

# 3RD INTERNATIONAL BLACK SEA MODERN SCIENTIFIC RESEARCH CONGRESS

MARCH 23-24, 2023  
SAMSUN, TURKIYE

EDITOR

PROF. DR. MARIAM JIKIA

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**ABSTRACTS BOOK**

3rd INTERNATIONAL BLACK SEA  
MODERN SCIENTIFIC RESEARCH  
CONGRESS

March 23-24, 2023 - Samsun, Turkiye

EDITOR

Prof. Dr. Mariam Jikia

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# CONGRESS ID

## CONGRESS TITLE

3RD INTERNATIONAL BLACK SEA MODERN SCIENTIFIC RESEARCH  
CONGRESS

## DATE AND PLACE

March 23-24, 2023 - Samsun, Turkiye

## ORGANIZATION

IKSAD INSTITUTE

## EDITOR

Prof. Dr. Mariam Jikia

## PARTICIPANTS COUNTRY (30 countries)

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INDONESIA, MALAYSIA, GEORGIA, USA, ROMANIA, KOSOVA, ITALY,  
PHILIPPINES, BULGARIA, SERBIA, MACEDONIA, MOROCCO, FRANCE, RUSSIA,  
SENEGAL, UKRAINE, HUNGARY, IRAQ, ALBANIA, OMAN, SLOVAKIA,  
GERMANY, UNITED KINGDOM

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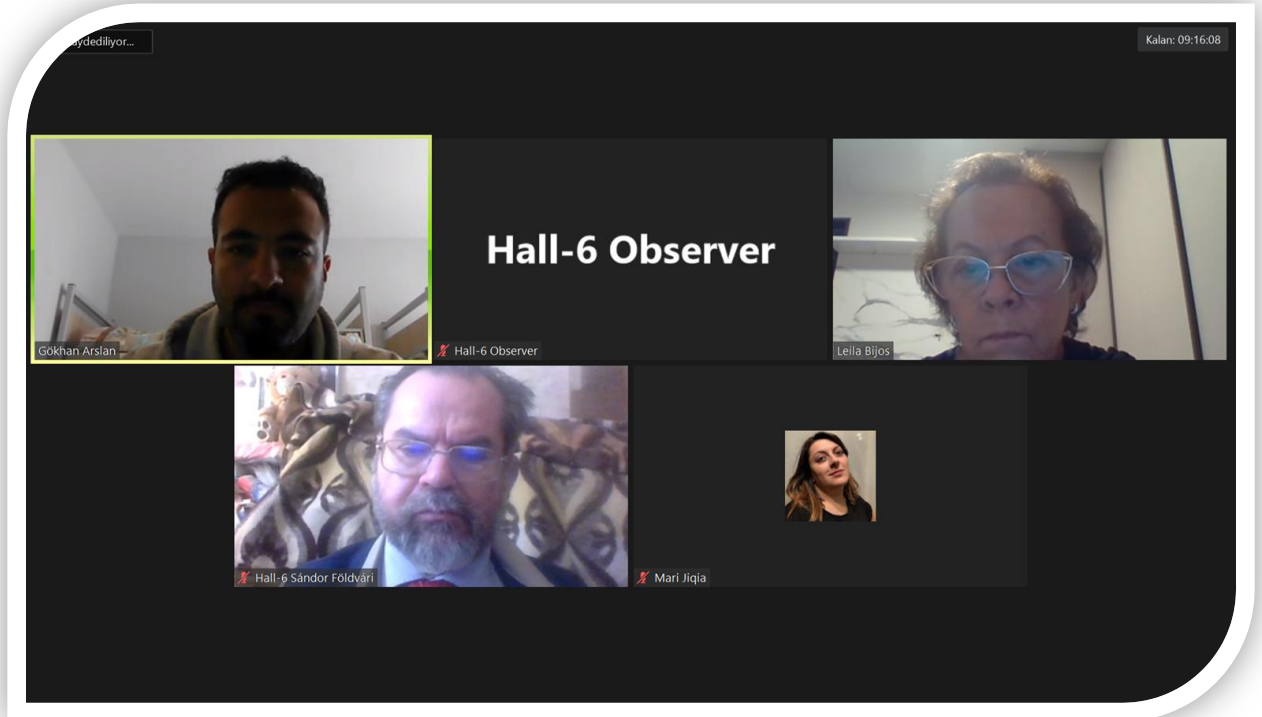
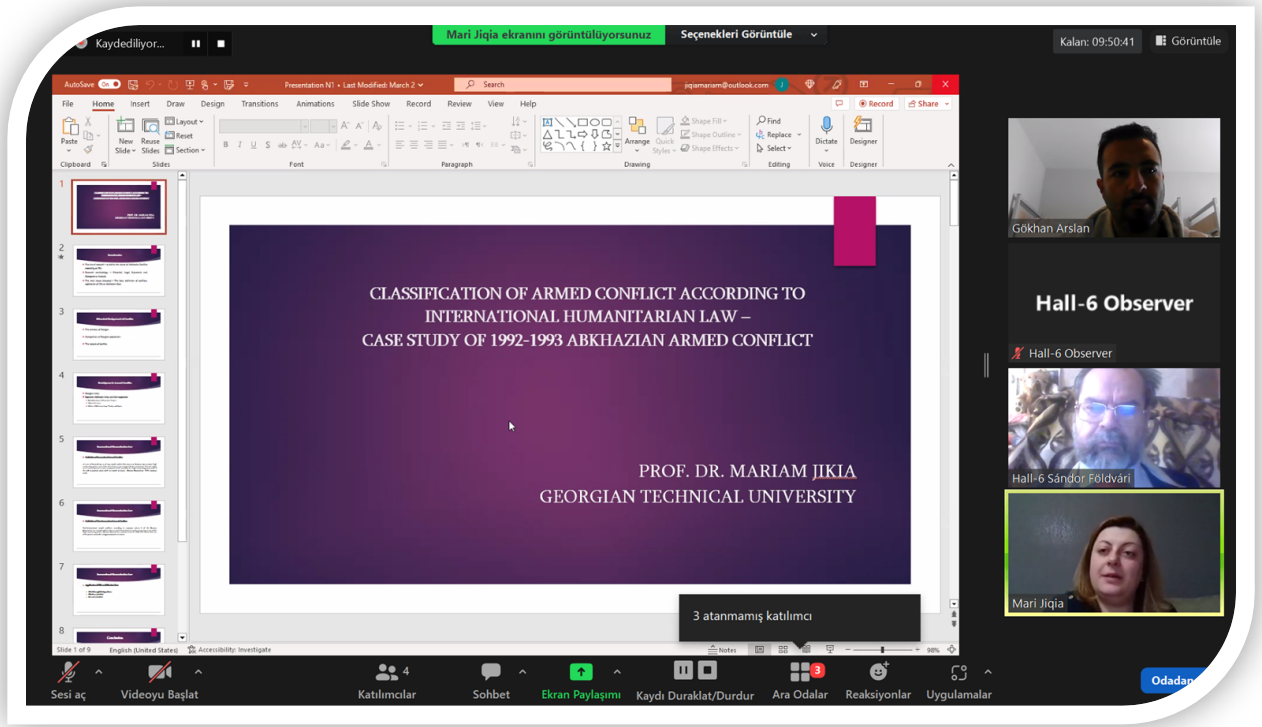
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# PHOTO GALLERY



# PHOTO GALLERY

Kaydediliyor... Ali Baykal ekranını görüntüleyorsunuz Seçenekleri Görüntüle Kalan: 09:39:24 Görüntüle

10  
11  
12  
13  
14  
15  
16

in each question between 17-19, an operation with *conventional numerals* is given. The alternatives are the operations indicated by "number" of bars arranged in digital 7 fonts. For example, the conventional numeral zero equals six bars, and the numeral 8 equals seven bars. Thus, when written in conventional numerals,  $1+1=2$ , but when these figures are written in bars, you can read as 2 bars + 2 bars = 4 bars. For example, in the 17<sup>th</sup> item The answer to the question is "D". So... please mark the option "D" without hesitation for the 17<sup>th</sup> item. In each item, choose the operation given as the "bar numbers" which corresponds to the operation given in the item.

17.	$2+2=4$	A $1+2=3$	B $1+7=3$	C $1+7=5$	D $1+4=4$	E $1+1=1$
18.	$7-3=4$	$8-0=4$	$7-3=4$	$8-3=4$	$8-7=4$	$8-1=3$
19.	$2+3=5$	$1+7=3$	$7-3=4$	$1+0=1$	$1+4=4$	$1+2=3$

Windows'u etkinleştirmek için Ayarlar'a gidin.

Sesi aç Videoyu Başlat Katılımcılar Sohbet Ekran Paylaşımı Kaydı Duraklat/Durdur Ara Odalar Reaksiyonlar Uygulamalar Odadan

Kaydediliyor... Carlotta Antonelli Hall 6 ekranını görüntüleyorsunuz Seçenekleri Görüntüle Kalan: 09:05:43 Görüntüle

1  
2  
3  
4  
5

3rd International Black Sea Modern Scientific Research Congress (March 23-24)  
Inclusive education and tertiary instruction.  
New questions in the tradition of disability studies

SAPIENZA  
UNIVERSITÀ DI ROMA

Carlotta Antonelli  
PhD student in the XXXV cycle Coris

Fare clic per inserire le note

2 atanmamış katılımcı

Sesi aç Videoyu Başlat Katılımcılar Sohbet Ekran Paylaşımı Kaydı Duraklat/Durdur Ara Odalar Reaksiyonlar Uygulamalar Odadan



# PHOTO GALLERY

Kaydediliyor... Ali Baykal ekranını görüntülüyorsunuz Seçenekleri Görüntüle Kalan: 09:22:41 Görüntüle

Hands collect the reward for what tools make.

STONE AGE BRONZE AGE IRON AGE

DARK AGE MODERN AGE COMPUTER AGE

Windows'u etkinleştirmek için Ayarlar'a gidin.

Sesi aç Videoyu Başlat Katılımcılar Sohbet Ekran Paylaşımı Kaydı Duraklat/Durdur Ara Odalar Reaksiyonlar Uygulamalar

Ali Baykal

Hall-6 Observer

hall-6 Irina Ana Drobot

kiran malik

Carlotta Antonelli Hall 6

Kaydediliyor... Kalan: 08:58:27

BACKGROUND

İmene Nourani-Hall7

Hall 7 - Observer

Anar Abdullayev

Gasimova K.F.

Hall 7 Gheorghe Giurgiu

FADHILAH HAVATI & HUS...

# PHOTO GALLERY

Medijor... Kalan: 08:52:48



### Type of Research

In this study, researchers used a type of library research, namely research with a series of activities related to library data collection methods, reading and recording and processing research materials. Library research is research whose object is searched for with various library information such as books, scientific journals, magazines, newspapers, and documents. This research is different from other studies which require observation or interviews in obtaining data. In this study, the data object sought by researchers was to search for literature that was in accordance with the issues raised. Researchers look for data in answering the problems raised by reading various appropriate references. Library research is a review of library data that can provide solutions or answers related to the problem under study. Through library research, it can provide results from what is sought through the data sources used.

Imene Nourani: Hall 7

Hall 7 - Observer

Hall 7 - Observer

Anar Abdullayev

Balasubramani...

Balasubramani G L

Hall 7 Gheorghe Giurgiu

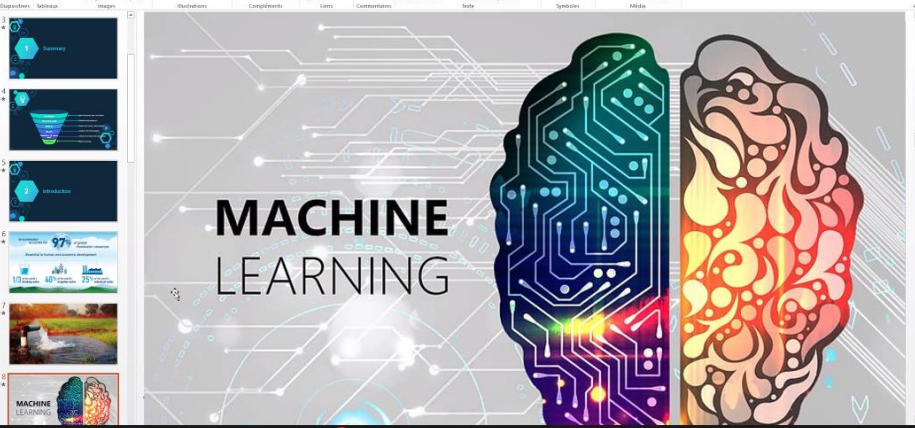


plant - Hall 3

Hall 3 - Observer AGAGUENA RA... jahal aymen Zegaar

















Hall 3 - Observer AGAGUENA RANIA jahal Suhani Bhagta aymen Zegaar

Kaydedilijor... Kalan: 09:37:05



Katılımcılar (8)

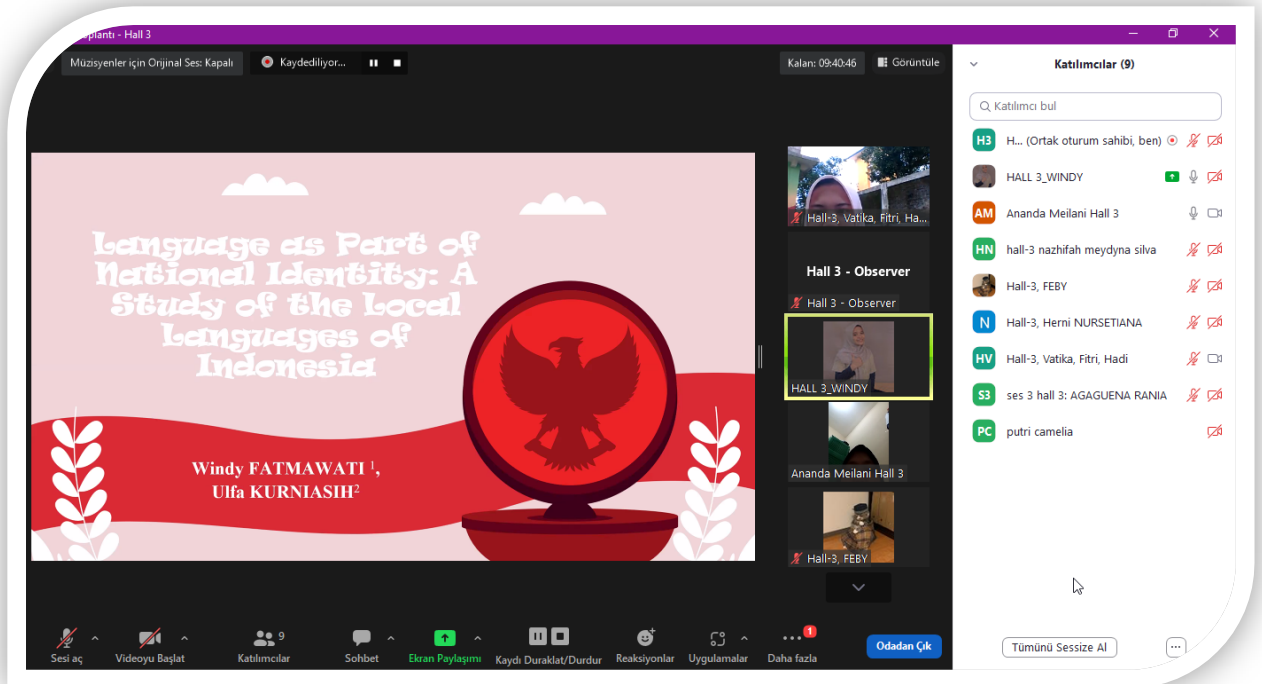
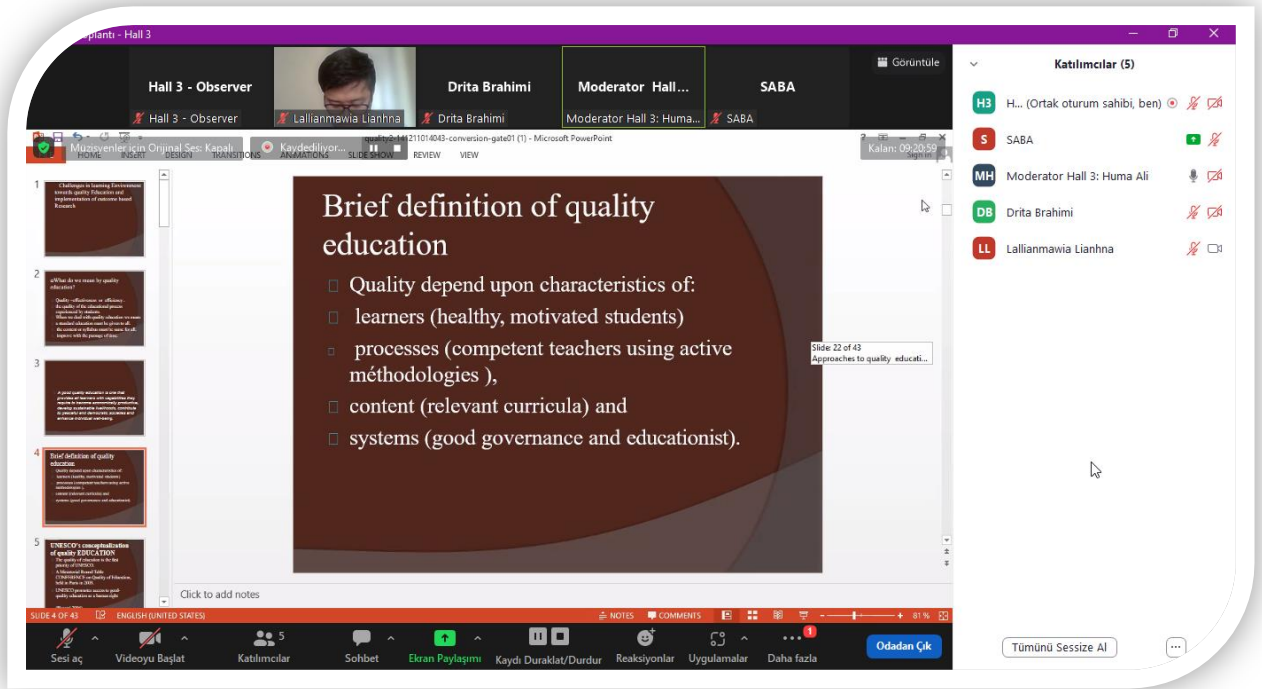
Q Katılımcı bul

- H3 H... (Ortak oturum sahibi ben)  
- AZ aymen Zegaar  
- AR AGAGUENA RANIA  
- C condor2  
- J jahal  
- JA Jamila Al Siyabi  
- MD Moderator: Dr. Rabia  
- Suhani Bhagta  

Tümünü Sessize Al

Sesi aç Videoyu Başlat Katılımcılar Sohbet Ekran Paylaşımı Kaydı Duraklat/Durdur Reaksiyonlar Uygulamalar Daha fazla Odadan Çık

# PHOTO GALLERY





# PHOTO GALLERY

planti - Hall 3

Muzisyenler için Original Ses: Kapalı

Kalan: 09:26:14 Görüntüle

## Question and answer

### The Aim

To describe Indonesian spelling and terminology

Katılımcılar (10)

Q Katılımcı bul

- H3 Hall 3... (Ortak oturum sahibi, ben)
- AM Ananda Meilani Hall-3
- AA Arsen Adhita Sendi Hall-3
- Hall 3\_WINDY
- HN hall-3 nazhifah meydyna silva
- HP hall-3 putri camelia rosanty
- Hall-3, FEBY
- N Hall-3, Herni NURSETIANA
- HV Hall-3, Vatika, Fitri, Hadi
- S3 ses 3 hall 3: AGAGUENA RANIA

Sesi aç Videoyu Başlat Katılımcılar Sohbet Ekran Paylaşımı Kaydet Ara Odalar Reaksiyonlar Uygulamalar Odadan Çık

Tümünü Sessize Al

Kaydediliyor...

Fatma Sarı ekranını görüntüleyorsunuz Seçenekleri Görüntüle

Kalan: 09:55:16 Görüntüle

## Aronyanın bu kadar talep edilebilir bir tarım ürünü olmasında etmenler;


- İlk olarak bahçe kısmından başlayıp çok kısa sürede ürün alınabilmesi ve harcanılan masraflarını fazlasıyla karşılıyor olmasıdır.
- Meyvelerin kullanımına geldiğimizde çok yönlü alanlarda kullanıma sahiptir. Birim alana düşen fayda son derece fazla olmasıyla sağlık yönünden gözde bir meyve olmuştur.
- Türkiye'nin jeopolitik konumu ve elverişli coğrafik iklimi nedeniyle Türkiye bu konuda yetiştiricilik yönünden elverişli bir ülke konumuna gelebilmektedir.

Katılımcılar (6)

Sohbet Ekran Paylaşımı Kaydı Duraklat/Durdur Ara Odalar Reaksiyonlar Uygulamalar Odadan Çık

# PHOTO GALLERY

Kaydediliyor... Fatma Sarı ekranını görüntüyorsunuz Seçenekleri Görüntüle Kalan: 09:41:08 Görüntüle



- Orkidelerde, tohum toprağa düştükten sonra yumru ve yaprakların gelişim dönemleri süresi çok uzamaktadır. Yaprak ve yumrular erken evrede ortalama 2-4 yıl içinde oluşumunu tamamlamaktadır.
- *Orchis*, *Ophrys* ve *Dactylorhiza*'larda ilk yapraklar ortalama 4,
- *Epipactis* ve *Cephalanthera* türlerinde ise 2-3 yıl sonra;
- *Spiranthes aestivalis* türünde ise ilk yumru ancak 9. yılda,
- *Neottia* türlerinde ilk çiçek 9-12 yıl sonra oluşmaktadır.
- *Listera* türlerinde ilk yaprak 4. yılda oluşurken,
- ilk çiçeği ise tohum toprağa düşmesiyle 15 yıl sonra açmaktadır.
- *Cypripedium* türlerinde ise, ergin bir bireyde meydana gelmesi için 16 yıl veya daha fazla beklemek gerekmektedir.(Gümüş, 2009)


2 atanmamış katılımcı

Hall-5-Neşe BORO  
Hall-5 Observer  
Ahmet Ömer K...  
Ahmet Ömer Koçak  
Fatma Sarı  
HALL-5 Dilara S...  
HALL-5 Dilara SAYGIN

Sesi aç Videoyu Başlat Katılımcılar 11 Sohbet Ekran Paylaşımı Kaydı Duraklat/Durdur Ara Odalar 2 Reaksiyonlar Uygulamalar Odadan

Kaydediliyor... Kalan: 08:18:35 Görüntüle

Hall 6 - Observer



Hall-6 AYNUK CİN Hall 6 - Observer Doç. Naci Ömer ALAYUNT

Hall-6, Büşra Atabilen Füreya Elif Öztürkkan Hall-6, Günsu Soykut

İstemi Serin- S-2; Hall-6 Doç. Dr. Hasan UZUN

Sesi aç Videoyu Başlat Katılımcılar 8 Sohbet Ekran Paylaşımı Kaydı Duraklat/Durdur Ara Odalar 1 Reaksiyonlar Uygulamalar Odadan



# PHOTO GALLERY

Kaydediliyor...

Kalan: 08:46:53

*Curcuma longa* Linn.'in kurutulmuş öğütülmüş köksapı olan kurkumin, Türkçe'de zerdeçal, Hintçe'de Haldi, İngilizce'de turmeric ve Japonca'da ukon olarak bilinmektedir. Asya tıbbında yaygın olarak kullanılan bu bitkinin birçok biyolojik aktif özelliği bilinmektedir. Ticari olarak bilinen kurkumin, %77 kurkumin, % 17 demetoksikurkumin ve % 3 bis-demetoksikurkumin içermektedir. Yapılan birçok çalışmada zerdeçalın Alzheimer hastalığına karşı koruyucu olduğu rapor edilmiştir.



Hall 6 - Observer

Emine Aslan Telci hall-6

Füreye Elif Öztürkkan

Gulistan Yurdagul

Doç. Naci Omer ALAY...

h-6, Fatma Nur Altin

plantı - Hall 3

Hall 3 - Observer

Muzisyenler için Orjinal Ses: Kapalı

Kaydediliyor...

Soruntüle

Kalan: 09:14:55

ANTİK KAYNAKLARA GÖRE PONTOS BÖLGESİNDE YETİŞEN ENDEMİK VE TIBBİ BİTKİLER VE BU BİTKİLERİN KULLANIM ALANLARI

Doç. Dr. Mesut KINACI

Katılımcılar (10)

Q Katılımcı bul

- H3 H... (Ortak oturum sahibi, ben) [Ses] [Görünmez]
- H3 Hall-3 Mesut KINACI [Ses] [Görünmez]
- Ö Özlem Yıldırım Kırış [Ses] [Görünmez]
- FS Filiz Sofuoğlu Babayev [Ses] [Görünmez]
- HD Hall-3, Doç. Dr. Tuna Batuhan [Ses] [Görünmez]
- k Hall-3, Kamile Güneş [Ses] [Görünmez]
- HM Hall-3, Mahmut ÇAMLIÇA [Ses] [Görünmez]
- HR Hall-3, Resul TURAN [Ses] [Görünmez]
- MB Moderator: Burak Başkan [Ses] [Görünmez]
- R Rawan Alaeddin [Ses] [Görünmez]

Sesi aç Videoyu Başlat Katılımcılar Schibet Ekran Paylaşımı Kaydı Duraklat/Durdur Reaksiyonlar Uygulamalar Daha fazla Odadan Çık


Tümünü Sessize Al

# PHOTO GALLERY

planti - Hall 3

Muzisyenler için Orjinal Ses: Kapalı Kaydediliyor... Kalan: 09:00:54 Görüntüle

καρύα ποντική=Karua Pontika (*Pontus Fındığı*)



Hall 3 - Observer

Hall 3 - Observer

Moderator: Burak Ba... Hall-3 Mesut KINACI

Hall-3, Resul TURAN Özlem Yıldırım Kırış

Filiz Sofuoğlu B... Hall-3, Kamile Güneş Filiz Sofuoğlu Babayev

Hall-3, Mahmut... Hall-3, Mahmut ÇAMLICA

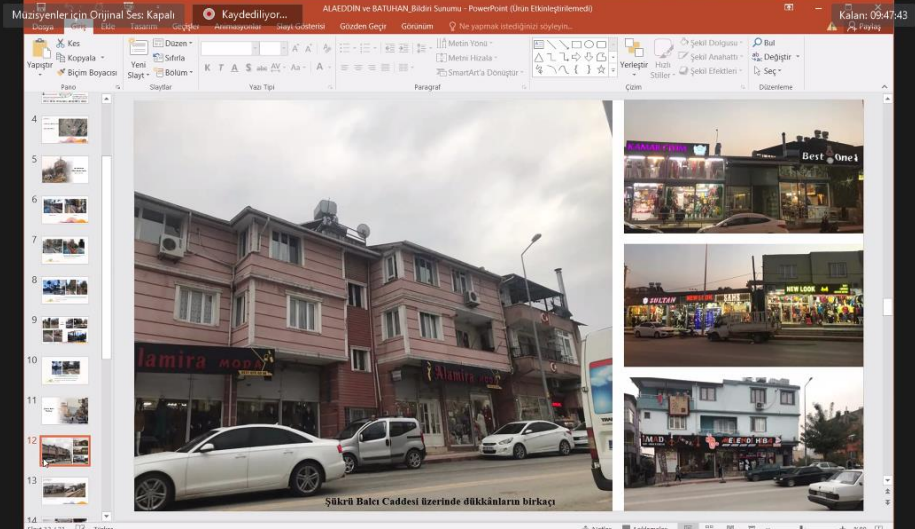
Sesi aç Videoyu Başlat Katılımcılar Sohbet Ekran Paylaşımı Kaydı Duraklat/Durdur Ara Odalar Reaksiyonlar Uygulamalar Odadan

planti

Hall 3 - Observer

Hall 3 - Observer Hall-3, Doç. Dr. Tuna Bat... Moderator: Burak Ba... Hall-3 Mesut KINACI Hall-3, Resul TURAN

Muzisyenler için Orjinal Ses: Kapalı Kaydediliyor... ALAEDDİN ve BATUHAN, Bâdîni Sunumu - PowerPoint (Dünya Etkinleştirilmedi) Kalan: 09:47:43



Şişli Balçı Caddesi üzerinde dükkanlarını birkaçı

Katılımcılar (11)

Q Katılımcı bul

- H3 H... (Ortak oturum sahibi, ben)
- HD Hall-3, Doç. Dr. Tuna Batuhan
- FS Filiz Sofuoğlu Babayev
- H3 Hall-3 Mesut KINACI
- k Hall-3, Kamile Güneş
- HM Hall-3, Mahmut ÇAMLICA
- HR Hall-3, Resul TURAN
- MB Moderator: Burak Başkan
- Ö Özlem Yıldırım Kırış
- R Rawan Alaeddin
- Ş Şenol ŞEN

Tümünü Sesizle Al

# PHOTO GALLERY

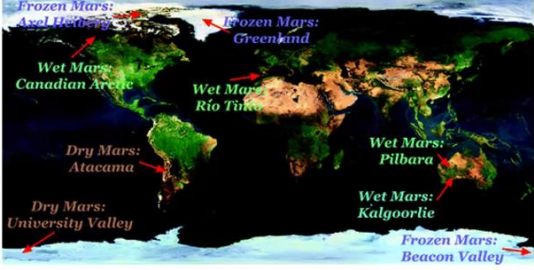
planti - Hall 3

Hall 3 - Observer

Batu Çolak Moderator: Hall-3, Er... S2, H3, Furgan Aslan... uğur çalyan

Müziyenler için Orjinal Ses: Kapalı Kaydediliyor... Kalam: 09:12:55

## Mars Analogu Kabul Edilen Diğer Bölgeler



Mars'ın farklı zaman dilimlerindeki analogları. (Fairén ve diğ.,2010).

Sesi aç Videoyu Başlat Katılımcılar Sohbet Ekran Paylaşımı Kaydı Duraklat/Durdur Reaksiyonlar Uygulamalar Daha fazla Odadan Çık

Katılımcılar (8)

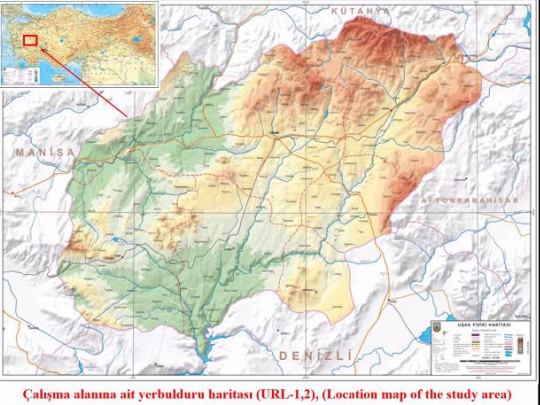
Q Katılımcı bul

- H3 H... (Ortak oturum sahibi, ben)
- B Batu Çolak
- GS Gülizar Sanyer
- HD HALL-3 Doç.Dr. MUSTAFA KILIC ...
- MH Moderator: Hall-3, Ertan Mahir ...
- N NIHAL DOĞRUÖZ GÜNGÖR
- S2, H3, Furgan Aslanoğlu
- U uğur çalyan

Tümünü Sessize Al

planti

Müziyenler için Orjinal Ses: Kapalı Kaydediliyor... Kalam: 09:37:34



Çalışma alanına ait yerbuldur haritası (URL-1,2), (Location map of the study area)

Hall 3 - Observer

Session-1, Hall-3, Sel...

Hall-3, Fatma AKSEVER

Hall-3, Azize Demirp...

Ümit ayata

Katılımcılar (8)

Q Katılımcı bul

- H3 H... (Ortak oturum sahibi, ben)
- HF Hall-3, Fatma AKSEVER
- U Ümit ayata
- T TK
- H3 Hall-3, Azize Demirpolat
- HD HALL-3 Doç.Dr. MUSTAFA KILIC ...
- SB S1-H3-Alaeddin BOBAT
- SH Session-1, Hall-3, Selçuk USTA

Tümünü Sessize Al



# PHOTO GALLERY

planti

Kuzisyenler için Orijinal Ses: Kapalı Kaydediliyor...

Kalanı: 09:14:33

Katılımcılar (8)

Q Katılımcı bul

- H3 H... (Ortak oturum sahibi, ben)
- Ü Ümit ayata
- SB S1-H3-Alaeddin BOBAT
- H3 Hall-3, Azize Demirpolat
- HD HALL-3 Doç.Dr. MUSTAFA KILIC ...
- HF Hall-3, Fatma AKSEVER
- ST S1-H3. Tamraz K.
- SH Session-1, Hall-3, Selçuk USTA

Not okunmuş için tıklayın

Session-1, Hall-3, Sel...

Hall 3 - Observer

Hall 3 - Observer

Hall-3, Fatma AKSEVER


Ümit ayata

S1-H3-Alaeddin...

S1-H3-Alaeddin BOBAT

Tümünü Sessize Al

Bu çalışmada, lotofa (*Sterculia rhinopetala* K. Schum.) odumunda doğal yaşlandırma uygulamaları sonunda meydana gelen bazı yüzey değişiklikleri araştırılmıştır. Eide dilen sonuçların bu ağaç türüne ait bilgi dünyasına önemli bilgiler katacağı hedeflenmektedir.



Hall-4, Observer


Kaydediliyor...

Kalanı: 09:54:04


Katılımcılar (4)

- HO H... (Ortak oturum sahibi, ben)
- MF Moderator: Fuat Topuz
- GE Gültekin ERDAL
- Hall 4-Betül Sukan Karaçağul

Effects of Oil Spills On Marine Ecosystem



Effects of Oil Spills On Marine Ecosystem



Oil spills can occur due to tankers, barges, pipelines, refineries, drilling rigs and storage facilities

# PHOTO GALLERY

Kaydediliyor...

Kalan: 09:27:59 Görüntüle

Katılımcılar (7)

- HO H... (Ortak oturum sahibi, ben)
- GE Gültekin ERDAL
- EA ender özeren (hall 4)
- Hall 4-Betül Sukan Karaçağıl
- HS Hall-4, Servet YİĞİT
- MF Moderator: Fuat Topuz
- NA NESLİ AYDIN

Hall-4, Observer

Moderator: Fuat Topuz

Hall-4, Observer

Hall 4-Betül Sukan Karaçağıl

Gültekin ERDAL

Hall-4, Servet YİĞİT

NESLİ AYDIN

ender özeren (hall 4)

1 atanmamış katılımcı

11 Sayf

• Ambalajın üç temel işlevinden biri olan koruma, neredeyse insanlık tarihiyle eşit yaşıttır. İnsanların avcı-toplayıcı dönemlerinde, yiyeceğin fazlasının iç güdüsel olarak saklandığı bilinmektedir.

• İlk yıllarda avın kokusunu engellemek, diğer canlıların bulmasını zorlaştırmak için keskin kokulu bitki ve yapraklara sarılıp toprağa gömülmüş veya yüksek ağaç kovuklarında koruma altına alınmıştır. Bu yöntem ilk ambalajı tanımlarken, sargı şekli ise ambalajın koruma işlevi olarak tanımlanabilmektedir

Hall-4, Observer

Hall-4, Observer

Moderator: Fuat Topuz

Hall 4-Betül Sukan Karaçağıl

Gültekin ERDAL

Hall-4, Servet YİĞİT

ender özeren (hall 4)

Kalan: 09:06:20

Kaydediliyor...

ORGANİK BESLENMENİN KENT İNSANINA MALİYETİ: BİR SANAL PAZAR ARAŞTIRMASI

Betül Sukan-Karaçağıl  
Prof. Dr. Gamze Akbulut

Katılımcılar (8)

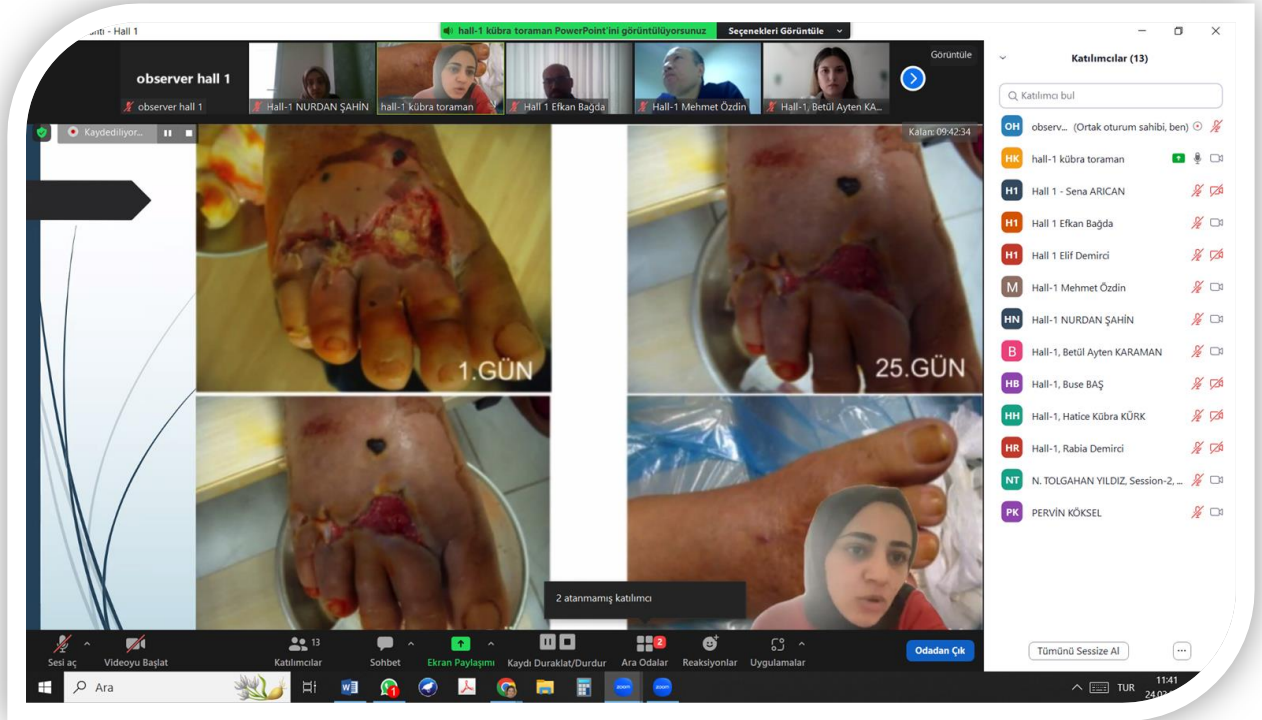
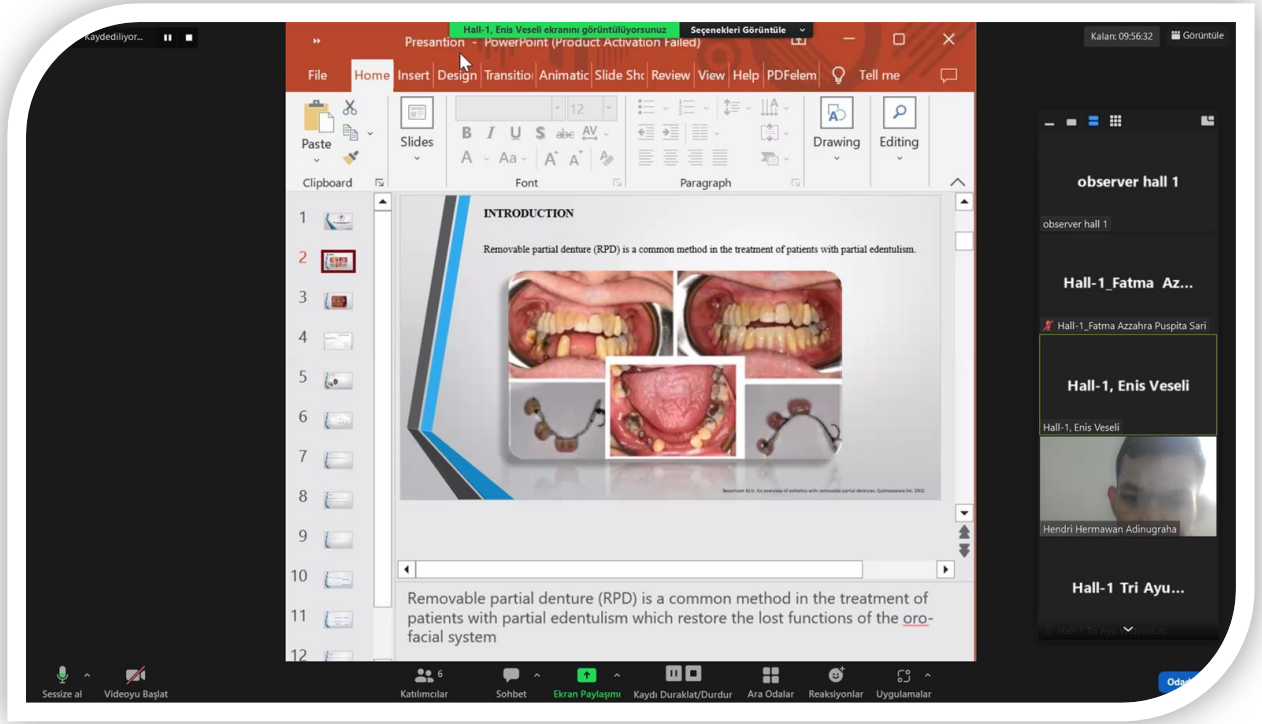
Q Katılımcı bul

- HO H... (Ortak oturum sahibi, ben)
- Hall 4-Betül Sukan Karaçağıl
- HS Hall-4, Servet YİĞİT
- MF Moderator: Fuat Topuz
- DI Dr. İsmail YAPICI
- EA ender özeren (hall 4)
- GE Gültekin ERDAL
- NA NESLİ AYDIN

Tümünü Sessize Al



# PHOTO GALLERY



# PHOTO GALLERY

**Çalışma Alanı ve Veri Setleri**

İSTANBUL BÜYÜKŞEHİR BELEDİYESİ  
KOCAELİ BÜYÜKŞEHİR BELEDİYESİ  
TÜİK TÜRKİYE İSTATİSTİK KURUMU

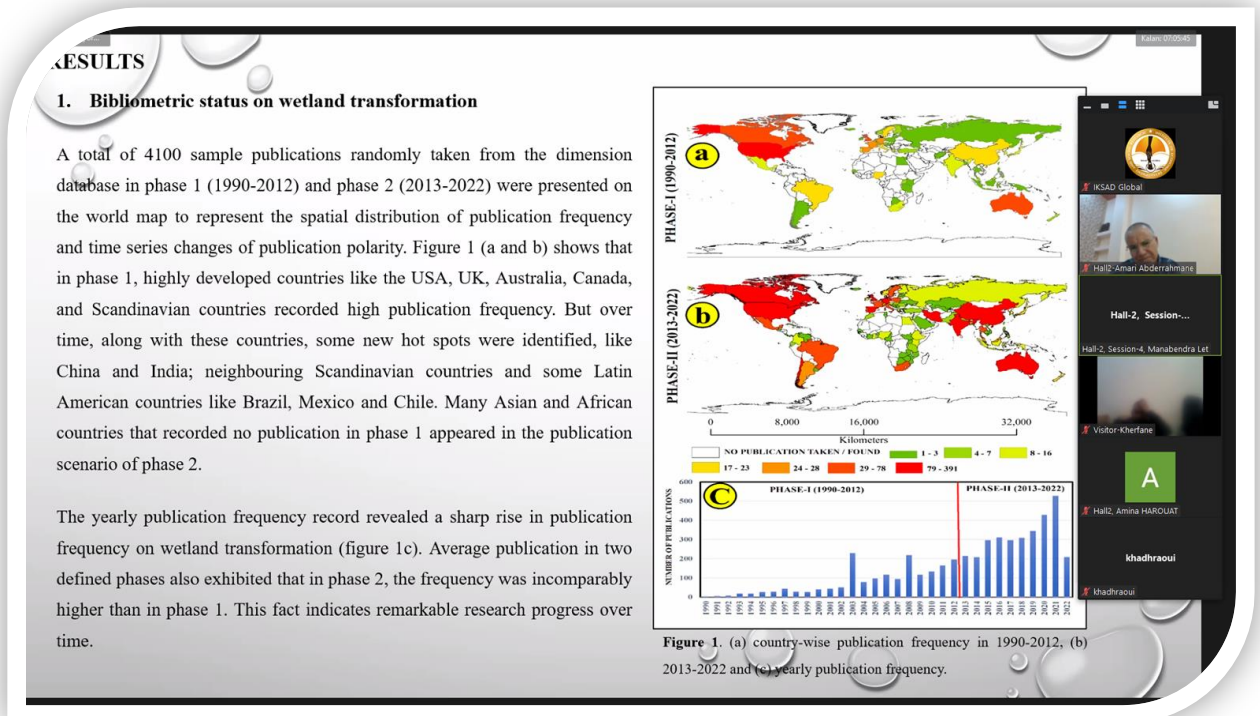
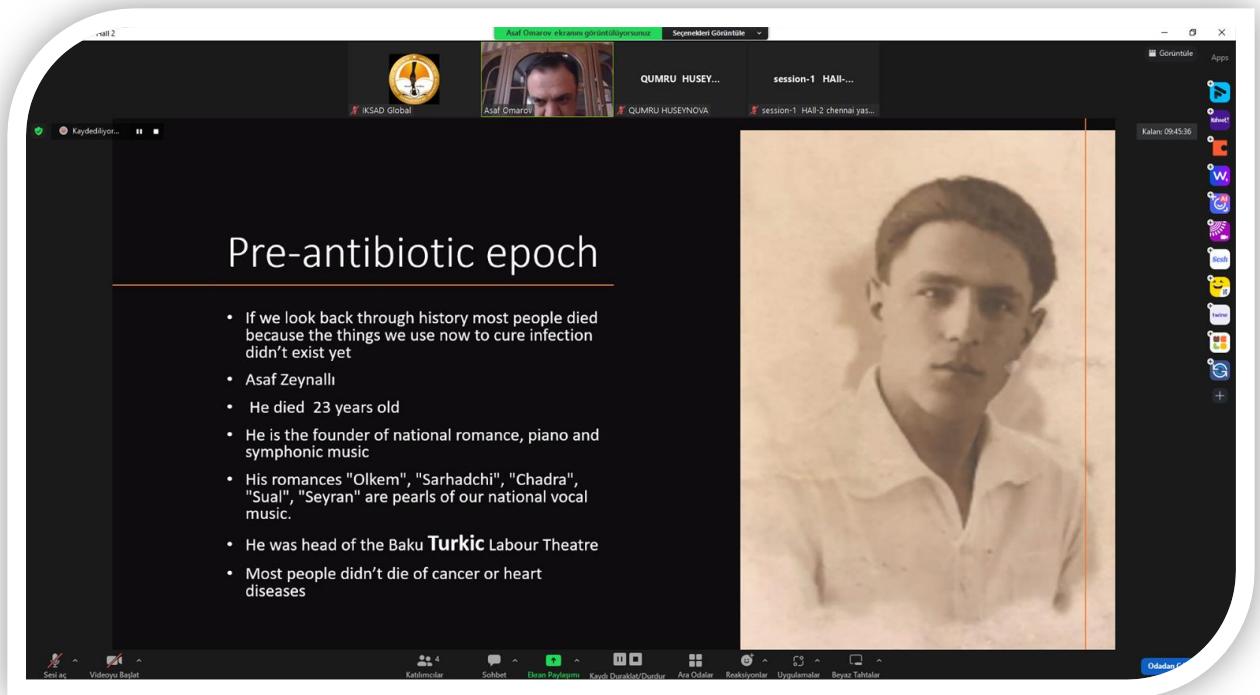
Şekil-1. Çalışma alanının belirlenmesi.  
Çalışma alanı olarak İstanbul ilinin Anadolu yakasında yer alan Pendik ve Tuzla ilçeleri, Kocaeli ilinin ise Gebze, Çayırova ve Darıca ilçeleri seçilmiştir (Şekil-1).

Day: 01-12-2022

Toplam SO<sub>2</sub> Miktarı:  
713875.31 (DU)

Tropospheric vertical column of SO<sub>2</sub> (DU)

# PHOTO GALLERY







# PHOTO GALLERY

Hall-4, Observer

Kaydediliyor...

All parts of the plant have a positive effect on human health including the oil from the seed, which is considered as an anticoagulant and also used to prevent other diseases:

**HEALTH BENEFITS OF SAFFLOWER OIL**

- Effective remedy against obesity
- Helps to keep hair and scalp healthy
- Boots quality and appearance of skin
- Aids in managing diabetes
- Reduces risk of atherosclerosis and strokes
- Helps to regulate cholesterol levels in body
- Helps to decrease severity of premenstrual syndrome (PMS) symptoms

Katılımcılar (10)

Q. Katılımcı bul

- HO H... (Ortak oturum sahibi, ben)
- HK Hall-4, Kamel ZEMOUR
- AH Arzu Hasanova Azerbaijan
- BL Bunyatova Lale
- EY El-Ouazzani Younesse
- GA Gahramanova Aida
- HF H4- Fatma BAŞDEMİR
- KR Khalid Reggab
- OM Oleksii Makarenko
- Session 2, Hall 4, Muhammad Fa...

Kalanı: 09:36:18

Hall-4, Observer

Kaydediliyor...

**Lunar Helium-3 Is Well Documented**

- Helium-3 concentration verified from Apollo 11, 12, 14, 15, 16, 17 and U.S.S.R. Luna 16, 20 samples.
- Current analyses indicate that there are at least 1,000,000 tonnes of helium-3 imbedded in the lunar surface.

5 atanmamış katılımcı

Katılımcılar (11)

Q. Katılımcı bul

- HO H... (Ortak oturum sahibi, ben)
- MZ Massimo Zucchetti
- HALL- 4 Dhikra Derbal
- HB Hall\_4,nadia boughedir
- HK Hall-4, Kamel ZEMOUR
- Hall4-Benammar Abdelkader
- HK Hall5-CHOUHM Kadda
- Z Moderator: Zeid Bendaoudi
- ok
- OB Oussama Boutif
- RR Reggab Khaled

Kalanı: 08:37:31

Sesi aç Videoyu Başlat Katılımcılar Sohbet Ekran Paylaşımı Kaydı Duraklat/Durdur Ana Odalar Reaksiyonlar Uygulamalar Oturumdan Çık Tümü Sessize Al

# PHOTO GALLERY

Hall-5, Observer Moderator: Hall... C.Sulochana, Se... HQ

Kaydediliyor... Soruntule

## Phytosynthesis

Kalan: 09:21:35

The diagram illustrates the mechanism of phytosynthesis. It starts with 'Plant Phytochemical Extracts' on the left. These react with 'metal salts' (represented as  $M^+$ ) through 'Bio-reduction' and 'Growth' processes. The bio-reduction process converts  $M^+$  into elemental metal ( $M^0$ ). The growth process involves the formation of metal oxides ( $MO$ ). The final product is 'Phyto-mediated metal oxides' ( $MOX$ ), which is formed through 'Calcination' of the metal oxides. The diagram also notes that 'Phyto-constituents as reducing and stabilizing agents' are involved in the process. A legend indicates that green circles represent 'Bio active compounds',  $M^0$  represents 'Elemental metal', and  $MOX$  represents 'Metal oxides'. The entire process is labeled as 'Phyto-framework assisted synthesis Mechanism'.

6

**Katılımcılar (7)**

- HO H... (Ortak oturma sahibi, ben)
- I Irum Shaheen
- CS C.Sulochana, Session -1, Hall No...
- HA Hall-5,Aisha Azmat
- H HQ
- MH Moderator: Hall-5 Wajid rasool
- SN Session1+Hall-5-Djouambi Nahla

Hall-5, Observer Anil Oğuzcan

Kaydediliyor... Soruntule

Kalan: 08:39:20

Nizami Ganjavi monument in the Nizami square

5 atanmamış katılımcı

**Katılımcılar (10)**

Q: Katılımcı bul

- HO H... (Ortak oturma sahibi, ben)
- AM Asmatkhanim Mammadova
- AO Anil Oğuzcan
- FN Fidan Nasirova
- HY Hall-5, YAVUZ ERTÜRK
- G Hall-5,Gunel Babayeva
- HH Huseyn Huseynli
- OB Orhun Büyükkarcı
- ST Selen Tekalp
- TÇ Talha ÇİÇEK



# 3<sup>rd</sup> INTERNATIONAL BLACK SEA MODERN SCIENTIFIC RESEARCH CONGRESS

March 23-24, 2023  
Samsun, Turkiye

## CONGRESS PROGRAM

**ÖNEMLİ, DİKKATLE OKUYUNUZ LÜTFEN / IMPORTANT, PLEASE READ  
CAREFULLY**

### Önemli, Dikkatle Okuyunuz Lütfen

- ✓ Kongremizde Yazım Kurallarına uygun gönderilmiş ve bilim kurulundan geçen bildirimler için online (video konferans sistemi üzerinden) sunum imkanı sağlanmıştır.
- ✓ Online sunum yapabilmek için <https://zoom.us/join> sitesi üzerinden giriş yaparak "Meeting ID or Personal Link Name" yerine ID numarasını girerek oturuma katılabilirsiniz.
- ✓ Zoom uygulaması ücretsizdir ve hesap oluşturmaya gerek yoktur.
- ✓ Zoom uygulaması kaydolmadan kullanılabilir.
- ✓ Uygulama tablet, telefon ve PC'lerde çalışıyor.
- ✓ Her oturumdaki sunucular, sunum saatinden 15 dk öncesinde oturuma bağlanmış olmaları gerekmektedir.
- ✓ Tüm kongre katılımcıları canlı bağlanarak tüm oturumları dinleyebilir.
- ✓ Moderatör – oturumdaki sunum ve bilimsel tartışma (soru-cevap) kısmından sorumludur.

### Dikkat Edilmesi Gerekenler- TEKNİK BİLGİLER

- ✓ Bilgisayarınızda mikrofon olduğuna ve çalıştığına emin olun.
- ✓ Zoom'da ekran paylaşma özelliğine kullanabilmelisiniz.
- ✓ Kabul edilen bildiri sahiplerinin mail adreslerine Zoom uygulamasında oluşturduğumuz oturuma ait ID numarası gönderilecektir.
- ✓ **Katılım belgeleri kongre sonunda tarafınıza pdf olarak gönderilecektir**
- ✓ Kongre programında yer ve saat değişikliği gibi talepler dikkate alınmayacaktır

### IMPORTANT, PLEASE READ CAREFULLY

- ✓ To be able to attend a meeting online, login via <https://zoom.us/join> site, enter ID "Meeting ID or Personal Link Name" and solidify the session.
- ✓ The Zoom application is free and no need to create an account.
- ✓ The Zoom application can be used without registration.
- ✓ The application works on tablets, phones and PCs.
- ✓ The participant must be connected to the session 15 minutes before the presentation time.
- ✓ All congress participants can connect live and listen to all sessions.
- ✓ Moderator is responsible for the presentation and scientific discussion (question-answer) section of the session.

### Points to Take into Consideration - TECHNICAL INFORMATION

- ✓ Make sure your computer has a microphone and is working.
- ✓ You should be able to use screen sharing feature in Zoom.
- ✓ **Attendance certificates will be sent to you as pdf at the end of the congress.**
- ✓ Requests such as change of place and time will not be taken into consideration in the congress program.



Before you login to Zoom please indicate your name\_surname and HALL  
number,

**exp. Hall-1, Ali ÖZDEMİR**

**23.03.2023 / Session-1, Hall-1**  
**Ankara Local Time: 09:00 – 11:00**  
**Moderator: Dr. Binyam Zigta**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
THE INFLUENCE OF THERMAL RADIATION AND CHEMICAL REACTION ON MHD MICROPOLAR FLUID IN THE PRESENCE OF HEAT GENERATION/ ABSORPTION	Dr. Binyam Zigta	Wachemo University ETHIOPIA
STATISTICAL QUALITY CONTROL ANALYSIS OF AQUATRUST TABLE WATER MAKURDI	Okorie Charity Ebelechukwu Bamigbala Olateju Alao Auta Jonathan Timothy Ogege Lydia Omar	Federal University, Wukari Nigeria
"APPLICATION OF THE MOLECULAR GENETIC METHODS TO THE DETECTION OF PERIOPATHOGENIC BACTERIA IN RPD WEARERS"	Enis Veseli	University of Pristina Kosova
SYNTHESIS, IN SILICO AND IN VITRO BIOLOGICAL ACTIVITY OF SOME NOVEL 1-SUBSTITUTED 3-ISOPROPYL-3,4-DIHYDROISOQUINOLINES	Miglena MILUSHEVA Mina TODOROVA Yulian TUMBARSKI Stoyanka NIKOLOVA	Medical University of Plovdiv Bulgaria University of Food Technologies Bulgaria
BIOSYNTHESIS OF CO-NI NANOPARTICLES AND EVALUTION OF THEIR ANTIMICROBIAL AND WOUND HEALING POTENTIAL	Noreen Sajjad Arif Nazir Ayesha Sadiqa	University of Lahore Pakistan
MACHINE LEARNING WITH THE XGBOOST MODEL FOR BAND GAP PREDICTION BASED ON CHEMICAL FORMULA	BEN KAMRI Ahmed Lamine BEN MESSAOUD Cheikh lakhdar FADLA Mohammed Abdelilah LEFKAIER Ibn khaldoun	University of Laghouat, Algeria
EXPLORING THE STRUCTURAL, ELECTRONIC, AND MAGNETIC PROPERTIES OF A FERROMAGNETIC MANGANITE OXIDE USING DENSITY FUNCTIONAL THEORY AND CASTEP CODE	Chikh Lakhdar BEN MESSAOUD Ahmed Lamine BEN KAMRI Zoulikha HEBBOUL Ibn Khaldoun LEFKAIER	Ammar Thelidji University Algeria
STUDY OF THE ANTIOXIDANT PROPERTIES OF VACCINIUM MYRTILLUS L. EXTRACT ENCAPSULATED IN CHITOSAN NANOPARTICLES	Dr. Cornelia NICHITA	University of Bucharest Romania

**All participants must join the conference 10 minutes before the session time.**  
**Every presentation should last not longer than 10-12 minutes.**  
**Kindly keep your cameras on till the end of the session.**

**23.03.2023 / Session-1, Hall-2**  
**Ankara Local Time: 09:00 – 11:00**  
**Moderator: Dr.Yassmine CHENNAI**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
AGROTECHNICAL CONTROL MEASURES AGAINST FUNGAL DISEASES IN THE POMEGRANATE PLANT UNDER THE CONDITIONS OF THE ABSHERON REGION	Hasanli Israfil Zulfugar oghlu	Scientific Research Institute of Fruit Growing and Tea Cultivation of the Ministry of Agriculture of the Republic of Azerbaijan
UDC 632.9/4 PROPHYLACTIC CONTROL MEASURES AGAINST FIELD MICE IN IRRIGATED AND DRY GRAIN CROPS	Abbasova Nahidə Şavaat qizi	Scientific Research Institute of Plant Protection and Technical Plants Azerbaijan
CROSS-SECTIONAL STUDY, AMR BACTERIA IN ANIMAL PRODUCTS IN AZERBAIJAN, 2022	Asaf M.Omarov Ali Azghani Gumru Huseynova Aysel Hasanzade	The ADA University Azerbaijan The University of Texas at Tyler Usa Azerbaijan Food Safety Institute Azerbaijan
ANTIBACTERIAL AND ANTI-OXIDANT ACTIVITIES OF EXTRACTS FROM MEDICINAL PLANTS	Dr.Yassmine CHENNAI Dr.Assma FETTEH	Mohamed Khaidhar University, Biskra Algeria
QSAR MODELING USING GAUSSIAN PROCESS APPLIED FOR A SERIES OF FLAVONOIDS AS POTENTIAL ANTIOXIDANTS	Prof.Dr. Salah BELAIDI Dr.Yassmine CHENNAI	Mohamed Khaidhar University, Biskra Algeria
QUANTITATIVE STRUCTURE ACTIVITY RELATIONSHIP (QSAR) INVESTIGATIONS AND MOLECULAR DOCKING ANALYSIS OF PLASMODIUM PROTEIN FARNESYLTRANSFERASE INHIBITORS AS POTENT ANTIMALARIAL AGENTS	Dr.Yassmine CHENNAI Ouassaf Mebarka	Mohamed Khaidhar University, Biskra Algeria
CONTRIBUTION TO DRUG DISCOVERY THROUGH COMPUTATIONAL ANALYSIS OF SEVERAL SERIES OF HETEROCYCLIC MOLECULES	Dr.Yassmine CHENNAI Ouassaf Mebarka	Mohamed Khaidhar University, Biskra Algeria
IN SILICO INVESTIGATION OF SEVERAL SERIES OF HETEROCYCLIC MOLECULES FOR DRUG DISCOVERY	Prof.Dr. Salah BELAIDI Dr.Yassmine CHENNAI	Mohamed Khaidhar University, Biskra Algeria

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**23.03.2023 / Session-1, Hall-3**  
**Ankara Local Time: 09:00 – 11:00**  
**Moderator: Prof. Dr. Huma Ali**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
EVALUATING THE EFFECT OF BOKO HARAM INSURGENCY ON EDUCATION AND STUDENTS OF TERTIARY INSTITUTIONS IN NORTHEAST NIGERIA	AISHATU, Musa Yusuf SALEH Umar	"Nigeria Fed. Poly. Nigeria Public administration department"
CHALLENGES IN LEARNING ENVIRONMENT TOWARDS QUALITY EDUCATION AND IMPLEMENTATION OF OUTCOME BASED APPROACH	Prof. Dr. Huma Ali Dr. Saba Zubai	Jinnah Sindh Medical University Karachi Pakistan
KNOWLEDGE AND PRACTICE OF PERSONAL HYGIENE AMONG PRIMARY SCHOOL PUPILS IN PAKI COMMUNITY IKARA LOCAL GOVERNMENT AREA OF KADUNA STATE	Ibrahim Zailani DR ABDULLAHI DAHIRU	National open university of Nigeria
RAMBUAI AND HUMAN SUFFERING IN MALASWAMI JACOB'S 'ZORAMI: A REDEMPTION SONG'	Lallianmawia Lianhna Dr. Rafraf Shakil Ansari	Sharda University India
EXPLORATION OF THE IMPACT OF ASSISTIVE TECHNOLOGY IN INCLUSIVE ENGLISH LANGUAGE CLASSROOM	Jamila Al Siyabi Victoria Tuzlukova	Sultan Qaboos University Oman
THE FUTURE DEVELOPMENT OF THE EU ENERGY SECURITY AFTER THE INTRODUCTION OF RESTRICTIVE MEASURES	Ing. Viktoria Pestova Ing. Jan Hrinko	University of Economics in Bratislava Slovakia
UNDERSTANDING THE RELATIONSHIP BETWEEN UNION INSTRUMENTALITY AND UNION COMMITMENT	Bewara Anindito Effendi Tohir Ade Irma Anggraeni	Universitas Jenderal Soedirman Indonesia
IMPROVING THE ASSERTIVE COMMUNICATION SKILLS OF STUDENTS - FUTURE PRESCHOOL TEACHERS	PhD Mirjana Nikolić PhD Maja Cvijetić PhD Isidora Korać	Preschool Teacher Training and Business Informatics College of Applied Studies – Sirmium, Sremska Mitrovica, Serbia
A COMPARATIVE APPROACH BETWEEN GIORGIO BASSANI AND MARCEL PROUST (THE GARDEN OF FINZI-CONTINIS AND IN SEARCH OF LOST TIME)	Dr. Drita BRAHIMI	"Luigj Gurakuqi" University, Shkodër, Albania
POVERTY AND CORRUPTION IN THE WESTERN BALKAN COUNTRIES – A PANEL ANALYSIS	Roberta Bajrami Medain Hashani Besime Ziberi	Faculty of Economics, AAB College, Pristina, Kosovo

**All participants must join the conference 10 minutes before the session time.**  
**Every presentation should last not longer than 10-12 minutes.**  
**Kindly keep your cameras on till the end of the session.**

**23.03.2023 / Session-1, Hall-4**  
**Ankara Local Time: 09:00 – 11:00**  
**Moderator: Pushkar Pandey**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
APPLYING UX PRINCIPLES TO FIND PRE-PATTERNS IN HANDHELD AUGMENTED REALITY GAMES	Pushkar Pandey	Indian Institute of Technology Kanpur, India
PHISHING WEBSITE DETECTOR	Ms. Ashwini B Mr. Naveen G Mr. VEEWIN M	Bannari Amman Institute India
A SELF DIAGNOSIS MEDICAL CHATBOT USING ARTIFICIAL INTELLIGENCE	RAJESHWARI D YAAZHINI S	Bannari Amman Institute Of Technology India
HUMAN-CENTRIC UX DESIGN PRINCIPLES AND DESIGN THINKING: AN EMPIRICAL STUDY USING DESIGN CHALLENGES	Pushkar Pandey Aditi Oraon	Indian Institute of Technology Kanpur, India
UX STUDY ON HANDHELD AUGMENTED REALITY GAMES BY APPLYING SPRADLEY'S NINE DIMENSIONS DESIGN PRINCIPLE	Pushkar Pandey Renu Kundu	Indian Institute of Technology Kanpur, India
EFFICIENCY OF WEB-BASED, COMPUTER AND MOBILE SOFTWARE APPLICATIONS IN FACILITATING TEACHING AND LEARNING OF CHEMICAL CONCEPTS	Hassan Aliyu Corrienna Abdul Talib	Sokoto State University Nigeria Universiti Teknologi Malaysia
ANN FOR NOISE REMOVAL IN DIGITAL IMAGES	Nail Alaoui Abdallah Azzouz sara daoudi Souad Ksenna Lakhdar Bouhamla	Université ZIANE Algeria

**All participants must join the conference 10 minutes before the session time.**  
**Every presentation should last not longer than 10-12 minutes.**  
**Kindly keep your cameras on till the end of the session.**

**23.03.2023 / Session-1, Hall-5**  
**Ankara Local Time: 09:00 – 11:00**  
**Moderator: Wajid Rasool**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
EFFECT OF NONLINEAR RADIATION ON 3D UNSTABLE MHD STAGNANCY FLOW OF FE <sub>3</sub> O <sub>4</sub> /GRAPHENE-WATER HYBRID NANOFLUID	G.P. Ashwinkumar C. Sulochana N.Sandeep	Vijayanagara Sri Krishnadevaraya University, Bellary India Gulbarga University India Central University of Karnataka India
ELECTROCHEMICAL INVESTIGATION OF FACILE MOO <sub>3</sub> /NIO/PDO/PD NANO ELECTRODE MATERIAL FOR SUPERCAPACITOR APPLICATION	Irum Shaheen Khuram Shahzad Ahmad	Fatima Jinnah Women University PAKISTAN
EFFECT OF MACHUNUNG PARAMETERS ON SURFACE ROUGHNESS AND MATERUAL REMOVAL RATE UN MACHUNUNG OF POM C GF 25% USUNG PCD TOOL	Djouambi Nahla Pr. Mohamed Athmane Yallese Dr. Kaddeche Mounia Gasmi Boutheyne	May 8th 1945 University Algeria
MODELING AND MULTI-OBJECTIVE OPTIMIZATION FOR MINIMIZING CUTTING FORCE AND MAXIMIZING PRODUCTIVITY FOR POM C GF 25% IN TURNING PROCESS USING PCD TOOL	Djouambi Nahla Pr. Mohamed Athmane Yallese Dr. Kaddeche Mounia Gasmi Boutheyne	May 8th 1945 University Algeria
INTERVAL-VALUED Q-RUNG ORTHOPAIR FUZZY ACZEL-ALSINA OPERATIONS-BASED BONFERRONI MEAN AGGREGATION OPERATORS AND THEIR APPLICATIONS	Wajid Rasool Jawad Ali	Kohat University Pakistan
EXISTENCE OF SEVERAL 1:1 ENTRAINMENT REGIONS IN THE ARNOLD ONION DIAGRAM	Aisha Azmat Emel Khan	Kohat University Pakistan
NUMERICAL SIMULATION OF A PROTON EXCHANGE MEMBRANE FUEL CELL (PEMFC)	Brakni Oumaima	University of Science and Technology Houari Boumediene Algeria
RESOLUTION OF SCHRODINGER EQUATION WITH PSEUDO HARMONIC POTENTIAL VIA NIKIFOROV- UVAROV (NU) METHOD	REGGAB Khalid	Ziane Achour University Algeria
COMPARATIVE STUDY OF THE PERFORMANCE OF PEM FUEL CELLS WITH DIFFERENT FLOW FIELDS	Brakni Oumaima Chabab Sabrina Kerboua Yasmina Ziari	University of Science and Technology Houari Boumediene Algeria

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**23.03.2023 / Session-1, Hall-6**  
**Ankara Local Time: 09:00 – 11:00**  
**Moderator: Prof. Oleksii MAKARENKO**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
THE POLITICAL SITUATION IN KARABAKH DURING THE AZERBAIJAN DEMOCRATIC REPUBLIC AND THE KARABAKH AND ZANGAZUR ISSUE IN PARLIAMENTARY DOCUMENTS	Nurlana Malikli	Lankaran State University Azerbaijan
"IMPLEMENTATION OF INTERNATIONAL HUMANITARIAN LAW – CASE STUDY OF 1992-1993 ABKHAZIAN ARMED CONFLICT"	Dr. Prof. Mariam Jikia	Georgian Technical University Georgia
THE ROLE OF EUROPEAN UNION IN CONFLICT RESOLUTION – CASE STUDY OF 2008 RUSSIA-GEORGIA WAR	Dr. Prof. Mariam Jikia	Georgian Technical University Georgia
INDONESIA'S GEOPOLITICS AND THE IMPLEMENTATION OF THE ARCHIPELAGO'S INSIGHT	Ardina JANIBAH Lita Dwi ARIYANTI Hendri Hermawan ADĪNUGRAHA Ade GUNAWAN Ria Anisatus SHOLĪHAH	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
RUSSIA'S PLAN TO LAND ON THE BOSPHORUS OF ISTANBUL IN THE LAST QUARTER OF THE XIX CENTURY	Gökhan Arslan	"Federal University of Kazan (Volga region) Kazan, Republic of Tatarstan, Russian Federation"
THE QUESTION OF THE STRAITS IN RUSSIAN-TURKISH RELATIONS IN THE BEGINNING OF THE XX CENTURY	Gökhan Arslan	"Federal University of Kazan (Volga region) Kazan, Republic of Tatarstan, Russian Federation"
THE BEGINNINGS AND UNFOLDING OF THE GRAND DUCHY OF LITHUANIA	Sándor FÖLDVÁRI	Debrecen University Hungary
DIGITIZED DATABASES OF OLD-PRINTED CYRILLIC BOOKS IN EAST EUROPE: THE CASES OF LITHUANIAN AND BELARUSIAN LIBRARIES	Sándor FÖLDVÁRI	Debrecen University Hungary
PROTECTION OF SEXUAL INTEGRITY (FREEDOM) OF CITIZENS DURING WAR BY INTERNATIONAL CRIMINAL LAW: UKRAINE CASE	Prof. Oleksii MAKARENKO	Zaporizhzhia National University Ukraine

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**23.03.2023 / Session-1, Hall-7**  
**Ankara Local Time: 09:00 – 11:00**  
**Moderator: Major Gheorghe GIURGIU**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
"ULTRASOUND AND DOPPLER INVESTIGATIONS OF THE PROJECTION OF THE FACIAL ARTERY ON THE SKIN"	Anar Abdullayev Sevda Garayeva Nigar Allahverdiyeva Zemfira Nadirli	Azerbaijan Medical University AZERBAIJAN
GUT DYSBIOSIS IN DOGS WITH SPINAL CORD INJURY: IMPACT OF POLENOPLASMIN	Major Gheorghe GIURGIU Prof. Dr. Manole COJOCARU	Deniplant-Aide Sante Medical Center, Biomedicine, Bucharest, Romania Titu Maiorescu University Romania
STRUCTURE-BASED DRUG REPURPOSING TO INHIBIT THE DNA GYRASE OF MYCOBACTERIUM TUBERCULOSIS	Balasubramani G L Rinky Rajput Rakesh Bhatnagar Abhinav Grover	Jawaharlal Nehru University, New Delhi, India
THE OUTCOME OF THE TREATING INDIGESTION SYNDROME ASSOCIATED WITH GALLSTONES	Gasimova K.F.	Azerbaijan Medical University AZERBAIJAN
EPIDEMIOLOGY OF FEMALE THYROID CANCER, A RETROSPECTIVE STUDY OVER 21 YEARS IN THE STATE OF BATNA, ALGERIA, BETWEEN 1995 AND 2015	Imene Nourani Fayçal Beichi Messaouda Oudjehih	local public health establishment, ElMaader. Btana, Algeria University Batna2, Algeria
DETERMINANTS OF BREAST CANCER SURVIVAL IN BATNA, ALGERIA, 2010-2012	Nourani I Beichi F Oudjehih M Benbrahim W Deltour I	University Batna 2 Algeria
SUSCEPTIBILITY OF AVIAN CORONAVIRUS INFECTIOUS BRONCHITIS VIRUS TO THYMOQUINONE IN VITRO	Rim Rezagui Mohamed Oukessou Siham Fellahi	Physiology and Therapeutic Unit, Agronomy and Veterinary Institute Hassan II, Rabat B.P. 6202, Morocco
INCESTUOUS ABUSE BY BLOOD RELATIVES (A Case Study of Forensic Medicine Forensic Linguistics)	Fadhilah Hayati Husni Rahman Yoga	University of North Sumatra Indonesia State Islamic University of North Sumatra Indonesia

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**23.03.2023 / Session-2, Hall-1**  
**Ankara Local Time: 11:30 – 13:30**  
**Moderator: Hendri Hermawan Adinugraha**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
CONVENTIONAL TOURISM AND HALAL TOURISM: A COMPARATIVE STUDY	Hendri Hermawan Adinugraha Razie bin Nasarruddin Rizky Andrian	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia Armug Oil & Gas Academy, Malaysia
HALAL LABELS ON COSMETICS AS A FACTOR TO CONSIDER IN MAKING PURCHASING DECISIONS	Nurul Karimah Cintia Salsabila Dian Fuadah Hendri Hermawan Adinugraha	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
THE ROLE OF COMMUNITY WAKAF TOWARDS THE DEVELOPMENT OF THE SOVEREIGN ECONOMY OF INDONESIA	Khoirum Rodhiatu Ifa Hendri Hermawan ADINUGRAHA SUSMININGSIH Ali MUHTAROM	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
HALAL FOOD BUSINESS: POTENTIAL AND OPPORTUNITIES IN INDONESIA	Dhimas Ilham SEJATI Hendri Hermawan ADINUGRAHA SUSMININGSIH Ali MUHTAROM	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
VERSES AND HADITH ECONOMIC MOTIVATION	Fatma Azzahra Puspita SARI Achmad Tubagus SURUR Hendri Hermawan ADINUGRAHA Ade GUNAWAN Ria Anisatus SHOLIAH	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
PUBLIC RELATIONS MANAGEMENT STRATEGIES AND TECHNIQUES	Dyah Ratna ROHMANIA Muhammad Khoirul FIKRI Hendri Hermawan ADINUGRAHA Ade GUNAWAN Ria Anisatus SHOLIAH	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
IMPLEMENTATION OF DEMOCRACY IN INDONESIA	HUSNI FADHILAH LITA DWI ARIYANTI Hendri Hermawan ADINUGRAHA Ade GUNAWAN Ria Anisatus SHOLIAH	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
SHARIA FINANCIAL LITERACY FOR DISABILITIES COMMUNITIES: CASE STUDY OF DISABILITIES COMMUNITIES IN INDONESIA	Indra Purnama DANJARSO Hendri Hermawan ADINUGRAHA SUSMININGSIH ALI MUHTAROM	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
PUBLIC RELATION : THEORY AND CONCEPT	Tri Ayu WIDYASTUTI Muhammad Khoirul FIKRI Hendri Hermawan ADINUGRAHA Ade GUNAWAN Ria Anisatus SHOLIAH	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia

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**23.03.2023 / Session-2, Hall-2**  
**Ankara Local Time: 11:30 – 13:30**  
**Moderator: Najma AZIMA**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
EXPORT OF HALAL COSMETIC PRODUCTS: POTENTIAL AND OPPORTUNITIES IN INDONESIA	Adhi Riza AULIA Muhammad Khoirul FIKRI Hendri Hermawan ADINUGRAHA Ade GUNAWAN Ria Anisatus SHOLIHAH	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
PUBLIC RELATIONS AND CRISIS MANAGEMENT: THEORY AND CONCEPT	Nailun NAJA Muhammad Khoirul FIKRI Hendri Hermawan ADINUGRAHA Ade GUNAWAN Ria Anisatus SHOLIHAH	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
ORGANIZATIONAL MANAGEMENT ARTICLES	Naila HALISYA TAMAMUDIN Hendri Hermawan ADINUGRAHA Ade GUNAWAN Ria Anisatus SHOLIHAH	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
INDONESIAN NATIONAL IDENTITY	Najwa AZMI Lita Dwi ARIYANTI Hendri Hermawan ADINUGRAHA Ade GUNAWAN Ria Anisatus SHOLIHAH	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
THE CONCEPT OF REGIONAL AUTONOMY AND ITS IMPLEMENTATION IN INDONESIA	Najma AZIMA Lita Dwi ARIYANTI Hendri Hermawan ADINUGRAHA Ade GUNAWAN Anisatus SHOLIHAH	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
SWOT ANALYSIS OF COMPANIES IN INDONESIA	Shafa Nissa AUDIA Muhamad Khoirul FIKRI Hendri Hermawan ADINUGRAHA Ade GUNAWAN Ria Anisatus SHOLIHAH	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
REALIZING THE CONCEPT OF CIVIL SOCIETY IN INDONESIA	Nailatul ADWIYAH Lita Dwi ARIYANTI Hendri Hermawan ADINUGRAHA Ade GUNAWAN Ria Anisatus SHOLIHAH	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
VERSES AND HADITH REGARDING WAKAF EMPOWERMENT	Muhammad Khoirul ANWAR iMuhamad iMASRUR Hendri Hermawan ADINUGRAHA Ade GUNAWAN Ria Anisatus SHOLIHAH	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia

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**23.03.2023 / Session-2, Hall-3**  
**Ankara Local Time: 11:30 – 13:30**  
**Moderator: Ananda MEILANI**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
PUBLIC RELATIONS CONSULTANT	Arsen Adhita SENDI Muhammad Khoirul FIKRI Hendri Hermawan ADINUGRAHA Ade GUNAWAN Ria Anisatus SHOLIHAH	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
CONSTITUTION AND UUD 1945	Feby Risqi PANGESTU Lita Dwi ARYANTI Hendri Hermawan ADINUGRAHA Ade GUNAWAN Ria Anisatus SHOLIHAH	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
PANCASILA IN THE CONTEXT OF PHILOSOPHY, IDEOLOGY AND IDENTITY	Herni NURSETIANA Lita Dwi ARIYANI Hendri Hermawan ADINUGRAHA Ade GUNAWAN Ria Anisatus SHOLIHAH	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
EJAAN DAN PERISTILAHAN BAHASA INDONESIA	Ananda MEILANI Nur Fikri Nahari FASY Hendri Hermawan ADINUGRAHA Ade GUNAWAN Ria Anisatus SHOLIHAH	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
PERAN PUBLIC RELATION DALAM PEMERINTAH DAN SEKTOR PUBLIK: STUDY KASUS DI INDONESIA	Sabiq Muhammad ZAKI Achmad Tubagus Surur Hendri Hermawan ADINUGRAHA Ade GUNAWAN Ria Anisatus SHOLIHAH	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
THE BASIC CONCEPTS OF ISLAMIC ECONOMY	Anggi SAPUTRA Muhammad Ulil ALBAB Rois SIDIQ Muhammad Aris SYAFTI Happy Sista DEVY	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
ISLAMIC MARKET MECHANISM	VATIKA DARA WATI FITRI VIRDHA AMELIA M. HADI ASFARI MUHAMMAD ARIS SAFTI HAPPY SISTA DEVY	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
DEVELOPMENT OF ISLAMIC FINANSIAL INSTITUTIONS IN INDONESIA	NAZHIFAH MEYDYNA SILVA YANDA KARTIKASARI PUTRY CAMELIA ROSANTY MUHAMMAD ARIS SAFTI HAPPY SISTA DEVY	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
LANGUAGE AS PART OF NATIONAL IDENTITY A STUDY OF THE LOCAL LANGUAGES OF INDONESIA	Windy FATMAWATI Ulfa KURNIASIH	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia

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**23.03.2023 / Session-2, Hall-4**  
**Ankara Local Time: 11:30 – 13:30**  
**Moderator: Dr.Faiz Muhammad Shaikh**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
ASSESSMENT OF SOME WHEAT VARIETIES UNDER COVID 19 AT HADEJA STATION, JIGAWA WITH LAKE CHAD RESEARCH INSTITUTE MAIDUGURI BORNO STATE, NIGERIA	Usman Abdullahi Fatima Abubakar	"Department of Agricultural Economic & Extension Lake Chad Research Institute Nigeria"
CLIMATE CHANGE AND MEGA FLOOD 2022 OF GUAVA INTERCROPPING WITH MUNGBEANS IN LARKANA	Dr.Faiz Muhammad Shaikh Shoukat Rafiue Awan Dr.Nadeem Bhatti Iqra Soomro	SZABAC-Dokri-Campus of Sindh Agriculture University Tando jam PAKISTAN
QUANTITATIVE AND QUALITATIVE CHANGES IN TYPE COMBINATIONS OF MICROMYSETS OF TECHNOGENIC SOILS IN AZERBAIJAN CONDITIONS	Assoc. Prof. Dr. Bunyatova Lala Novruz kızı Assoc. Prof. Dr. Hasanova Arzu Resul kızı Gahramanova Aida Yarış kızı	Sumqayit State University Azerbaijan
BIOLOGICAL ACTIVITY OF OLIVE OIL FROM ARID AREA IN ALGERIA	ZEMOUR Kamel CHOUHIM Kadda Mohamed Amine	Tissemsilt University Algeria
SAFFLOWER SEED MEAL (CARTHAMUS TINCTORIUS L.) QUALITY AS AFFECTED BY ENVIRONMENTAL CONDITIONS	ZEMOUR Kamel	Tissemsilt University Algeria
RAPID AND NON-DESTRUCTIVE TECHNIQUES FOR SUPERVISION OF FOOD PROCESSES	Dr. Muhammad Haseeb Ahmad Mr. Muhammad Faizan Afzal	University Faisalabad Pakistan
BIODIVERSITY AND MEDICINAL PLANT RESOURCES OF SOUTHEAST MOROCCO: AN ETHNOBOTANICAL INVESTIGATION	Younesse EL-OUAZZANI Fouad MSANDA Khalil CHERIFI	Laboratory of Microbial Biotechnology and Plant Protection, Faculty of Sciences, Agadir, Morocco
STUDY OF THE PERFORMANCE EVALUATION OF THE EL-KALA WASTEWATER TREATMENT PLANT (North-East Algeria)	Kherifi wahida Hecini linda Khadidja Bouzid Fedia Bekiri Ben Malek Ahmed Amiri khaled Bekari naceur el dine	Badji-Mokhtar University Algeria

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**23.03.2023 / Session-2, Hall-5**  
**Ankara Local Time: 11:30 – 13:30**  
**Moderator: Assist. Prof. Dr. Orhun BÜYÜKKARCI**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
SYSTEM OF FORMING STUDENTS COMPARATIVE SKILLS	Əskərova Fidan Zəmani qızı	Azerbaijan State Pedagogical University Azerbaijan
COMPARATIVE ANALISES OF PERSONNEL MANAGEMENT MODELS	Gunel Babayeva	Azerbaijan University
THE LANGUAGE CHARACTERISTICS OF WISDOM QUOTES IN NIZAMI GANJAVI'S MASNAVIS (EPIC WORKS)	Asmetkhanum Mammadova	Azerbaijan, Baku State University
SPATIALIZATION IN NARRATIVE DISCOURSE AND AN APPLICATION	Assist. Prof. Dr. Orhun BÜYÜKKARCI	Mardin Artuklu University Türkiye
NATIONAL THINKING AND NATIONALITY IN THE WORK OF THE AZERBAIJANI POET HUSEYN JAVID "TOPAL TEYMUR"	Hüseyn HÜSEYNLİ	Azerbaijan University
"DITCH THAT TURNED INTO A 'WAVE' OR THE BRAVE SOUTH AZERBAIJAN GIRL"	NASIROVA FIDAN YAQUB	Azerbaijan National Academy of Science
THE QUESTION OF STYLE IN LITERARY TRANSLATION: A HAUNTED HOUSE	Assist. Prof. Dr. Selen TEKALP	Dicle University Türkiye
A RESEARCH IN TERMS OF SOCIAL ENGINEERING ON THE PAST, PRESENT AND FUTURE OF PUBLIC RELATIONS	Res. Assist. Anıl Uğur Oğuzcan Prof. Dr. Ebru Özgen	Marmara University Türkiye
AN APPROACH TO THE SENSE OF DEATH AND ENTOMBMENT CEREMONIES IN THE CONTEXT OF THE MOUNTAIN CULT OF TURKS	Yavuz ERTÜRK	Ankara Yıldırım Beyazıt University Türkiye
ANATOLIAN WISDOM ATTEMPT OF IDENTIFICATION	Yavuz ERTÜRK	Ankara Yıldırım Beyazıt University Türkiye

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**23.03.2023 / Session-2, Hall-6**  
**Ankara Local Time: 11:30 – 13:30**  
**Moderator: Prof. Dr. Ali BAYKAL**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
STUDENTS ASSESSMENT OF ONLINE EDUCATION DURING THE COVID-19 EPIDEMIC: AN ANALYSIS	Zohaib Hassan	Superior University Pakistan
INCLUSIVE EDUCATION AND TERTIARY INSTRUCTION. NEW QUESTIONS IN THE TRADITION OF DISABILITY STUDIES	Phd student Carlotta Antonelli	University of Rome Italy
PHENOMENA AND PROBLEMS ACCOMPANYING CHILD DEVELOPMENT IN OUR SCHOOLS	Ermira Ymeraj	University “Luigj Gurakuqi” Shkodër Albania
MEASUREMENT OF COGNITIVE FLEXIBILITY WITH NUMERALS	Prof. Dr. Ali BAYKAL	Bahçeşehir University Türkiye
CONJUGATE QUALITIES EXPECTED OF INSTRUCTIONAL MEDIA	Prof. Dr. Ali BAYKAL	Bahçeşehir University Türkiye
E-LEARNING AND COVID-19: CHALLENGES AND RESOURCES OF WORKING MOTHERS WITH YOUNG KIDS	Kiran Ikram Dr. Asma Seemi Malik Dr. Tayyaba Sohail	Lahore College for Women University Pakistan
BOOK PHOTOGRAPHS ON SOCIAL MEDIA	Irina-Ana DROBOT	Technical University of Civil Engineerng Bucharest Romania
UNIVERSAL DESIGN FOR LEARNING: ENSURING ACCESSIBLE LEARNING ENVIRONMENT FOR STUDENTS WITH SPECIAL EDUCATIONAL NEEDS IN AN INCLUSIVE CLASSROOM SETTINGS	Fr. Baiju Thomas	Ramakrishna Mission Vivekananda Educational and Research Institute India
PRESCHOOL EDUCATION CHALLENGES AND THE NEED FOR ALTERNATIVE EDUCATION	Nino Kitoshvili	Invited Lecturer of Georgian National University SEU

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**23.03.2023 / Session-2, Hall-7**  
**Ankara Local Time: 11:30 – 13:30**  
**Moderator: Chems Eddine BOUKHEDIMI**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
FACTORS INFLUENCING MOTORCYCLE ACCIDENTS AMONG P-HAILING RIDERS	Muhammad Sidnan Abyan Azman Mohamed Mohd Khairul Afzan Mohd Lazi Muhammad Isran Ramli	Universiti Teknologi Malaysia Hasanuddin University Indonesia
PROTECTION OF MARINE RESOURCES: BASIS FOR POLICY MAKING ON ILLEGAL FISHING	Dr. Froilan D. Mobo	"Department of Research, Development and Extension Philippine Merchant Marine Academy, Philippines"
PREDICTIVE ACCURACY OF THE ALTMAN AND ZMIJEWSKI MODELS WITH COMPANY SIZE AS AN EXPLANATORY VARIABLE IN SHARIA HOTEL, RESTAURANT AND TOURISM SECTOR COMPANIES IN INDONESIA	Muhammad Taufiq Abadi	State Islamic University K.H. Abdurrahman Indonesia
"STRENGTHENING GROUP INSTITUTIONAL CAPACITY IN ENCOURAGING THE ACCELERATION OF DIGITALIZATION TRANSFORMATION AND DEVELOPMENT OF OYSTER MUSHROOM MICRO AND SMALL ENTERPRISE"	Pringgo Dwiyantoro Edi Kusniadi Muhammad Sidnan Abyan Munajat	Bandung Institute of Technology, Indonesia
"DIGITAL-BASED INFORMATION TECHNOLOGY FOR HEALTHY TRADITIONAL MARKETS DURING THE COVID-19 PANDEMIC: A CASE STUDY IN RENGAT CITY, INDONESIA."	Pringgo Dwiyantoro Muhammad Sidnan Abyan Tuntun Salamaton Zen Kartib Bayu	Bandung Institute of Technology, Indonesia Universiti Teknologi Malaysia
ANALYSIS OF WILLINGNESS TO PAY MORE FOR ORGANIC FOOD: COMPARISON STUDY BETWEEN TURKISH AND ALGERIAN CONSUMERS	Chems Eddine BOUKHEDIMI	University of Tizi Ouzou Algeria
THE IMPORTANCE OF DEVELOPING THE HALAL INDUSTRY THROUGH TECHNOLOGICAL ADVANCEMENTS IN THE ERA OF SOCIETY 4.0 TO ENSURE THE SAFETY AND SUSTAINABILITY OF HALAL PRODUCTS	Suci Wiji Asih Hendri Hermawan Adinugraha M. Aris Syafi'i Happy Sista Devy	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
STRATEGY FOR ALLOCATION OF ADEQUATE PLACE TO SUPPORT THE EXISTENCE OF STREET TRADER WITH THE FOOD COURT CONCEPT	Aprillia MAHARANI Hendri Hermawan ADINUGRAHA M. Aris SYAFI'I Happy Sista DEVY	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
OPTIMIZING AND IMPLEMENTING PENTAHHELIX AS AN ELEMENT OF SUCCES IN THE DEVELOPMANT OF CREATIVE ECONOMY BASED TOURISM VILLAGES IN KALIBAKUNG TEGAL HERBAL HEALTH TOURISM	Mohammad Adi Windiarko Hendri Hermawan Adinugraha M. Aris Syafi'i Happy Sista Devy	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia

**23.03.2023 / Session-3, Hall-1**  
**Ankara Local Time: 14:00 – 16:00**  
**Moderator: Dr. Mrs. Seema S. Desai**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
THE RULINGS OF THE DEFECTIVE HADITH, INJURIOUS AND NON-INJURIOUS DEFECT IN TERMS OF ARGUMENT AND CONSIDERATION	HASHIM ISMAIM IBRAHIM BAJALANI	Koya University Iraq
ASSESSING THE IMPACT OF THE INTERNET AS A LEARNING RESOURCE AMONG STUDENTS AT SOME SELECTED POLYTECHNICS IN NORTHEAST NIGERIA	SALEH Umar AWWAL Ayuba Darki	"Nigeria Fed. Poly. Nigeria Public administration department"
THE STUDY OF SOCIAL MEDIA ANALYTICS TO ENHANCE THE PERFORMANCE OF THE PLATFORM AND INCREASE THE USER ENGAGEMENT	Dr. Mrs. Seema S. Desai Ms. Aishwarya Shinde	Rajarambapu Institute of Technology India
"IMPLEMENTATION OF DIGITAL-BASED MARKET INFORMATION TECHNOLOGY IN THE PEOPLE'S MARKET, RENGAT CITY, INDONESIA"	Muhammad Sidnan Abyan Pringgo Dwiyanoro Tuntun Salamatur Zen Kartib Bayu	Universiti Teknologi Malaysia Bandung Institute of Technology, Indonesia
A STUDY OF INVESTORS AWARENESS AND PREFERENCES TOWARDS VARIOUS MUTUAL FUNDS SCHEMES IN WESTERN MAHARASHTRA WITH SPECIAL REFERENCE NIPPON INDIA MUTUAL FUND	Dr. Mrs. Seema S. Desai Mr. Prasad Patil	Rajarambapu Institute of Technology India
A STUDY OF MARKETING MIX WITH SPECIAL REFERENCE SAMPATRAO DESHMUKH COOP MILK UNION LIMITED. KADEPUR	Dr. Mrs. Seema S. Desai Mr. Shubham Mohite	Rajarambapu Institute of Technology India
A STUDY ON CASH FLOW STATEMENT WITH REFERENCE TO MANUGRAPH INDIA LTD	Dr. Mrs. Seema S. Desai Miss. Manaswi Mahendra Kumbhar	Rajarambapu Institute of Technology India
A STUDY OF INVESTORS AWARENESS & PREFERENCES TOWARDS VARIOUS MUTUAL FUNDS SCHEMES IN WESTERN MAHARASHTRA WITH SPECIAL REFERENCE ADITYA BIRLA SUN LIFE MUTUAL FUND	Dr. Mrs. Seema S. Desai Mr. Digambar Vijay Bhusari	Rajarambapu Institute of Technology India
A STUDY ON INVESTORS BEHAVIOUR TOWARDS MUTUAL FUNDS WITH REFERENCE TO TATA MUTUAL FUND	Dr. Mrs. Seema S. Desai Ms. Aishwarya Randive	Rajarambapu Institute of Technology India

**23.03.2023 / Session-3, Hall-2**  
**Ankara Local Time: 14:00 – 16:00**  
**Moderator: Basma BENBOUYA**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
SIMULATION STUDY OF THE EFFECT OF WELD BEAD CLAMPING DISTANCE OF SHEETS ON THE TEMPERATURE GRADIENT OF ELECTRIC ARC WELDING OF A3 STEEL SHEETS	Bourebhou Amor Bendifallah Mourad Mezoudj Mourad Fedaoui Kamel Rezgue Iman Belloufi Abderrahim	University of Constantine Algeria University of Batna Algeria Kasdi Merabh Ouargla University Algeria
ENERGY MANAGEMENT OF AN ELECTRIC VEHICLE WITH HYBRID STORAGE SYSTEM FUEL CELL/BATTERY	Basma BENBOUYA Hocine CHEGHIB	Badji Mokhtar Annaba University Algeria
THE USE DEMOLITION CONCRETE WASTE TO MANUFACTURE ROLLER- COMPACTED CONCRETE	Selma KAABECHE Mebarak BELAOURA	"Department of Construction Materials Research Laboratory LTPiTE, National School of Public Works, Kouba/Algeria."
THE EMPIRICAL STUDY OF A TURBOMACHINE IN AN INDUSTRIAL ENVIRONMENT BY EMD ANALYSIS	KEBABSA Tarek Babouri Mohamed Khemissi Ammar Mrabti	University 8 Mai 1945 Guelma, Algeria
STUDY OF THE DURABILITY OF CONCRETE MADE WITH RUBBER TIRE: A REVIEW	Ameur Belmouhoub Assia Abdelouahed	20 Aout 1955, Technical Science, Civil Engineering, Skikda, Algeria
USE OF ACOUSTIC EMISSION AND DIGITAL IMAGE CORRELATION TO CHARACTERIZE DAMAGE TO TREATED AND UNTREATED LUFFFA FIBER REINFORCED COMPOSITE	Massinissa Grabi Ahmed Chellil Samir Lecheb Hocine Grabi	Boumerdes University, Algeria UMMTO University, Algeria
SYNTHESIS, CHARACTERIZATION AND ANTIBACTERIAL ACTIVITY OF A TRANSITION METAL COMPLEX	Ghania BEN AZIA Louiza ZENKHRI Souheyla BOUDJEMA	Kasdi Merbah University Algeria
CONTRIBUTION TO THE THEORETICALSTUDY OF THE ELASTIC BEHAVIOUR OF AN ORTHOTROPIC COMPOSITE MATERIAL WITH ORGANIC MATRIX	Boubekeur Razika Hadjou Belaid Zakia Khaldi Smain	University of Tlemcen Algeria
MECHANICAL AND PHYSICAL PROPERTIES OF SELF CONSOLIDATING CONCRETE WITH RECYCLED AGGREGATES	BEROUA Narimene BENSEBTI Salah Eddine CHABANE Abdelhafid NGO Tien-Tung KADRI El Hadj	laboratory ,constantine university Algeria University Cergy Pontoise, Paris, France

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**23.03.2023 / Session-3, Hall-3**  
**Ankara Local Time: 14:00 – 16:00**  
**Moderator: Dr. Rabia Shabir Ahmad**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
ISOLATION OF APPLE SCAB CAUSING FUNGUS V. INAEQUALIS AND DEVELOPMENT OF DSRNA SYNTHESIZING CONSTRUCTS FOR THE SILENCING OF TARGETED GENES OF THE FUNGUS	Suhani Bhagta Anil Kant	Jaypee University of Information Technology India
EFFICIENCY OF EXTRA TREES CLASSIFIER FOR GROUNDWATER QUALITY CLASSIFICATION FOR IRRIGATION PURPOSES	Aymen Zegaar Samira Ounoki Abdelmoutia Telli	Biskra University, Algeria
NATURAL RESOURCE TO CURE DIABETES MELLITUS	Dr. Rabia Shabir Ahmad	Department of Food Science GCUF Pakistan
EVALUATION OF THE EFFICACY OF TROPONIN AS AN INDICATOR OF HEAVY METAL-INDUCED HEART DISEASE IN WISTAR RATS	AGAGUENA Rania ADJROUD Ounassa	University August 20,1955 , SKIKDA Algeria University of BATNA 2 Algeria
DRINKING WATER TREATMENT USING CACTUS AS A NATURAL COAGULANT	Abderrezaq Benalia Kerroum Derbal Amel Khalfaoui Ouiem Baatache	Higher Normal School of Constantine Algeria
USE OF ALOE VERA LEAVES FOR THE REMOVAL OF TURBIDITY BY BIO- COAGULATION: STUDY OF THE EXPERIMENTAL DESIGN	Abderrezaq Benalia Kerroum Derbal Amel Khalfaoui	Higher Normal School of Constantine Algeria University of Constantine Algeria
EXPERIMENTAL STUDY OF THE EFFECTS OF POLYETHYLENE GLYCOL ON POLYSULFONE MEMBRANE PROPERTIES	Hadjou Bélaïd Zakia Abdoune Fatima Zohra	University of Tlemcen Algeria
EVALUATION OF ANTIOXIDANT AND ANTIDIABETIC ACTIVITIES OF PLANT EXTRACTS BELONGING TO THE ASTERACEAE FAMILY	Kerkabou Abdeldjalil Boumaraf Manel Mekkiou Ratiba	Université des Frères Mentouri Constantine Algeria
STUDIES ON ASPERGILLUS FLAVUS ON TIGER NUT (CYPERUS ESCULENTUS) INCUBATED AT DIFFERENT REGIMES OF LIGHT	Udo, Abasiofon S. Kuromiayebaye Digitemie Okereke Victor C.	University of Port Harcourt, Nigeria. Department of Agricultural Technology, Federal Polytechnic Ekowe, Bayelsa State, Nigeria.

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**23.03.2023 / Session-3, Hall-4**  
**Ankara Local Time: 14:00 – 16:00**  
**Moderator: Massimo Zucchetti**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
A MINIATURISED SIERPINSKI HEXAGONAL-SHAPED FRACTAL ANTENNA FOR RADARS MONITORING	Benammar Abdelkader Bendaoudi Amina Mahdjoub Zoubir	Mustapha Stambouli, Science and Technologie, Electrical engienering, Mascara, Algeria Djillali Liabes, LEPO Lab, Electronics, Sidi Bel Abbes, Algeria.
NUCLEAR FUSION AT A TURNING POINT	Massimo Zucchetti	Plasma Science and Fusion Center, MIT, Cambridge (MA), USA
STUDY AND ANALYSIS OF HARMONICS PROPAGATION IN ELECTRICAL GRID CONNECTED PHOTOVOLTAIC SYSTEM	Yacine Djeghader Zouhir Boumous Samira Boumaous Omar Feddaoui	University of Mohamed- Cherif Messaadia Algeria
DESIGN OF A MID-INFRARED CHALCOGENIDE SLOT WAVEGUIDES SENSORS	Zegadi Rami	Ferhat Abbas University Sétif Algeria
MODELING OF DIELECTRIC ABLATION INDUCED BY ULTRASHORT LASER PULSES	Boultif Oussama Beddiaf Zaidi Bouzbier Anfel	University of Batna1 Algeria
ELABORATION ET CARACTÉRISATION DES MATÉRIAUX MESOPOREUX DE TYPE AG/SBA15	Boughedir nadia Bailiche Zohra	Université de Tlemcen Algeria University of Ain t émouchent chemistry laboratory; Algeria
A NOVEL APPROACH TO CLEANING PHOTOVOLTAIC PANELS UTILIZING AN ELECTRIC WIND.	Bendaoudi Zeid Namoune abdelhadi Kadous Nezha Tilmatine Amar	University Ahmed Zabana Algeria
AN ANALYSIS OF THE HEAT EXCHANGE PERFORMANCE AND SECOND LAW VIEWPOINT FOR MHD FORCED CONVECTION IN A U-BEND HEAT EXCHANGER	Zakaria Korei	University of Mentouri Brothers Constantine1 Algeria
THE FLOW RATE AND THE TURBINE INLET TEMPERATURE EFFECT ON SUPERCRITICAL ORGANIC RANKINE CYCLE PERFORMANCE	Dhikra Derbal	Badji Mokhtar University Algeria
SIMULATIONS OF MICROFLUIDIC T-JUNCTION BUBBLE GENERATION USING THE TWO-PHASE LEVEL SET METHOD	Tayeb Sakhi Abdelkader fidjah	University of Science and Technology Houari Boumediene Algeria University of Djelfa Algeria

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**23.03.2023 / Session-3, Hall-5**  
**Ankara Local Time: 14:00 – 16:00**  
**Moderator: Bendaoudi Zeid**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
NEW AUTOMATIC SELF-WATERING SYSTEM FOR AGRICULTURAL LAND	Bendaoudi Zeid	University Ahmed Zabana Algeria
EFFECT OF SALT STRESS ON THE GERMINATION CAPACITY OF DURUM WHEAT ( <i>Triticum durum</i> Desf.)	CHOUHIM Kadda ZEMOUR Kamel	Tissemsilt University Algeria
EFFECT OF SALINITY ON SOILLESS EGGPLANT ( <i>Solanum melongena</i> L.)	CHOUHIM Kadda ZEMOUR Kamel	Tissemsilt University Algeria
ELABORATION AND CHARACTERIZATION OF A BIOMATERIAL MODIFIED FROM SNAIL SHELL TO ELIMINATE METHYL VIOLET 2B	MEFTAH Sara	University of Tlemcen Algeria
BEHAVIOUR OF MORTAR BASED ON BLAST FURNACE SLAG TO CHEMICAL ATTACKS	Abderrahim GUETTECHE Rima BOUTAKOUK Salah Eddine BENSEBTI Abdelhafid CHABANE Tien-tung NGO El Hadj KADRI	Université Constantine Algeria
EVALUATION OF THE RELATIONSHIP BETWEEN CERTAIN POMOLOGICAL CHARACTERISTICS OF FOUR VARIETIES OF OLIVE TREE <i>OLEA EUROPEA</i> IMPLANTED IN ARID ZONES (BISKRA ALGERIA) AND THEIR INDUSTRIAL YIELD OF THE METHOD OF COLD EXTRACTION OF OLIVE OIL.	Mr. KHAMKHOUM SAMIRA Mr. BOUKHALFA HASSINA HAFIDA MR.MENACER SALIM MR. ZAGHOUANI AMEUR	University of Mohamed Khaider Biskra Algeria
THE EFFECT OF THE METHOD OF FERTILIZATION WITH HUMIC ACIDS IN LIQUIDS IN THE YIELD OF THE CULTIVATION OF MELON UNDER GREENHOUSE IN THE ARID ZONES CASE OF BISKRA	ZAGHOUANI Ameur HADJEB Ayoub KHAMKHOUM Samira HAMADI Amina	University of Mohamed Khaider Biskra Algeria
"EVALUATION OF AGRONOMICAL AND PHYSIO-BIOCHEMICAL TRAITS IN INDIAN POTATO VARIETIES UNDER DIFFERENT NITROGEN REGIMES UNDER AEROPONICS"	Rasna Zinta Jagesh Kumar Tiwari Tanuja Buckseth Ajay Kumar Thakur Umesh Goutam	Indian Council of Agricultural Research (ICAR) India
INFLUENCE OF THE USE OF TREATED WASTEWATER ON THE PHYSICO-CHEMICAL AND BIOCHEMICAL QUALITIES OF CITRUS FRUITS IN THE WILAYA OF MOSTAGANEM (STEP OF BOUGUIRAT)	Djilali Mohamed Dahmouni Said Mustapha kamel fodil	Abdelhamid Ibnbadis University MOSTAGANEM Algeria
BIODIVERSITY OF CEREAL WEEDS IN THE NORTHERN ZONE OF THE SETIF REGION	HAMMADI AMINA ZAGHOUANI AMEUR	University Ferhat ABBAS Sétif1 Algeria University Mohammed khidher Biskra Algeria

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**23.03.2023 / Session-3, Hall-6**  
**Ankara Local Time: 14:00 – 16:00**  
**Moderator: Dr.Nassima RIOUCHI**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
EFFECT OF SINTERING ATMOSPHERE ON CRYSTALLIZATIONS, POROSITY AND THERMAL EXPANSION COEFFICIENT OF CORDIERITE CERAMIC	Dr.Nassima RIOUCHI Dr.Oussama RIOUCHI Prof.Dr. Mohamed LOUOU Prof.Dr. Mohamed ABOU-SALAMA	Mohamed 1st University, Morocco
INVESTIGATION OF THE STRUCTURAL, ELECTRONIC AND MAGNETIC PROPERTIES OF THE COMPOUND SmX (X: P, Sb) RARE-EARTH BY THE FP-LAPW METHOD	Ezzine Mohammed Chams Eddine Ezzine Kawther Fatma Zohra	University of Djillali Liabes Algeria
MINIATURIZED SIW TRAVELING WAVE ANTENNA ARRAY DESIGN FOR SUB-TERAHERTZ APPLICATIONS	Nabil Cherif Mehadji Abri Benzerga Fellah	Mustapha Stambouli University Algeria Abou Bekr Belkaid University Algeria
NUMERICAL SIMULATION OF p-GaN/ i-InGaN/n-GaN PHOTO-DIODES	Mourad Kaddeche Zine Eddine Kaddeche	Djilali Bounaama University Algeria Bilecik Şeyh Edebali University Türkiye
SYNTHESIS AND DESIGN OF [ACETANILIDECADMIUM-2 MALIC ACID] COMPLEX FOR WATER DEPOLUTION	Nour elhouda Babaami Louiza Zenkhri Souhyla Boudjema	University Kasdi Merbah Algeria University of Tlemcen Algeria
BOUND STATE SOLUTIONS OF THE SCHRODINGER EQUATION WITH KRATZER PLUS GENERALIZED MORSE POTENTIAL FOR SELECTED DIATOMIC MOLECULES	Ferdjaoui Mostapha	Constantine University Algeria
MONITORING OF THE OPERATING PERFORMANCE OF A WASTEWATER TREATMENT STATION	BENAKCHA MANSOURA	Mohammed Khider University Algeria
ON THE STRUCTURAL AND MAGNETOTRANSPORT PROPERTIES OF THE DOUBLE-LAYERED MANGANITE LA 1.4 SR 1.6 MN 1.8 ZN 0.2 O 7	Akrem Bellouti Nabil Mahamdoua Cabir Terzioglu Fatih Denbri Sevgi Polat Altintas	University Mohamed SedikBenYahia of Jijel Algeria AIB University Türkiye
OPTIMIZATION OF HEAT TRANSFER IN SHELL AND TUBE HEAT EXCHANGERS FOR SALINE WATER DESALINATION	Tayeb SAKHI Abdelkader FIDJAH	University of Sciences and Technology Houari Boumediene Algeria University of Djelfa Algeria

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**23.03.2023 / Session-3, Hall-7**  
**Ankara Local Time: 14:00 – 16:00**  
**Moderator: Ouiem Baatache**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
ENHANCED EXTRACTION OF ACTIVE COAGULANT AGENTS FROM PINE CONE POWDER FOR WASTEWATER TREATMENT	Ouiem Baatache	"National Polytechnic School of Constantine Algeria"
NEW BUFFER LAYER FOR CISe THIN FILM SOLAR CELLS	Ghezal Fathi Yagoubi Malek	Enset Skikda, Physics,Skikda, Algeria
PYSICO-MECHANICAL MODIFICATIONS MADE BY RECYCLED CONCRETE SAND TO PLASTIC MORTAR	Imene Bouldoum Toufik Boubekeur Karim Ezziane	University of HASSIBA BENBOUALI Algeria University of Ahmed Benyahia El Wancharissi Algeria
BUFFER LAYER IMPROVEMENT FOR HIGH-EFFICIENCY CZTS/CTZSE/CTZSSE SOLAR CELLS	Bouchelaghem Aissa Bouloufa Abdeslam	Ferhat Abbas Setif-1 University Algeria
GREEN SYNTHESIS OF POLYAMIN BY USING OF MAGHNITE-H+ AND MAGHNITE-NA+, AS A SOLID CATALYST MONTMORILLONITE TYPE 'ALGERIAN CLAY'	DERKAOUI Samira BELBACHIR Mohammed	University of ORAN 1 Ahmed Ben Bella Algeria
TRANSVERSE PHOTONS SELF ENERGY AT NEXT TO-LEADING ORDER IN HOT SCALAR QED	Karima Bouakaz Amel Youcefi	Ecole Normale Supérieure, Department of Physics Algeria
ESTIMATION OF PHOTOVOLTAIC CELLS/MODULES PARAMETERS HARRIS HAWKS OPTIMIZATION TECHNIQUE	Youcef Halali Touhami Ghaitaoui Ouledali omar Ghaitaoui Ahmed Essama	Laboratoire de Développement Durable et Informatique Algeria
GROWTH KINETICS OF IRON BORIDES BY SLURRY COATING TECHNIQUE ON XC38 STEEL	Ahmed Daas Khelifi Halima Omar Allaoui	University of Laghouat Algeria
THE STUDY OF THE HISTORIC INDOOR MICROCLIMATE TO CONTRIBUTE TO THE PRESERVATION OF THE RESIDENTIAL HERITAGE	Dr.BENCHEKROUN Marwa Dr. BABA SLIMANE Nour El Houda	University Saad Dahleb of Blida Algeria Polytechnic School of Architecture and Urban Plannin Algeria
FROM THE MEDINA TO THE METROPOLIS AND FROM TH HORSE-DAWN CARRIAGE TO THE METRO: THE IMPACT OF URBAN EVOLUTION ON THE HISTORY OF TRANSPORT IN ALGIERS	Dr. BABA SLIMANE Nour El Houda Dr. BENCHEKROUN Marwa Prof. BAOUNI Tahar	Polytechnic School of Architecture and Urban Plannin Algeria

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**23.03.2023 / Session-4, Hall-1**  
**Ankara Local Time: 16:30 – 18:30**  
**Moderator: Sami Bouterra**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
IDENTIFICATION OF SYMMETRICAL CRACK DIMENSIONS BY EDDY CURRENT TECHNIQUE FOR A STEEL PLATE	Aldjia Chaalani Dahmane Hachi Bachir Helifa Iben Khaldoun Lefkaier Mouloud Feliachi	University of Laghouat Algeria University of Djelfa Algeria University of Nantes France
REAL TIME ULTRASOFT LONGITUDINAL PHOTONS SELF ENERGY AT NEXT TO-LEADING ORDER IN HOT SCALAR QED	Karima Bouakaz Amel Youcefi	Laboratoire de Physique des Particules et de Algeria
"STUDY AND SIMULATION OF SELF-SUPPLY OF A BUILDING BY PHOTOVOLTAIC ENERGY: CASE OF AN LDDI LABORATORY UNIV_ADRAR ALGERIA"	Ghaitaoui Touhami Ben moussa Feryal Foujir Lamia	Laboratoire de Développement Durable et Informatique (LDDI) Algeria
THE EFFECT OF QUENCHING AFTER BORIDING TREATMENTS TO OBTAIN A HARDNESS GRADIENT ON X70 STEEL	Khelifi Halima Daas Ahmed Sami Zidelmel	University of Laghouat Algeria
NUMERICAL INVESTIGATION OF SUCTION SIDE MODIFICATION VIA UNDULATIONS AND SAW TOOTH WAVE SHAPE INFLUENCE ON FLOW SEPARATION OVER HAWT S809 PHASE VI BLADE	Sami Bouterra	Higher School of Industrial Technology Algeria
AB-INITIO STUDY OF SKUTTERUDITE COMPOUNDS: ELECTRONIC AND OPTICAL PROPERTIES	Fatima Garadi Ahmed lamine BEN KAMRI	Amar thlidji, science,material science, Laghouat, Algeria
CONFECTION AND CHARACTERIZATION OF ADOBE MATERIAL	SI AHMED Chabane	University of Bejaia Algeria
TIME AGING AND MOISTURE ABSORPTION OF WATER-SALTWATER EFFECTS ON TENSILE PROPERTIES OF COMPOSITE POLYESTER/GLASS A REVIEW	Djaber.Bouhafara Younes.menail	Annaba Graduate School of Industrial Technologies Plaine Ouest, LR3MI ,Annaba, Algeria
TOWARDS SMART FORMAL VERIFICATION OF SOC COMPONENTS	Lamia ELJADIRI Ismail ASSAYAD Tarik NAHHAL	Hassan II University Morocco

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**23.03.2023 / Session-4, Hall-2**  
**Ankara Local Time: 16:30 – 18:30**  
**Moderator: Aisha Azmat**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
STRUCTURAL, ELECTRONIC AND ELASTIC PROPERTIES OF THE FERROMAGNETIC PEROVSKITE $RbTaO_3$	Khadhraoui Zakaria Amara Abdelaziz Salima Labidi	University of Badji Mokhtar Annaba Algeria
THE NON-ISOTHERMAL KINETICS OF $\alpha$ -ALUMINA FORMATION IN MECHANICALLY ACTIVATED KAOLIN-ALUMINUM CERAMIC SYSTEM	Toufik Sahraoui Fateh Chouia Yousf Islem Bourezg	University of Biskra Algeria Ziane Achour University of Djelfa Algeria
APPLICATION OF ECO-FRIENDLY INHIBITORS TO PREVENT CORROSION INDUCED BY CHLORIDES IN REINFORCED CONCRETE	Amina HAROUAT Abdelillah BEZZAR Latefa SAIL	University Aboubekr Belkaid Algeria
THE IMPACT OF STATCOM AND FUZZY LOGIC ON THE PERFORMANCE OF AN HVDC LINK	MOHAMED ALI MOUSSA ABDERAHMANE AMARI	University of Chlef, Algeria
EXPLORING THE STRUCTURAL AND ELECTRONIC PROPERTIES OF CALCIUM ANTIMONY PHOSPHORUS USING DENSITY FUNCTIONAL THEORY AND WIEN2K CODE	Karbouche Khayreddine Cheriet Abderrahmane Gueffaf Hamza Haideche Zaid	Ammar Thelidji University of Laghouat Algeria
EXISTENCE OF SEVERAL 1:1 ENTRAINMENT REGIONS IN THE ARNOLD ONION DIAGRAM	Aisha Azmat	Kohat University Pakistan
FINITE ELEMENT SIMULATION OF ULTRASONICALLY ASSISTED WIRE DRAWING PROCESSES	Abdullah Basim Jasim Alla Daham Younes Ziad Shakeeb Al Sarraf	University of Mosul Iraq
GLOBAL WETLAND LOSS SCENARIO IN LIGHT OF SOCIO-ECOLOGICAL WELL-BEING PERSPECTIVES	Manabendra Let Swades Pal	University of Gour Banga Malda India

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**23.03.2023 / Session-4, Hall-3**  
**Ankara Local Time: 16:30 – 18:30**  
**Moderator: Asst. Prof. Cheikh FAYE**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
VISIBLE LIGHT COMMUNICATION: PROMISING OPPORTUNITIES FOR SMART CITIES' FUTURE DEVELOPMENT	ABDELMOULA Ahmed BOUDJENANE Fatima zohra L'ANTRI Ibrahim DEHACHE Kawther	University of Abdelhamid ibn Badis Algeria
FROM RESEARCH TO REALITY: ADVANCEMENTS AND OPPORTUNITIES IN VISIBLE LIGHT COMMUNICATION FOR WIRELESS NETWORKS	ABDELMOULA Ahmed BOUDJENANE Fatima zohra L'ANTRI Ibrahim DEHACHE Kawther	University of Abdelhamid ibn Badis Algeria
DROUGH INDEX FORECASTING USING ARIMA MODELS IN THE HODNA RIVER BASIN	LADOUALI Sabrina SAKAA Bachir CHAFFAI Hicham	University Badji Mokhtar-Annaba Algeria
TOWARDS SMART FORMAL VERIFICATION OF SOC COMPONENTS	Lamia ELJADIRI Ismail ASSAYAD Tarik NAHHAL	Hassan II University Morocco
PROPERTIES OF LINEAR DIFFERENTIAL EQUATION SOLUTIONS CLOSE TO A PUNCTURED DISK	MAZOUZ SAID SAADA HAMOUDA	University of Mostaganem (UMAB) University Mostaganem, Algeria
VARIABILITE DES PRECIPITATIONS ET DE L'ECOULEMENT DANS LE BASSIN DU FLEUVE SENEGAL	Asst. Prof. Cheikh FAYE	University of Ziguinchor Senegal
SPATIO-TEMPORAL DYNAMICS OF LAND USE CHANGES UNDER ANTHROPOGENIC IMPACT IN THE CITY OF MEKNES (MORROCOY) FROM 2000 TO 2021	El Fallah Kamal	University Ibn Toufail Morocco
COUPLED BOUNDARY AND FINITE ELEMENT METHOD FOR STABILITY ANALYSIS OF LAUNCH VEHICLE	Elena Sierikova, PhD Elena Strelnikova Denys Kriutchenko Artem Karaiev	National University of Civil Defence of Ukraine A.M. Podgorny Institute for Mechanical Engineering Problems NAS of Ukraine

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**23.03.2023 / Session-4, Hall-4**  
**Ankara Local Time: 16:30 – 18:30**  
**Moderator: Dr Ivan PAVLOVIC**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
DETECTION OF RADON AND LEAD ION IN BLOOD FROM NAJAF USING DIFFERENT DEVICES	Amjad H. Ali B. A. Almayahi	Directorate General of Education in Najaf Governorate, Najaf, Iraq University of Kufa Iraq
DYRRACHIUM (DURRES, ALBANIA) URBANIZATION IN THE 1 <sup>st</sup> -4 <sup>th</sup> CENTURIES AD: NEW ARCHAEOLOGICAL DISCOVERIES	Arlind Kasa	University "Aleksandër Moisiu" Albania
"ENHANCE THE GAS-SENSING PERFORMANCES OF METAL OXIDE (NiO) THIN FILMS FOR DETECTING NITROGEN DIOXIDE GAS"	Radhiyah M. Aljarrah Lac. Nawar Raheem Asst. Prof. Dr.Ali Al-Jawdah	University of Kufa Iraq
THE PRESENCE OF TOXOCARA CANIS AND ANCYLOSTOMIDAE SP. AT PET DOGS IN THE BELGRADE AREA	Dr Ivan PAVLOVIC	Scientific Institute of Veterinary Medicine of Serbia, Belgrade, Serbia,
TRANSITION METAL COMPLEXES OF DRUG BASED SCHIFF LIGAND: SYNTHESIS, CHARACTERIZATION AND IN VITRO BIOLOGICAL EVALUATION	Amina Mumtaz	PCSIR Laboratories Complex, Ferozepur Road, Lahore-Pakistan
SHORT DENTAL IMPLANTS WITH A PLATFORM SWITCH AND A LASER MICRO-GROOVED CORONAL DESIGN SUPPORTING SINGLE CROWNS IN PROSTHETIC REHABILITATION OF ATROPHIC POSTERIOR JAWS: A MULTICENTER RETROSPECTIVE STUDY	Rodolfo Reda Renzo Guarnieri Alessio Zanza Marco Seracchiani Dario Di Nardo Luca Testarelli	Sapienza University of Rome Italy
2D QSAR STUDIES ON A SERIES OF COUMARIN DERIVATIVES AS INHIBITORS OF CK2	Prof. Dr. Salah BELAIDI Dr.Yassmine CHENNAI	Mohamed Khaidhar University Algeria
SYNTHESIS, ANTIMALARIAL PROPERTIES AND 2D-QSAR STUDIES OF FARNESYLTRANSFERASE INHIBITORS	Dr.Yassmine CHENNAI Ouassaf Mebarka	Mohamed Khaidhar University Algeria
DOCKING AND SCORING IN VIRTUAL SCREENING FOR DRUG DISCOVERY	Dr.Yassmine CHENNAI Ouassaf Mebarka	Mohamed Khaidhar University Algeria

**23.03.2023 / Session-4, Hall-5**  
**Ankara Local Time: 16:30 – 18:30**  
**Moderator: Prof. Radoslav Baltezarević**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
THE EVOLUTION OF VISUAL ART IN CULTURAL MEDIA	Nemanja Vučković Milena Nikodijević Laze Tripkov	International university of Novi Pazar Serbia University of Niš Serbia International balcanic univestity Macedonia
PERSONIFICATION OF WOMEN IN AMELIORATION OF SCIENCE AND TECHNOLOGIES	Dr. Sagaya Aurelia	CHRIST University India
SMART CITY SIMULATION	Shilpa K , Dr. Sagaya Aurelia	CHRIST University India
DECEPTIVE ADVERTISING IN THE ONLINE ENVIRONMENT	Prof. Radoslav Baltezarević, PhD	Megatrend University Serbia
'DAVID FOUND ZIKLAG BURNED WITH FIRE': ECOTERRORISM IN NIGERIA AND PLACE OF FAITH-BASED COMMUNITIES	Favour C. Uroko Agbo, Peace Chinemeremogo	University of Nigeria
DIGITIZED THE NATIONAL ART GALLERY IN CAPITAL OF PAKISTAN – A REVIEW BY DIRECTOR (HRIMS)	MUHAMMAD FAISAL	Director (HRIMS), Ministry of Human Rights Commission, Pakistan
VERSES AND HADITS ABOUT WORK ETHICS	Ilyas SANJAYA Achmad Tubagus SURUR Hendri Hermawan ADINUGRAHA Ade GUNAWAN Ria Anisatus SHOLIHAH	UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia
THE INFLUENCE OF SOCIAL MEDIA ON YOUNG MOROCCAN VOTERS	AKESTOUR Malika KANANE Badereddine SKOURI Hassan	Ibn Zohr University Morocco

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**23.03.2023 / Session-4, Hall-6**  
**Ankara Local Time: 16:30 – 18:30**  
**Moderator: Assist. Prof. Dr. Veli Emre Kurtça &**  
**Assoc. Prof. Dr. Deniz Mertkan GEZGİN**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
THE EFFECT OF ROBOTIC CODING PRACTICES ON HIGH SCHOOL STUDENTS' REFLECTIVE THINKING SKILLS TO PROBLEM SOLVING AND ROBOTIC ATTITUDE	Assoc. Prof. Dr. Deniz Mertkan GEZGİN Osman Necip SÜMER	Trakya University Türkiye Doga College Türkiye
ASSISTIVE TECHNOLOGIES: CURRENT DEVELOPMENTS IN SPECIAL EDUCATION	Assist. Prof. Dr. Veli Emre Kurtça Assoc. Prof. Dr. Deniz Mertkan GEZGİN	Trakya University Türkiye
"APPLICATION OF MULTI-FIELD ART EDUCATION METHOD WITH DISTANCE EDUCATION TO 3rd GRADE STUDENTS IN PRIMARY EDUCATION"	Neslihan GÜNEŞ Assoc. Prof. Dr. Gonca Hülya YAYAN	Gazi University Türkiye
OPINIONS OF SCHOOL MANAGERS ON THE EMPLOYMENT OF CLEANING AND SECURITY PERSONNEL IN SCHOOLS WITHIN THE SCOPE OF A SOCIETY BENEFIT PROGRAM (CAMPLE OF YENİÇAĞA AND DÖRTDİVAN)	Prof. Dr. Türkan ARGON Fatih Mehmet GÜLMEZ	Bolu Abant İzzet Baysal University Türkiye
REASONS FOR WANTING TO BE AN EDUCATIONAL INSTITUTION	Prof. Dr. Türkan ARGON Fatih Mehmet GÜLMEZ	Bolu Abant İzzet Baysal University Türkiye
EXAMINATION OF PROFESSIONS IN SOCIAL STUDIES 5th, 6th and 7th GRADE TEXTBOOKS	Assist. Prof. Dr. Mehtap DİNÇER Mustafa BULUT	Burdur Mehmet Akif Ersoy University Türkiye
INVESTIGATION OF THE FACULTY OF SPORTS SCIENCES STUDENTS' THINKING AND BEHAVIORS RELATED TO STRESS AND ANGER PERCEIVED DURING THE EXAM PERIOD	Abdullah ARISOY Assoc. Prof. Dr. Hulusi ALP	Süleyman Demirel University Türkiye
INVESTIGATION OF SOCIAL PROBLEM SOLVING SKILLS OF STUDENTS IN FACULTY OF SPORTS SCIENCES	Büşra AKKAYA Assoc. Prof. Dr. Hulusi ALP	Süleyman Demirel University Türkiye

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**23.03.2023 / Session-4, Hall-7**  
**Ankara Local Time: 16:30 – 18:30**  
**Moderator: Prof. Dr. Abdullah ÖZDEMİR**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
FOURIER COINTEGRATION RELATIONSHIP BETWEEN INFLATION AND EXCHANGE RATE: THE CASE OF TURKEY	İbrahim Sezer BELLİLER Ahmet DEMİRALP	Harran University Türkiye
GLASS CEILING SYNDROME IN THE PUBLIC SECTOR IN SELECTED EUROPEAN COUNTRIES	Prof. Dr. Abdullah ÖZDEMİR Prof. Dr. Hatice EROL	Aydın Adnan Menderes University Türkiye
AN OVERVIEW OF WOMEN'S POVERTY IN THE WORLD	Prof. Dr. Hatice EROL Prof. Dr. Abdullah ÖZDEMİR	Aydın Adnan Menderes University Türkiye
FOURIER COINTEGRATION RELATIONSHIP BETWEEN ISE100 INDEX AND POLICY INTEREST: THE CASE OF TURKEY	Ahmet DEMİRALP İbrahim Sezer BELLİLER	Harran University Türkiye
THE REFLECTION OF FINANCIAL DEVELOPMENT AND CLEAN ENERGY INVESTMENTS ON ENVIRONMENTAL SUSTAINABLE ECONOMIC GROWTH: EVIDENCE FROM NIC COUNTRIES	Assist. Prof. Dr. Tolga ERGÜN Assist. Prof. Dr. Yusuf GÜNEYSU	Trabzon University Türkiye
RELATIONSHIP OF RENEWABLE ENERGY CONSUMPTION AND ECONOMIC GROWTH: EVIDENCE FROM TURKEY	Lect. Dr. Esra SOYU YILDIRIM	Aksaray University Türkiye
PRODUCT STRUCTURE OF IMPORT AND EXPORT IN TURKEY IN THE PERIOD 1923-1938	Assoc. Prof. Dr. Merter MERT	Ankara Hacı Bayram Veli University Türkiye
PRODUCT STRUCTURE OF TURKEY'S FOREIGN TRADE WITH MAJOR COUNTRIES IN THE PERIOD 1923-1938	Assoc. Prof. Dr. Merter MERT	Ankara Hacı Bayram Veli University Türkiye

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**24.03.2023 / Session-1, Hall-1**  
**Ankara Local Time: 09:00 – 11:00**  
**Moderator: Prof. Dr. Kelime Erdal**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
THE BASIS OF A GOOD TRANSLATION AND THE CHARACTERISTICS OF QUALIFIED TRANSLATORS	Assist. Prof. Dr. İlknur BAYTAR	Kastamonu University Türkiye
WOMEN IN FARUK NAFİZ ÇAMLIBEL'S POEMS	Prof. Dr. Kelime Erdal	Bursa Uludağ University Türkiye
THE PORTRAIT OF KÜRŞAT BUMİN AS A TRADITIONAL INTELLECTUAL: TRUTH TELLER OR FREE-FLOATING?	Assist. Prof. Dr. Eylem Akdeniz Göker	Altınbaş University Türkiye
SEA AND SEA JOURNEY IN THE POEMS OF IBN RASHİQ AL-QAYRĀWANĪ	Assist. Prof. Dr. İhsan DOĞRU	Karamanoğlu Mehmetbey University Türkiye
ZİYA GÖKALP AND İBRAHİM ALAADDİN GÖVSA'S OPINIONS ON WOMEN'S EDUCATION	Prof. Dr. Kelime Erdal	Bursa Uludağ University Türkiye
EGYPT-CENTERED SUFI EDUCATIONAL INSTITUTIONS IN THE EYYUBI PERIOD	Assoc. Prof. Dr. Mahmut DÜNDAR	Van Yüzüncü Yıl University Türkiye
READING "DUHA KOCA OĞLU DELİ DUMRUL BOYU" IN CONTEXT OF THEORIES OF HUMOR	Res. Assist. Talha ÇİÇEK	Yüzüncü Yıl University Türkiye
HUMOR IN ANATOLIAN FIELD MINSTREL BICKERING	Res. Assist. Talha ÇİÇEK	Yüzüncü Yıl University Türkiye
THE NATURE OF PRINCIPLES OF LOGIC IN AL-FĀRĀBĪ	Dr. Metin KOÇHAN	Mardin Artuklu University Türkiye
BODY LANGUAGE FOR PATIENTS WHO ARE USED BY PRIVATE HOSPITALS ON THEIR WEBSITE	Gülşah Çiftçi Assist. Prof. Dr. Ali Osman Uymaz	Alanya Alaaddin Keykubat University Türkiye

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**24.03.2023 / Session-1, Hall-2**  
**Ankara Local Time: 09:00 – 11:00**  
**Moderator: Assoc. Prof. Dr. İsmail KIRBAŞ**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
ACCELEROMETER-BASED PEDOMETER HARDWARE DESIGN FOR CATTLES	Assoc. Prof. Dr. İsmail KIRBAŞ	Burdur Mehmet Akif Ersoy University Türkiye
THE USE OF GAMIFICATION IN THE REALM OF DONATIONS FOR NON-PROFIT ORGANIZATIONS: A Q-METHOD ANALYSIS ON DONOR PERCEPTIONS	Prof. Dr. Emel KARAYEL BİLBİL Gözde NARMAN	Marmara University Türkiye
THE EFFECT OF WEB 2.0 TOOLS ON THE SUCCESS OF CELL AND DIVISION UNIT	Melike USTA Assist. Prof. Dr. Gamze KIRILMAZKAYA	Harran University Türkiye
DETERMINATION OF THE NUMBER OF STEPS FROM ACCELEROMETER DATA USING SIGNAL PROCESSING METHODS	Assoc. Prof. Dr. İsmail KIRBAŞ	Burdur Mehmet Akif Ersoy University Türkiye
STOCK PRICE PREDICTION WITH ARTIFICIAL NEURAL NETWORK BASED ON LONG SHORT-TERM MEMORY (LSTM) MODEL	Assist. Prof. Dr. Kadir KIRDA	Artvin Çoruh University Türkiye
CONSTRUCTION OF THE NAND GATE IN QUANTUM COMPUTING SYSTEMS USING QUANTUM FOURIER TRANSFORM	Murat Kurt Ayda Kaltehei Selçuk Çakmak Azmi Gençten	Ondokuz Mayıs University Türkiye
A NEW APPROACH TO SOLVING QUADRATIC ASSIGNMENT PROBLEM WITH DISCRETE RAT SWARM OPTIMIZATION ALGORITHM	Assist. Prof. Dr. Vahit TONGUR	Konya Technical University Türkiye
DISCRETE ARTIFICIAL GORILLA TROOPS OPTIMIZATION ALGORITHM FOR THE TRAVELING SALESMAN PROBLEM	Assist. Prof. Dr. Vahit TONGUR	Konya Technical University Türkiye
THE TRAP USING MACHINE LEARNING TO FIGHT PUFFER FISH	Lect. Mert DEMİR	İzmir Concept Vocational School Türkiye
FIGHTING PESTS IN HONEY BEE HIVES WITH OBJECT RECOGNITION METHOD	Lect. Mert DEMİR	İzmir Concept Vocational School Türkiye

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**24.03.2023 / Session-1, Hall-3**  
**Ankara Local Time: 09:00 – 11:00**  
**Moderator: Assoc. Prof. Dr. Ümit AYATA**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
ESTIMATION OF DAILY AVERAGE SOLAR RADIATION USING THE GOODIN MODEL: CASE STUDY IN KAHRAMANMARAS	Assist. Prof. Dr. Selçuk USTA	Van Yüzüncü Yıl University Türkiye
INVESTIGATION OF SOME SURFACE PROPERTIES AND SHORE D HARDNESS VALUES OF AMAOUK (DETARIUM MACROCARPUM HARMS) WOOD HEAT-TREATED AT 200 DEGREES	Assist. Prof. Dr. Göksel ULAY Assoc. Prof. Dr. Ümit AYATA	Van Yüzüncü Yıl University Türkiye Bayburt University Türkiye
A REVIEW ON BIO-INSPIRED ENVELOPES TO ACHIEVE ENERGY EFFICIENT BUILDINGS	Tamraz KAZIMOV Semra ARSLAN SELÇUK	- Gazi University Türkiye
DROUGHT ANALYSIS OF UŞAK PROVINCE WITH DIFFERENT CLIMATE CLASSIFICATIONS	Assoc. Prof. Dr. Fatma AKSEVER	Süleyman Demirel University Türkiye
NATURAL WEATHERING PERFORMANCE ON LOTOFA (STERCULIA RHINOPETALA K. SCHUM.) WOOD SURFACES	Assist. Prof. Dr. Göksel ULAY Assoc. Prof. Dr. Ümit AYATA	Van Yüzüncü Yıl University Türkiye Bayburt University Türkiye
FEES CHARGED AT SHOPPING CENTER PARKING LOTS	Alaeddin BOBAT	Kocaeli University Türkiye
USE OF FOREST AREAS FOR MINING PURPOSES PROBLEMS AND QUESTIONS	Alaeddin BOBAT	Kocaeli University Türkiye
A STUDY ON THE ROLE OF MEDIA IN STIGMATIZATION OF MENTAL ILLNESSES	Petek Durgec	Ege University Türkiye
USES OF ESSENTIAL OILS	Assist. Prof. Dr. Azize DEMİRPOLAT	Bingöl University Türkiye

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**24.03.2023 / Session-1, Hall-4**  
**Ankara Local Time: 09:00 – 11:00**  
**Moderator: Assist. Prof. Dr. Fuat Topuz**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
CLEANUP OF OIL SPILLS BY POLYIMIDE-BASED NANOFIBROUS MEMBRANES FROM SEAWATER	Assist. Prof. Dr. Fuat Topuz	Istanbul Technical University Türkiye
ASSESSMENT AND EVALUATION PROBLEMS IN VIRTUAL ECOLOGIES	Lect. Dr. Ender ÖZEREN	Dicle University Türkiye
PACKAGING AND ENVIRONMENTAL AWARENESS	Gültekin ERDAL	Bursa Uludağ University Türkiye
SMART CITY APPLICATIONS IN REDUCING THE EFFECTS OF NATURAL DISASTERS	Prof. Dr. Ferit İZCİ Servet YİĞİT	Van Yüzüncü Yıl University Türkiye
COST OF ORGANIC NUTRITION TO URBAN PEOPLE: AN ONLINE MARKET RESEARCH	Betül SUKAN-KARAÇAĞIL Prof. Dr. Gamze AKBULUT	Gazi University Türkiye
REMOVAL OF AZO DYES BY BOTTOM ASHES FROM THE USE OF COAL AND WOOD PELLETS AS FUEL FOR SUSTAINABLE WASTE MANAGEMENT	Assist. Prof. Dr. Nesli AYDIN Assoc. Prof. Dr. Deniz İzlen ÇİFÇİ	Tekirdağ University Türkiye
HOW DID EARTHQUAKES AFFECT FOOD SECURITY AND NUTRITION? REPORTED PROBLEMS AND POTENTIAL SOLUTIONS	Betül SUKAN-KARAÇAĞIL Prof. Dr. Gamze AKBULUT	Gazi University Türkiye
SKEUOMORPHIC DESIGN AND ITS VITAL EFFECTS	Gültekin ERDAL	Bursa Uludağ University Türkiye
REUSING OF WOOD BOTTOM ASH RELEASED FROM THE FURNITURE INDUSTRY FOR REACTIVE DYE REMOVAL	Assist. Prof. Dr. Nesli AYDIN Eda BACAĞ Prof. Dr. Elçin GÜNEŞ Assoc. Prof. Dr. Deniz İzlen ÇİFÇİ	Tekirdağ University Türkiye

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**24.03.2023 / Session-1, Hall-5**  
**Ankara Local Time: 09:00 – 11:00**  
**Moderator: Assist. Prof. Dr. Emrah KELEŞ**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
OVERVIEW OF PROVINCIAL CONSUMPTION CULTURE IN ADVERTISEMENTS IN MUŞ PRESS	Assist. Prof. Dr. Tülay YAZICI	Muş Alparslan University Türkiye
SOCIO-CULTURAL ELEMENTS IN PRIMARY SCHOOL TURKISH TEXTBOOKS IN TERMS OF COMMUNICATIVE APPROACH	Lect. Dr. Anıl MANGUŞ	Giresun University Türkiye
SOCIO-CULTURAL ELEMENTS IN PRIMARY SCHOOL ENGLISH TEXTBOOKS IN TERMS OF COMMUNICATIVE APPROACH	Lect. Dr. Anıl MANGUŞ	Giresun University Türkiye
PSYCHOLOGICAL VIOLENCE IN THE WORKPLACE: A STUDY ON COURT DECISIONS OF MOBBING CASES	Zuhal ERGÜN	Atatürk University Türkiye
THE IMPORTANCE OF VISUAL CULTURE IN TODAY'S ART EDUCATION	Assist. Prof. Dr. Songül MOLLAOĞLU	Sivas Cumhuriyet University Türkiye
MEDIATHIC CONSTRUCTION OF CHARISMA	Assist. Prof. Dr. Fatih DEĞİRMENÇİ	Atatürk University Türkiye
THE USE OF RELIGIOUS IMAGES AS A NARRATIVE FEATURE IN TURKISH HORROR CINEMA	Zuhal ERGÜN	Atatürk University Türkiye
THE IMPACT OF VIRAL ADVERTISING ON FINANCIAL PERFORMANCE	Assist. Prof. Dr. Emrah KELEŞ	Marmara University Türkiye
CORPORATE SOCIAL RESPONSIBILITY AS A STRATEGIC MANAGEMENT TOOL	Ulkar Zeynalova	Azerbaijan State University of Economics Azerbaijan

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**24.03.2023 / Session-1, Hall-6**  
**Ankara Local Time: 09:00 – 11:00**  
**Moderator: Assist. Prof. Dr. Kerim KARABACAK**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
GUAR GUM POWDER REINFORCED POLYESTER COMPOSITE PRODUCTION AND CHARACTERIZATION	Mukaddes KARATAŞ Ercan AYDOĞMUŞ	Fırat University Türkiye
ANALYSIS OF EFFICIENCY INCREASING PARAMETERS IN PNEUMATIC SYSTEMS AND APPLICATION IN AUTOMOTIVE INDUSTRY	Prof. Dr. Fikret Yüksel Fazıl Demirler	Yalova University Türkiye
AN EXAMPLE APPLICATION TO MEET AGRICULTURAL IRRIGATION NEEDS WITH A PHOTOVOLTAIC ENERGY SYSTEM INCLUDING A DC SUBMERSIBLE PUMP	Assist. Prof. Dr. Kerim KARABACAK	Kütahya Dumlupınar University Türkiye
"AN EXAMPLE ECONOMIC FEASIBILITY ANALYSIS ON THE GRID-CONNECTED PHOTOVOLTAIC ENERGY SYSTEMS: A CASE STUDY OF KUTAHYA CITY, TURKEY"	Assist. Prof. Dr. Kerim KARABACAK	Kütahya Dumlupınar University Türkiye
INVESTIGATION OF ELECTROCHEMICAL COATING OF DIFFERENT CERAMIC PARTICLES ON AISI 304 AUSTENITIC STAINLESS STEEL	Assoc. Prof. Dr. Faruk KARACA Gizem Tuğçe GÜNGÖR	Fırat University Türkiye
EFFECTS OF TCSC-FUEL CELL ON STATIC VOLTAGE STABILITY IN POWER SYSTEMS	Assoc. Prof. Dr. M. KENAN DÖŞOĞLU Res. Assist. Enes KAYMAZ	Düzce University Türkiye
INVESTIGATION OF THE EFFECTS OF TURBINE GOVERNOR MODELS ON SECONDARY VOLTAGE CONTROL IN POWER SYSTEMS	Assoc. Prof. Dr. M. KENAN DÖŞOĞLU Res. Assist. Enes KAYMAZ	Düzce University Türkiye
INVESTIGATION OF THE EFFECT OF THE AMOUNT OF COAGENTS ON THE RHEOLOGICAL AND PHYSICAL PROPERTIES OF THE FLORROCARBON RUBBER COMPOUND	Orhan TERZİOĞLU Muhammet KARA	ELATEK Rubber Industry. Trade A. S, Türkiye
CUTTING FORCE ANALYSIS IN MILLING OF DIN 1.4534 STAINLESS STEEL IN DRY AND MQL CUTTING ENVIRONMENTS	Hakan YURTKURAN Mustafa GÜNAY	Yozgat Bozok University Türkiye Karabük University Türkiye
"SURFACE ROUGHNESS OPTIMIZATION IN MILLING OF PH13-8 Mo STAINLESS STEEL BASED ON THE TAGUCHI METHOD"	Mustafa GÜNAY Hakan YURTKURAN	Karabük University Türkiye Yozgat Bozok University Türkiye

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**24.03.2023 / Session-2, Hall-1**  
**Ankara Local Time: 11:30 – 13:30**  
**Moderator: Uz. Dr. Mehmet ÖZDİN**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
HYPERBARIC OXYGEN THERAPY AND THE ROLE OF THE NURSE IN PATIENTS WITH DIABETIC FOOT WOUNDS	Kübra TORAMAN Assist. Prof. Dr. Gülcan BAHÇECİOĞLU TURAN	Fırat University Türkiye
COMPARISON OF THE EFFECTS OF EXERCISE AND MANUAL THERAPY METHODS ON MOUTH OPENING, CHEWING QUALITY, PRESSURE PAIN THRESHOLD, AND PSYCHOLOGICAL STATUS IN TEMPOROMANDIBULAR DISORDER	Assist. Prof. Dr. Nazım Tolgahan YILDIZ Prof. Dr. Zafer ERDEN	Karamanoğlu Mehmetbey University Türkiye Hacettepe University Türkiye
EXAMINING OF THE EFFECT OF ACTIVE WORKING PERIOD LENGTH OF FIREFIGHTERS ON RESPIRATORY FUNCTIONS AND STAIR CLIMBING PERFORMANCE	Fzt. Betül Ayten KARAMAN Fzt. Buse BAŞ Fzt. Hatice Kübra KÜRK Fzt. Sena ARICAN Uzm. Fzt. Fulya Senem KARAAHMETOĞLU Assoc. Prof. Dr. Esra PEHLİVAN	University of Health Sciences Türkiye
EXAMINATION OF THE EFFECT OF MINDFULNESS APPLICATION IN INDIVIDUALS WITH CHRONIC PAIN AND THE ROLE OF THE NURSE	Nurdan ŞAHİN Assist. Prof. Dr. Gülcan BAHÇECİOĞLU TURAN	Fırat University Türkiye
NURSING CARE OF A CASE WITH COCHLEAR IMPLANTATION DUE TO BILATERAL SENSORINEURAL HEARING LOSS ACCORDING TO ROY ADAPTATION MODEL	Res. Assist. Pervin Köksel Assist. Prof. Dr. Ayşe Topal Hançer	Sivas University Türkiye
NURSING CARE APPLIED TO PATIENTS WITH RAMSEY HUNT SYNDROME ACCORDING TO MERLEY MISHEL'S THEORY OF UNCERTAINTY	Res. Assist. Pervin Köksel	Sivas University Türkiye
THE PROBLEMS FACED BY PARENTS WITH A CHILD WITH AUTISM AND THE LOAD OF CARE-GIVING	Fzt. Rabia DEMİRCİ Fzt. Elif DEMİRCİ Dr. Fzt. Amine ATAÇ Assoc. Prof. Dr. Esra PEHLİVAN	University of Health Sciences Türkiye
THE EFFECT OF COVID-19 INFECTION ON THE REQUEST OF COAGULATION TESTS	Uz. Dr. Mehmet ÖZDİN	Sakarya University Türkiye
PHOTODYNAMIC THERAPY IN CANCER TREATMENT: IS LIGHT THE SOLUTION?	Efkan Bağda	Sivas Cumhuriyet University Türkiye
PHOTODYNAMIC THERAPY FOR ORAL SQUAMOUS CELL CARCINOMA	Efkan Bağda Didem Duman Ebubekir Ayhan Nurefşan Akkuş Esra Bağda Mahmut Durmuş	Sivas Cumhuriyet University Türkiye

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**24.03.2023 / Session-2, Hall-2**  
**Ankara Local Time: 11:30 – 13:30**  
**Moderator: Assoc. Prof. Dr. Sibel DEMİRARSLAN**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
EVALUATION OF OCCUPATIONAL ACCIDENTS AND OCCUPATIONAL DISEASES STATISTICS OF EMPLOYEES IN THE MANUFACTURING OF CLOTHING	Lect. Sevil ÇIRAKOĞLU KELLEÇİ Lect. Mine BALCI Lect. Hatice Kübra ÖZBEY	Bursa Uludağ University Türkiye
EXAMINATION OF THE CITY AND HUMAN RELATIONS THROUGH CERAMIC ART	Dr. Didar Ezgi ÖZDAĞ	Muğla Sıtkı Koçman University Türkiye
THE IMPORTANCE OF SUSTAINABILITY IN TEXTILE AND FASHION DESIGN EDUCATION	Lect. Hatice Kübra ÖZBEY	Bursa Uludağ University Türkiye
FORMATION CHARACTERISTICS OF FACADE ELEMENTS IN TRADITIONAL TARAKLI CIVIL ARCHITECTURE EXAMPLES	Dr. Özlem ÖZKAN ÖNÜR	Düzce University Türkiye
NATURAL STONES USED IN THE LANDSCAPE BUILDING ITEMS OF THE TOPKAPI PALACE MUSEUM AND THEIR CORRUPTION CONDITIONS	Dr. Özlem ÖZKAN ÖNÜR	Düzce University Türkiye
HOUSING INTERIOR ANALYSIS APPROACHES IN THE RELATIONSHIP OF ACTION - SPACE	Assoc. Prof. Dr. Sibel DEMİRARSLAN Lect. Oğuz DEMİRARSLAN	Kocaeli University Türkiye Maltepe University Türkiye
SUSTAINABILITY IN ARCHITECTURAL DESIGN AND KENGO KUMA ARCHITECTURE	Assoc. Prof. Dr. Sibel DEMİRARSLAN Lect. Oğuz DEMİRARSLAN	Kocaeli University Türkiye Maltepe University Türkiye

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**24.03.2023 / Session-2, Hall-3**  
**Ankara Local Time: 11:30 – 13:30**  
**Moderator: Assoc. Prof. Dr. Ertan Mahir KORKMAZ**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
SYNTHESIS OF NOVEL 1,3,4-OXADIAZEPINES IN THE ACETIC ACID MEDIUM	Assist. Prof. Dr. Furgan ASLANOĞLU	Van Yüzüncü Yıl University Türkiye
INDUSTRIAL VALUE OF MICROBIAL PIGMENTS	Batu ÇOLAK Prof. Dr. Nihal DOĞRUÖZ GÜNGÖR	İstanbul University Türkiye
THE IMPORTANCE OF MARS ANALOG CAVES FOR ASTROBIOLOGICAL RESEARCH	Batu ÇOLAK Prof. Dr. Nihal DOĞRUÖZ GÜNGÖR	İstanbul University Türkiye
INVESTIGATION OF MITOGENOMIC TRANSCRIPTION IN INSECTS: SIMULTANEOUS CONVERSION INTO MONOCISTRONIC TRANSCRIPTION UNITS	Assoc. Prof. Dr. Ertan Mahir KORKMAZ Assoc. Prof. Dr. Mahir BUDAK	Sivas Cumhuriyet University Türkiye
INVESTIGATION OF THE EFFECT OF CuO-TiO <sub>2</sub> /H <sub>2</sub> O HYBRID NANOFLUID ON HEAT TRANSFER PERFORMANCE OF SHELL AND TUBE HEAT EXCHANGERS	Assoc. Prof. Dr. Mustafa KILIÇ Res. Assist. Mahir ŞAHİN	Adana Alparslan Turkes Science and Technology University Türkiye
INVESTIGATION OF THE EFFECT OF THE THERMOPHYSICAL PROPERTIES OF CuO-TiO <sub>2</sub> /H <sub>2</sub> O HYBRID NANOFLUID ON HEAT TRANSFER PERFORMANCE	Assoc. Prof. Dr. Mustafa KILIÇ Res. Assist. Mahir ŞAHİN	Adana Alparslan Turkes Science and Technology University Türkiye
COMPARISON OF MONOLITH AND ACTIVATED CARBON SUPPORTED PLATINUM CATALYSTS ON AQUEOUS PHASE REFORMING	Assoc.Prof. Dr. Bahar Meryemoğlu Lect. Dr.Uğur Çağlayan	Çukurova University Türkiye
NiAl POWDER PREPARED BY TIG HEATING	Dr. Gülizar SARIYER Dr. Hasan Erdem ÇAMURLU	Akdeniz University Türkiye
NiAl PARTS HAVING 60 %, 150-300 MICROMETER PORES FORMED BY NaCl SPACER	Dr. Gülizar SARIYER Dr. Hasan Erdem ÇAMURLU	Akdeniz University Türkiye

**24.03.2023 / Session-2, Hall-4**  
**Ankara Local Time: 11:30 – 13:30**  
**Moderator: Prof. Dr. Saim Zeki BOSTAN**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
MORPHOLOGICAL BIODIVERSITY OF LOCAL PEAR GENOTYPES BASED ON CLUSTER ANALYZE	Prof. Dr. Saim Zeki BOSTAN	Ordu University Türkiye
BIOACTIVE COMPONENTS OF SOME THYME (THYMUS) SPECIES AND THEIR EFFECTS ON HEALTH	Dr. İsmail YAPICI Lect. Ebubekir İZOL	Gümüşhane University Türkiye Bingöl University Türkiye
"SPECTROSCOPIC AND CHROMATOGRAPHIC SEPARATION OF PHYTOCHEMICALS, NUTRIENTS, FATTY ACIDS, POLYPHENOLS AND OBSERVATION OF CHANGES IN SENSORY PROPERTIES OF COOKIES PREPARED USING WHEAT FLOUR AND VARIOUS SPICES"	Prof. Dr. Mehmet Musa ÖZCAN	Selçuk University Türkiye
CHANGE OF PHYSICOCHEMICAL TRAITS OF KIWIFRUIT IN DIFFERENT FRUIT MATURITY	Prof. Dr. Saim Zeki BOSTAN Esra MADEN	Ordu University Türkiye
BIOACTIVE PHENOLIC CONTENT OF BEE BREAD	Lect. Ebubekir İZOL Dr. İsmail YAPICI	Bingöl University Türkiye Gümüşhane University Türkiye
A POPULAR FRUIT IN IMPROVEMENT OF HEALTH: ARONIA	Prof. Dr. Gamze AKBULUT Assoc. Prof. Feride AYYILDIZ Asst. Prof. Emine YASSIBAŞ	Gazi University Türkiye
IN VITRO STERILIZATION OPTIMIZATION AND ENSURANCE OF HEIRLOOM SEEDS OF Solanum melongala L. and Cucurbita pepo L. SPECIES	Assoc. Prof. Dr. Aykut TOPDEMİR Ayça ŞAHİNALP	Fırat University Türkiye
EFFECTS OF GERMINATION ENVIRONMENTS ON BEAN GERMINATION	Assist. Prof. Dr. Fatma BAŞDEMİR	Harran University Türkiye
EVALUATION OF THE USE OF NON-JELATIN ALTERNATIVES AT SOFT CAPSULE ENCAPSULATION	Zehra TOK Assist. Prof. Dr. Mustafa MORTAŞ	Ondokuz Mayıs University Türkiye
OBTAINING IN VITRO CALLUS FROM HYPOCOTILES OBTAINED BY THE ANCESTRAL SEEDS OF Solanum lycopersicum L. and Capsicum annum L.	Ayça ŞAHİNALP Assoc. Prof. Dr. Aykut TOPDEMİR	Fırat University Türkiye
EVALUATION OF HEMP SEEDS IN SPREADABLE FOOD FORMS	Zümre ERGÜN Assist. Prof. Dr. Mustafa MORTAŞ	Ondokuz Mayıs University Türkiye

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**24.03.2023 / Session-2, Hall-5**  
**Ankara Local Time: 11:30 – 13:30**  
**Moderator: Assoc. Prof. Dr. Neşe Börü**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
THE RELATIONSHIP BETWEEN USING LEARNING EXPERIENCE PLATFORM (LXP) AS HOMEWORK and STUDENTS' FAIL/PASS STATUS IN UNIVERSITY ENGLISH PREPARATORY CLASSROOMS	Dilara SAYGIN Assist. Prof. Kamil Arif KIRKIÇ	Istanbul Sabahattin Zaim University Türkiye
EXAMINATION OF THE ENVIRONMENTAL BEHAVIORS OF CHILD DEVELOPMENT CANDIDATES	Lect. Bayram DELEŞ Assoc. Prof. Dr. Fatih AYDOĞDU Prof. Dr. Neriman ARAL	Erzincan Binali Yıldırım University Türkiye Ankara University Türkiye
THE RELATIONSHIP OF FUNCTIONAL MOTION ANALYSIS (FMS) SCORES WITH EXPLOSIVE FORCE AND 30M SPRINT IN ATHLETES AGED 17-19 IN FOOTBALL (KOCAELİ PROVINCE EXAMPLE)	Muhammed Fatih ÇİYAN Muhammed Umur UÇAŞ Serhat SAYLIK	Kocaeli University Türkiye
SOCIAL INNOVATION PERCEPTION IN EDUCATIONAL ADMINISTRATION: THE CASE OF ELAZIG PROVINCE	Ahmet Ömer KOÇAK	Fırat University Türkiye
BIBLIOMETRIC ANALYSIS OF PUBLICATIONS BASED ON GEOGRAPHICAL INDICATION: EXAMINATION IN WEB OF SCIENCE DATABASE	Res. Assist. Zehra Meliha TENGİZ Assist. Prof. Dr. Merve AYYILDIZ	Yozgat Bozok University Türkiye
THE ATTITUDES OF PRE-SERVICE EFL TEACHERS TOWARDS THE USE OF TEACHER CODE-SWITCHING	Melike ŞEN Assist. Prof. Dr. Dilek BÜYÜKAHİSKA	Ondokuz Mayıs University Türkiye
THE EFFECTS OF THE CENTRALIZED LAW AND REGULATIONS ON THE SCHOOL-FAMILY PARTNERSHIP IN LOW SOCIO-ECONOMIC REGIONS	Assoc. Prof. Dr. Neşe Börü Assoc. Prof. Dr. Mehmet Akif Erdener	Nevşehir Hacı Bektaş Veli University Türkiye Balıkesir University Türkiye
GENERAL FEATURES OF ARONIA MELANOCARPA PLANT AND ITS COMMERCIAL STATUS IN TURKEY	Res. Assist. Fatma SARI Prof. Dr. Şükran KULTUR	Istanbul Medipol University Türkiye
COMMERCIAL STATUS OF PLANT SPECIES USED IN SALEP PRODUCTION IN TURKEY	Res. Assist. Fatma SARI Prof. Dr. Şükran KULTUR Lect. Fethi Geçimli	Istanbul Medipol University Türkiye Pamukkale University Türkiye

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**24.03.2023 / Session-2, Hall-6**  
**Ankara Local Time: 11:30 – 13:30**  
**Moderator: Assoc. Prof. Dr. Naci Ömer ALAYUNT**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
NUTRITION IN THE PROCESS OF NEOADJUVAN AND ADJUVAN THERAPY IN COLORECTAL CANCERS	Res. Assist. Büşra ATABİLEN Prof. Dr. Gamze AKBULUT	Gazi University Türkiye
DETERMINING THE FACTORS AFFECTING MINDFUL EATING IN ADULTS	Res. Assist. Büşra ATABİLEN Prof. Dr. Gamze AKBULUT Res. Assist. Tevfik KOÇAK Prof. Dr. Nilüfer TEK	Gazi University Türkiye
"THE USE OF PHARMACOLOGICAL AND NON-PHARMACOLOGICAL METHODS IN THE MANAGEMENT OF ORAL MUCOSITIS OF CANCER PATIENTS"	Assist. Prof. Dr. Aynur CİN Assist. Prof. Dr. Hatice DEMİRAĞ Assist. Prof. Dr. Buket DAŞTAN Prof. Dr. Sevilay HİNTİSTAN	Gümüşhane University Türkiye Bayburt University Türkiye Karadeniz Technical University
A NEW LIGHT IN ALZHEIMER'S DISEASE: BRIGHT LIGHT THERAPY	Assist. Prof. Dr. Buket DAŞTAN Assist. Prof. Dr. Aynur CİN Assist. Prof. Dr. Hatice DEMİRAĞ	Bayburt University Türkiye Gümüşhane University Türkiye
APOPTOTIC EFFECTS OF RESVERATROL ON METASTATIC COLON CANCER CELLS	Assoc. Prof. Dr. Günsu Soykut Assoc. Prof. Dr. Eda Becer Prof. Dr. Seda Vatanserver	International Final University Doğu Akdeniz University Türkiye Manisa Celal Bayar University Türkiye
QUALITY, VALIDATION, ANALYSIS AND MEASUREMENT UNCERTAINTY IN THE MEDICAL BIOCHEMISTRY LABORATORY	Assoc. Prof. Dr. Naci Ömer ALAYUNT	Siirt University Türkiye
RELATIONSHIP OF METABOLIC SYNDROME PATHOGENESIS WITH GUT MICROBIOTA	Assoc. Prof. Dr. Naci Ömer ALAYUNT	Siirt University Türkiye
SAMATYA-PREDICTING SCORE IN ACUTE LYMPHOBLASTIC LEUKEMIA (ALL): COMBINING CLINICAL FEATURES WITH FLOW CYTOMETRY	Tahir Alper CINLI Istemi SERIN	"University of Health Sciences, Istanbul Training and Research Hospital Türkiye"
EVALUATION OF THE ANTI SARS-COV-2 POTENTIAL OF P-AMINOBENZOIC ACID: ISONICOTINAMIDE CO-CRYSTAL BY MOLECULAR DOCKING STUDIES	Füreyya Elif Öztürkkan Giray Buğra Akbaba	Kafkas University Türkiye
ALGORITHMIC THOUGHT AND SOCIETY	Assoc. Prof. Dr. Hasan UZUN	Fırat University Türkiye
SOCIAL MEDIATION AND UNIVERSITIES	Assoc. Prof. Dr. Hasan UZUN Çağrı YİĞİT	Fırat University Türkiye

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**24.03.2023 / Session-3, Hall-1**  
**Ankara Local Time: 14:00 – 16:00**  
**Moderator: Dr. Aydın Kaleli**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
GIS-BASED CAR PARKING SUITABILITY ANALYSIS FOR SUSTAINABLE TRANSPORTATION PLANNING	Res. Assist. Süleyman ŞİŞMAN Mesube Azize ŞAŞMAZ Selin Nur AKIN Prof. Dr. Arif Çağdaş AYDINOĞLU	Gebze Technical University University Türkiye
ASSESSING THE EFFECTS OF GROUND DELAY STRATEGIES ON FUEL CONSUMPTION AND TOTAL DELAY IN AIRPORT GROUND MANAGEMENT USING MATHEMATICAL MODELING	Asst. Prof. Kadir DÖNMEZ	Samsun University Türkiye
CONTRIBUTIONS TO THE TURKISH MARINE DIATOM FLORA, CENTRALES (BACILLARIOPHYTA)	Dr. Aydın Kaleli	Istanbul University Türkiye
PRODUCING TUCBS-RELATED NOISE MAPS TO IMPROVE THE QUALITY OF LIFE IN SMART CITIES: GTU CAMPUS CASE	Lect. Rabia BOVKIR Elif Efnan ŞEN Nilay TELLİOĞLU Prof. Dr. Arif Çağdaş AYDINOĞLU	Gebze Technical University University Türkiye
MONITORING SULFUR DIOXIDE VALUES AFTER THE VOLCANO EXPLOSION WITH THE HELP OF REMOTE SENSING IMAGES: A CASE STUDY OF MAUNA LOA VOLCANO	Res. Assist. Dr. Özer AKYÜREK	Kocaeli University Türkiye
ANALYSES OF STUDIES ON POSSIBLE EARTHQUAKE RISK IN TURKEY	Dilek SEMA Prof. Dr. İlknur MAYA	Çanakkale Onsekiz Mart University Türkiye
A POLYNOMIAL CORRECTION BASED ON TG20 GRID VALUES TO COMPUTE GEOID HEIGHTS ON TURKEY BETTER WITH EGM08	Assoc. Prof. Dr. Orhan KURT Özhan GÜNGÖRMEZ	Kocaeli University Türkiye
PARAMETER DEPENDENCY IN BROADCAST EPHEMERIDES ESTIMATION	Assoc. Prof. Dr. Orhan KURT Bekir Gürkan GÜLDAŞ Hakan UYANIK	Kocaeli University Türkiye University of Bonn Germany

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**24.03.2023 / Session-3, Hall-2**  
**Ankara Local Time: 14:00 – 16:00**  
**Moderator: Assist. Prof. Dr. Zafer USTA**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
GASRTRIC MUCORMYCOSIS: A CASE REPORT	Assoc. Prof. Dr. Emel ÇAKIR	Sancaktepe Martyr Prof Dr İlhan Varank Training and Research Hospital Türkiye
PERITONEAL SARCOIDOSIS MIMICKING PERITONEAL CARCINOMATOSIS	Assoc. Prof. Dr. Emel ÇAKIR	Sancaktepe Martyr Prof Dr İlhan Varank Training and Research Hospital Türkiye
THE ROLE OF DNA METHYLATION IN MALE INFERTILITY	Assist. Prof. Dr. Zafer USTA Özge DEĞİRMENCİ	Burdur Mehmet Akif Ersoy University Türkiye
THE ROLE AND EFFECTS OF PHYSICAL ACTIVITY ON SMOKING, ALCOHOL AND DRUG ADDICTION	Lect. Dr. Müşerref Ebru ŞEN	Gümüşhane University Türkiye
THE EFFECTS OF WEAVING TRAINING BASED ON TELEREHABILITATION ON DEXTERITY, COGNITION, AND FATIGUE IN PATIENTS WITH MULTIPLE SCLEROSIS	Nursel ÖZİRİ Assist. Prof. Dr. Tuba CAN AKMAN Lect. Fırat NEZİROĞLU Prof. Dr. Fatma ÜNVER	Pamukkale University Türkiye Bahçeşehir University Türkiye
EXAMINATION OF THE RELATIONSHIP BETWEEN UNIVERSITY STUDENTS' ATTITUDES ON GENDER ROLES AND MARRIAGE ANXIETY	Esra VİDİNEL Prof. Dr. Ercümen ERSANLI	Ondokuz Mayıs University Türkiye
THE USE OF UTILITY ARCHES IN ORTHODONTIC PRACTICE	Dt. Melike DOĞRU Prof. Dr. Zehra İLERİ	Selçuk University Türkiye
MAXILLARY PROTRACTION APPLICATIONS WITH CURRENT SKELETAL ANCHORAGE METHODS IN CLASS III MALOCCLUSIONS	Dt. Büşra ARISOY ALBAYRAK Prof. Dr. Zehra İLERİ	Selçuk University Türkiye
"INVESTIGATION OF THE EFFECTS OF ALTERNITY AND PAIN TRANSFORMING POWER LEVELS ON LIFE SATISFACTION IN FAMILIES"	Hüseyin İSTİF Prof. Dr. Ercümen ERSANLI	Ondokuz Mayıs University Türkiye
INVESTIGATION OF METAL CAMPING EQUIPMENT PRODUCTION IN TERMS OF OCCUPATIONAL HEALTH AND SAFETY	Bedirhan ORAL Assist. Prof. Dr. Hale YILDIZAY	Kütahya Dumlupınar University Türkiye

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**24.03.2023 / Session-3, Hall-3**  
**Ankara Local Time: 14:00 – 16:00**  
**Moderator: Assist. Prof. Dr. Burak BAŞKAN**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
SOCIAL COHESION OF SYRIANS IN TURKEY IN THE CONTEXT OF SOCIO- PSYCHOLOGICAL AND SPATIAL INTERACTIONS: THE CASE OF HATAY- ANTAKYA	Rawan ALAEDDIN Assoc. Prof. Dr. Tuna BATUHAN	Atatürk University Türkiye
CHANGE AND TRANSFORMATION IN URBAN PUBLIC SPACES DURING THE PANDEMIC PROCESS	Şebnem Zekiye KOKARCA Assoc. Prof. Dr. Tuna BATUHAN	Atatürk University Türkiye
THE REPERCUSSIONS OF THE TURKISH-GERMAN NON-AGGRESSION PACT IN TURKEY	Assist. Prof. Dr. Özlem YILDIRIM KIRIŞ	Recep Tayyip Erdoğan University Türkiye
ACCORDING TO ANCIENT SOURCES, ENDEMIC AND MEDICINAL PLANTS GROWING IN THE PONTOS REGION AND THEIR USAGE AREAS	Assoc. Prof. Dr. Mesut KINACI	Süleyman Demirel University Türkiye
WALES UNDER THREAT: A STUDY ON THE POLITICAL DISCOURSE OF PLAID CYMRU	Assist. Prof. Dr. Burak BAŞKAN	Erzurum Technical University Türkiye
KONAR-IMMIGRATION IN ASIAN HUNS	Filiz Sofuoğlu Babayev	Gaziantep University Türkiye
GEOGRAPHY AND CHARACTERISTICS OF EARLY TURKS	Filiz Sofuoğlu Babayev	Gaziantep University Türkiye
VOLUNTARY RETURN POLICIES OF THE EUROPEAN UNION	Assoc. Prof. Dr. Mesut ŞÖHRET Kamile GÜNEŞ	Gaziantep University Türkiye
AN OVERVIEW OF RUSSIA'S CAUCASUS POLICY: 1913 PETERSBURG "RUSSIAN RIVIERA" FAIR	Assist. Prof. Dr. Resul TURAN	Recep Tayyip Erdoğan University Türkiye

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**24.03.2023 / Session-3, Hall-4**  
**Ankara Local Time: 14:00 – 16:00**  
**Moderator: Assoc. Prof. Dr. Selvinaz YAKAN**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
DOPPLER INDICES OF UMBILICAL ARTERY BLOOD FLOW DURING PREGNANCY IN AWASSI SHEEP	Tuğra AKKUŞ Res. Assist. Ömer YAPRAKCI	Harran University Türkiye
THE EFFECTS OF BLACK SOLDIER FLY LARVA ( <i>Hermetia illucens</i> ) ADDED TO TROUT FEED IN DIFFERENT PROPORTIONS ON GROWTH PERFORMANCE AND SOME BLOOD PARAMETERS	Prof. Dr. Fatih AKDEMİR	Malatya Turgut Özal University Türkiye
LENGTH-WEIGHT RELATIONSHIPS OF ATLANTIC BONITO ( <i>Sarda sarda</i> Bloch, 1793), CAPTURED FROM THE SOUTH EASTERN BLACK SEA (TRABZON) IN 2021	Assoc. Prof. Dr. Rahşan Evren MAZLUM Muhammet EMANET	Recep Tayyip Erdoğan University Türkiye Derepazarı District Directorate of Agriculture and Forestry Türkiye
FERTILIZATION IN HERD MANAGEMENT	Assist. Prof. Dr. Hüseyin DENK	Ağrı İbrahim Çeçen University Türkiye
MASTITIS IN FLOCK MANAGEMENT	Assist. Prof. Dr. Hüseyin DENK	Ağrı İbrahim Çeçen University Türkiye
EYE DISEASES IN DOGS	Assoc. Prof. Dr. Selvinaz YAKAN	Ağrı İbrahim Çeçen University Türkiye
UROLITHIASIS IN CATS	Assoc. Prof. Dr. Selvinaz YAKAN	Ağrı İbrahim Çeçen University Türkiye

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**24.03.2023 / Session-3, Hall-5**  
**Ankara Local Time: 14:00 – 16:00**  
**Moderator: Assoc. Prof. Dr. Sait BARDAKÇI**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
INVESTIGATION OF PRIMARY TEACHER'S APPROACH AFTER EARTHQUAKE	Gülşah BAYIRLI Prof. Dr. Nida BAYINDIR	Eskişehir Osmangazi University Türkiye
A DEEP LEARNING MODEL FOR EXTRACTING PRODUCT NAMES FROM TURKISH UNSTRUCTURED TEXT	Dr. Serdar Arslan	Çankaya University Türkiye
THE KEY TO EMPOWERING NURSES IN DISASTER MANAGEMENT: DISASTER NURSING EDUCATION	Selen TEKİN Assist. Prof. Dr. Ayşe Çiçek KORKMAZ	Bandırma Onyediy Eylül University Türkiye
DETERMINING THE PROBLEMS THAT CLASS TEACHERS EXPERIENCE WITH THE FAMILIES OF REFUGEE CHILDREN	Chynar MOSHAYEVA Prof. Dr. Nida BAYINDIR	Eskişehir Osmangazi University Türkiye
PROTECTING PATIENT CONFIDENTIALITY IN INTERNATIONAL MEDICAL TOURISM MANAGEMENT	Dr. Fatih SEYRAN Assoc. Prof. Dr. İshak Suat ÖVEY	Alanya Alaaddin Keykubat University Türkiye
INVESTIGATION OF REACTIVE BALANCE PERFORMANCES OF ADOLASCENT ATHLETES-PILOT STUDY	Selinay KONAKBAY Lect. Ebru TEKİN Prof. Dr. Fatma ÜNVER	Pamukkale University Türkiye
INVESTMENT BEHAVIOR OF UNIVERSITY STUDENTS: A STRUCTURAL MODEL PROPOSAL	Assoc. Prof. Dr. Hüseyin Gürbüz Prof. Dr. Veysel Yılmaz	Eskişehir Osmangazi University Türkiye
DETERMINING OF PRIMARY TEACHER ABOUT EARTHQUAKE PREPARATION	Teacher. Zeynep Demirel Prof. Dr. Nida BAYINDIR	Eskişehir Osmangazi University Türkiye
SCHOOL REFUSAL	Assist. Prof. Dr. Gülden ÖZTÜRK SERTER	Ondokuz Mayıs University Türkiye
INVESTIGATION OF TEACHER CANDIDATES' SUCCESS GOAL ORIGINS	Assoc. Prof. Dr. Sait BARDAKÇI Assoc. Prof. Dr. Aysel ARSLAN	Sivas Cumhuriyet University Türkiye
INVESTIGATION OF TEACHER SELF-EFFICIENCY OF TEACHERS' SELF- REGULATED LEARNING PRACTICES	Assoc. Prof. Dr. Aysel ARSLAN Assoc. Prof. Dr. Sait BARDAKÇI	Sivas Cumhuriyet University Türkiye

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**24.03.2023 / Session-3, Hall-6**  
**Ankara Local Time: 14:00 – 16:00**  
**Moderator: Prof. Dr. Emine ASLAN TELCİ**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
THE RELATIONSHIP OF IRON DEFICIENCY ANEMIA AND OXIDATIVE STRESS IN PREGNANCY	Assoc. Prof. Dr. Naci Ömer ALAYUNT	Siirt University Türkiye
PSYCHIATRIC DISORDERS AND MICROBIOTA	Assoc. Prof. Dr. Naci Ömer ALAYUNT	Siirt University Türkiye
IN SILICO INVESTIGATION OF THE ANTI-ALZHEIMER EFFECTS OF CURCUMINOIDS	Füreyra Elif Öztürkkan Giray Buğra Akbaba	Kafkas University Türkiye
FUTILE CARE AND NURSING	Lect. Dr. Gülistan YURDAGÜL	Kilis 7 Aralık University Türkiye
INVESTIGATION OF THE RELATIONSHIP OF PSYCHOLOGICAL WELLNESS IN YOUTH WITH SELF-EFFICIENCY AND PERCEPTION OF GENERAL HEALTH STATUS	Prof. Dr. Emine ASLAN TELCİ Uzm. Fzt. Fatma Nur ALTIN	Pamukkale University Türkiye Aydın Adnan Menderes University Türkiye
"EXAMINATION OF THE RELATIONSHIP OF QUALITY OF LIFE AND VULNERABILITY TO DISEASE IN HEALTHY YOUNG ADULTS"	Uzm. Fzt. Fatma Nur ALTIN Prof. Dr. Emine ASLAN TELCİ Assist. Prof. Dr. Mücahit ÖZTOP	Aydın Adnan Menderes University Türkiye Pamukkale University Türkiye Burdur Mehmet Akif Ersoy University Türkiye
EVIDENCE-BASED NURSING PRACTICES IN THE END OF LIFE PERIOD	Lect. Dr. Gülistan YURDAGÜL	Kilis 7 Aralık University Türkiye
POLLEN MORPHOLOGY INVESTIGATIONS ACCORDING TO SCANNING ELECTRON MICROSCOPE (SEM) METHOD OF ECONOMICALLY IMPORTANT <i>Cotinus coggygia</i> Scop. (ANACARDIACEAE) TAXON IN ESKİŞEHİR	Assoc. Prof. Dr. Okan SEZER Prof. Dr. İsmühan POTOĞLU ERKARA	Eskişehir Osmangazi University Türkiye
POLLEN MORPHOLOGY IN <i>Cotinus coggygia</i> Scop. (ANACARDIACEAE) SAMPLE ACCORDING TO WODEHOUSE METHOD	Assoc. Prof. Dr. Okan SEZER Prof. Dr. İsmühan POTOĞLU ERKARA	Eskişehir Osmangazi University Türkiye
POLLEN MORPHOLOGY INVESTIGATIONS ACCORDING TO SCANNING ELECTRON MICROSCOPE (SEM) METHOD OF ECONOMICALLY IMPORTANT <i>Chaenomeles speciosa</i> (Sweet) Nakai (ROSACEAE) TAXON IN ESKİŞEHİR	Prof. Dr. İsmühan POTOĞLU ERKARA Assoc. Prof. Dr. Okan SEZER	Eskişehir Osmangazi University Türkiye
IDENTIFICATON OF POLLEN MORPHOLOGY IN <i>Chaenomeles speciosa</i> (Sweet) Nakai (ROSACEAE) SAMPLE ACCORDING TO ERDTMAN METHOD	Prof. Dr. İsmühan POTOĞLU ERKARA Assoc. Prof. Dr. Okan SEZER	Eskişehir Osmangazi University Türkiye

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**24.03.2023 / Session-4, Hall-1**  
**Ankara Local Time: 16:30 – 18:30**  
**Moderator: Assist. Prof. Dr. Başak TUNA**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
THERMO-ELECTRICAL PROPERTIES OF Sb-BASED AlMgSb	Prof. Dr. Fatma MEYDANERİ TEZEL	Karabük University Türkiye
METAL OXIDE ELECTRODES FOR SUPERCAPACITORS	Prof. Dr. Fatma MEYDANERİ TEZEL Prof. Dr. Necmi SERKAN TEZEL	Karabük University Türkiye
THE EFFECTS OF SURFACTANTS ION STRUCTURE ON SPRAY PROPERTIES	Assist. Prof. Dr. Muhammed Cemal TORAMAN Prof. Dr. Ali BAYAT	Hakkâri University Türkiye Çukurova University Türkiye
CRYSTAL STRUCTURE AND DFT STUDIES OF 2-(6-METHOXYNAPHTHALEN-2- YL) PROPIONIC ACID	Res. Assist. Okan ŞİMŞEK Assist. Prof. Dr. Sevgi KANSIZ Assoc. Prof. Dr.Necmi DEGE	Ondokuz Mayıs University Türkiye
CRYSTAL STRUCTURE AND HIRSHFELD SURFACE ANALYSIS OF 2,2'-DIPYRIDYLAMINE CHLORIDE DIHYDRATE	Res. Assist. Okan ŞİMŞEK Assist. Prof. Dr. Sevgi KANSIZ Assoc. Prof. Dr.Necmi DEGE	Ondokuz Mayıs University Türkiye Samsun University Türkiye
IMPROVEMENT OF THE PROPERTIES OF RECYCLED POLY(ETHYLENE TEREPHTHALATE)	Assist. Prof. Dr. Başak TUNA	Kırşehir Ahi Evran University Türkiye
THE INFLUENCE OF ORGANOCCLAYS ON THE PROPERTIES OF POLY(LACTIC ACID)	Assist. Prof. Dr. Başak TUNA	Kırşehir Ahi Evran University Türkiye

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**24.03.2023 / Session-4, Hall-2**  
**Ankara Local Time: 16:30 – 18:30**  
**Moderator: Assist. Prof. Dr. Semra KOCATAŞ**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
INTERNALIZED PATRIARCHY	Lect. Mihriban ULUCAN Assoc. Prof. Dr. Özlem DOĞAN YÜKSEKOL Res. Assist. Münevver Aybüke BERBER ÇIKRIK	Munzur University Türkiye Kastamonu University Türkiye
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**24.03.2023 / Session-4, Hall-3**  
**Ankara Local Time: 16:30 – 18:30**  
**Moderator: Prof. Dr. Mehmet Musa ÖZCAN**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

Title	Author(s)	Affiliation
EXPLORING THE THERAPEUTIC EFFECTS OF RADIX ASTRAGALUS ON GLIOBLASTOMA MULTIFORME CELL CULTURE	Assoc. Prof. Dr.Ufuk OKKAY Assoc. Prof. Dr. Irmak FERAH OKKAY	Atatürk University Türkiye
EXPLORING THE BENEFICIAL EFFECTS OF REISHI, SHIITAKE, AND MAITAKE MUSHROOM COMBINATION ON BREAST CANCER CELL CULTURE	Assoc. Prof. Dr.Ufuk OKKAY Assoc. Prof. Dr. Irmak FERAH OKKAY	Atatürk University Türkiye
VARIATION OF THE YIELD AND QUALITY PROPERTIES OF BITTER MELON ( <i>Momordica charantia</i> L.)	Res. Assist. Dr. Mahmut ÇAMLICA Assoc. Prof. Dr. Gülsüm YALDIZ	Bolu Abant İzzet Baysal University Türkiye
THE RELATIONSHIP BETWEEN SERVICE QUALITY IN FISH RESTAURANTS AND CUSTOMER SATISFACTION	Elif ERDOĞAN Prof. Dr. Mehmet PEKKAYA	Zonguldak Bülent Ecevit University Türkiye
THE ROLE OF BIO-FERTILIZER APPLICATIONS ON YIELD AND QUALITY IN MEDICINAL AND AROMATIC PLANTS	Assoc. Prof. Dr. Gülsüm YALDIZ Res. Assist. Dr. Mahmut ÇAMLICA	Bolu Abant İzzet Baysal University Türkiye
"EFFECT OF MICROWAVE DEHYDRATION ON BIOACTIVE COMPOUNDS, ANTIOXIDANT ACTIVITY AND POLYPHENOL PROFILES OF FRESH WILD PEAR FRUITS"	Prof. Dr. Mehmet Musa ÖZCAN Assoc. Prof. Dr. Nurhan Uslu	Selçuk University Türkiye
THE IMPACTS OF CLIMATE CHANGE ON TURFGRASS MANAGEMENT: THE EXAMPLE OF IZMIR PROVINCE, TURKEY	Dr. Şükrü Sezgi ÖZKAN	Ege University Türkiye
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**24.03.2023 / Session-4, Hall-4**  
**Ankara Local Time: 16:30 – 18:30**  
**Moderator: Prof. Oleksii MAKARENKO**  
**Meeting ID: 831 4911 0473 / Passcode: 030303**

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SIGNIFICANCE OF LEGUMES IN INCREASE OF SOIL FERTILITY	Asst. Prof. Sergiy LAVRENKO student Oleksandr SHEVCHENKO	Kherson State Agrarian and Economic University Ukraine
ENVIRONMENTAL VECTOR OF ECONOMIC AND INNOVATIVE TECHNOLOGIES FOR THE DEVELOPMENT OF BEEKEEPING UNDER THE CONDITIONS OF CLIMATE CHANGE	Asst. Prof. Sergiy LAVRENKO Asst. Prof. Olena VEDMEDENKO Asst. Prof. Nataliia LAVRENKO Asst. Prof. Oksana LIUBENKO Asst. Prof. Natalia KORBYCH	Kherson State Agrarian and Economic University Ukraine
CONTROL AND TESTING OF BEACH WATCHERS ATHLETES AND INCREASE THEIR PHYSICAL CONDITION	Dr. Alketa Çausi Mcs Robert Necaj	Necaj University Sports of Tirana Algeria University Sports of Tirana Algeria
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## THE INFLUENCE OF THERMAL RADIATION AND CHEMICAL REACTION ON MHD MICROPOLAR FLUID IN THE PRESENCE OF HEAT GENERATION/ ABSORPTION

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### ABSTRACT

Numerical and theoretical analysis of mixed convection flow of MHD micropolar fluid with stretching capillary in the presence of thermal radiation, chemical reaction, viscous dissipation and heat generation/absorption have been studied. The governing non linear partial differential equations of momentum, angular velocity, energy and concentration are converted into ordinary differential equations using similarity transformations which can be solved numerically. The dimensionless governing equations are solved by using Runge Kutta fourth fifth order along with shooting method. The effect of physical parameters viz., micropolar parameter, unsteadiness parameter, thermal buoyancy parameter, concentration buoyancy parameter, Hartmann number, spin gradient viscosity parameter, microinertial density parameter, thermal radiation parameter, Prandtl number, Eckert number, heat generation or absorption parameter, Schmidt number and chemical reaction parameter on flow variables viz., velocity of micropolar fluid, microrotation, temperature and concentration has been analyzed and discussed graphically. MATLAB code is used to analyze numerical and theoretical facts. From the simulation study it can be concluded that an increment of micropolar parameter, Hartmann number, unsteadiness parameter, thermal and concentration buoyancy parameter results in decrement of velocity flow of micropolar fluid; microrotation of micropolar fluid decreases with an increment of micropolar parameter, unsteadiness parameter, microinertial density parameter and spin gradient viscosity parameter; temperature profile of micropolar fluid decreases with an increment of thermal radiation parameter, Prandtl number, micropolar parameter, unsteadiness parameter, heat absorption and viscous dissipation parameter; concentration of micropolar fluid decreases as unsteadiness parameter, Schmidt number and chemical reaction parameter increases. Furthermore, computational values of local skin friction coefficient, local wall coupled coefficient, local Nusselt number and local Sherwood number for different values of parameters have been investigated.

**Keywords:** Thermal radiation, chemical reaction, viscous dissipation, heat absorption/ generation, similarity transformation.



## STATISTICAL QUALITY CONTROL ANALYSIS OF AQUATRUST TABLE WATER MAKURDI

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### ABSTRACT

For any organization to achieve its objectives of profit maximization, it is required that its product must be of high quality, so as to satisfy its customers and be able to compete with any other product in the market. To obtain quality products therefore, some control measures such as quality control method are needed in production process of any organization. This research work seeks to carry out quality control analysis of a popular brand of table water in Makurdi metropolis the Aqua table water, in terms of volume of water produced and the fault of the container. The data consists of 5 sample collected for the past 8 months leading to a total of 40 observations. The control chart for variable and attribute were employed and the analysis was carried out using the R software. From the results, it was found that the process data collated and analyzed lies within the designed range of specifications, implying that the company is capable of producing acceptable product. And it also shows that all charts are in a statistical quality control.

## APPLICATION OF THE MOLECULAR GENETIC METHODS TO THE DETECTION OF PERIOPATHOGENIC BACTERIA IN RPD WEARERS

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### ABSTRACT

Removable partial denture (RPD) is a common method in the treatment of patients with partial edentulism. Over time, it has been proven that RPD causes clinical and microbiological changes in the oral cavity, influencing the development of periodontitis, especially in patients with poor oral hygiene. Periodontopathogenic bacteria (PB) are the main factors in the development of periodontitis. Since those are facultative anaerobic bacteria, they are difficult to cultivate, so the authors during their research often encountered problems during the detection of these bacteria. This literature review aims to evaluate the detection of PB in patients treated with RPD, depending on the methods used.

An electronic search on the Medline databases was carried out about the topic. The inclusion criteria were the studies that report changes at the BP level, in patients treated with RPD.

The collected data has been contradictory. Most of the authors who used in-vitro cultivation methods showed that BP did not appear in patients treated with RPD, while the part of authors who used DNA-DNA, PCR, or RT-PCR technologies determined the presence of BP in the RPD wearers over time. The discrepancy may be explained by the lower detection levels of cultivation methods than molecular genetic methods.

Thus, we can suggest that applying adequate technology plays an important role in detecting microorganisms, including BP during scientific research.

**Keywords;** Removable Partial Denture, Periopathogenic bacteria

## SYNTHESIS, IN SILICO AND IN VITRO BIOLOGICAL ACTIVITY OF SOME NOVEL 1-SUBSTITUTED 3-ISOPROPYL-3,4-DIHYDROISOQUINOLINES

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### ABSTRACT

The isoquinoline ring has been found to possess a wide range of biological and pharmacological activities. The biological activity of isoquinoline derivatives, as analogues of various drugs, has provided a great deal of interest for the synthesis of new compounds.

Due to the interest, we synthesized a number of 1-substituted 3-isopropyl-3,4-dihydroisoquinolines as potential antispasmodics. In silico analysis aimed at predicting the pharmacodynamic profile of the compounds was performed. In silico simulation predicts muscle relaxant activity for all the compounds which is a permanent interest for our studies.

We used recently reported 3-methyl-1-phenylbutan-2-amides 3 as starting compounds and applied them in the Bischler-Napieralski reaction in phosphorus(V)oxychloride and 1h reflux. The reaction is a convenient method for the synthesis of a variety of 1,3-disubstituted 3,4-dihydroisoquinolines. A number of substituents at the 1-position of isoquinoline skeleton were introduced readily by changing the acyl chlorides. The structure of compounds obtained is determined using spectral methods.

A thorough biological evaluation of the compounds was conducted assessing their in vitro antimicrobial and antioxidant activity.

**Keywords:** synthesis, 3,4-dihydroisoquinoline, Bischler-Napieralski reaction, in silico, muscle relaxant, antimicrobial activity, antioxidant activity

## **BIOSYNTHESIS OF CO-NI NANOPARTICLES AND EVALUTION OF THEIR ANTIMICROBIAL AND WOUND HEALING POTENTIAL**

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### **ABSTRACT**

Bimetallic nanoparticles show remarkable catalytic, thermal, antimicrobial, wound healing, optical, electrical, and magnetic properties that are substantially from their bulk and monometallic counterparts. In this work comparative study of Co-Ni bimetallic nanoparticles prepared by two methods green synthesis and physical grinding is done. Co-Ni bimetallic nanoparticles are synthesized by using Citrullus colocynthis plant seed extract. Synthesized Co-Ni bimetallic nanoparticles by both methods are evaluated for antibacterial and wound-healing activities. Nanoparticles will be prepared by combining the two salts of Co & Ni metals by adding the seed extract dropwise with constant heating and stirring for the requisite time. The seed extract of Citrullus colocynthis plant also contains reducing and capping agents. Synthesized nanoparticles are characterized by UV-Vis, FT-IR, Zeta potential, SEM, and EDX. Nanoparticles prepared by physical grind method depicted effective antibacterial activity against (*E. coli*, *Bacillus licheniformis*, *Aeromonas* and *Pseudomonas aeruginosa*) and wound healing.

**Keywords:** Bimetallic nanoparticles, Green synthesis, physical grind, antimicrobial activity

## **MACHINE LEARNING WITH THE XGBOOST MODEL FOR BAND GAP PREDICTION BASED ON CHEMICAL FORMULA**

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### **ABSTRACT**

In this study, we analyzed the band gap of a particular semiconductor material using an ensemble learning approach. The band gap is an important property of semiconductors, as it determines their ability to conduct electricity. The XGBoost algorithm, a popular machine-learning technique, was utilized to develop the model. In this approach, the experimentally determined band gap (E<sub>g</sub>) was used as the dependent variable. The model was validated to ensure its accuracy, and the results showed a high degree of precision. The achieved an R<sup>2</sup> value of 0.877 through 10-fold cross-validation. R<sup>2</sup> is a statistical measure that indicates how well the model fits the data. A value of 1.0 indicates a perfect fit, while a value of 0.0 indicates that the model does not fit the data at all. An R<sup>2</sup> value of 0.877 indicates that the model has a strong fit with the data.

Ensemble learning is a machine learning technique that combines multiple models to improve the overall performance of the system. It is particularly useful for complex problems, such as predicting the band gap of a semiconductor material. XGBoost is a powerful algorithm that has been shown to be effective in many different types of machine learning applications, including regression problems like this one. Overall, the results of this study suggest that an ensemble learning approach using the XGBoost algorithm can be an effective method for analyzing the band gap of semiconductor materials. This technique could potentially be used to accelerate the development of new semiconductors with specific electrical properties, which could have important applications in fields like electronics, energy, and photonics.

**Keywords:** XGBoost; machine learning; ensemble learning; band gap.

## EXPLORING THE STRUCTURAL, ELECTRONIC, AND MAGNETIC PROPERTIES OF A FERROMAGNETIC MANGANITE OXIDE USING DENSITY FUNCTIONAL THEORY AND CASTEP CODE

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### ABSTRACT

Since the discovery of the colossal magnetoresistance (CMR) effect in perovskite manganites doped with  $R_{1-x}A_xMnO_3$  (where R is a rare earth and A is an alkaline earth, such as Ca, Sr, or Ba), these systems have become the focus of extensive research.

In this study, we used the CASTEP code to perform a comprehensive analysis of the manganite oxide  $Pr_{0.5}Ba_{0.5}MnO_3$ , a tetragonal ferromagnetic material with space group  $P4/mmm$ , using density functional theory (DFT) and the OTFG non-conserving pseudo-potential-plane-wave (PP-PW) method. The objective was to study the structural, electronic and magnetic properties of the material and to determine if the theoretical results were consistent with the experimental observations. The results obtained using the GGA-PBE approximation for the compound ( $Pr_{0.5}Ba_{0.5}MnO_3$ ) are in excellent agreement with the available experimental values, the deviations of the lattice parameters obtained from the experimental results are about 0.86% and 0.17% for the a and c lattice vectors, respectively. The study of the total and partial density of states and the band structure revealed that the material exhibited semi-metallic properties in which one spin channel (majority spin) had a metallic-like behavior while the other spin channel (minority spin) had a band gap, leading to a 100% spin polarization at the Fermi level, making it an interesting candidate for spintronics. We also calculated that the total magnetic moment of the material was 24  $\mu_B$  per unit cell, which suggests that the material has a strong ferromagnetic behavior. The Mn and Pr atoms in the material have magnetic moments of 3.6  $\mu_B$  and 2.2  $\mu_B$ , respectively. These magnetic moments can be attributed to the exchange interaction between the localized d-electrons of the Mn and Pr atoms and the roaming electrons of the O and Mn atoms. Overall, the study has provided valuable information on the structural, electronic, and magnetic properties of the  $Pr_{0.5}Ba_{0.5}MnO_3$  oxide, which can be used to understand its behavior and potential applications such as spintronics. The use of DFT and PP-PW methods has allowed a more detailed and accurate analysis of the material properties, which would not have been possible with experimental observations alone.

**Keywords:** ferromagnetic, half-metallic, DFT, PP-PW, GGAPBE, colossal magnetoresistance CMR.



## STUDY OF THE ANTIOXIDANT PROPERTIES OF VACCINIUM MYRTILLUS L. EXTRACT ENCAPSULATED IN CHITOSAN NANOPARTICLES

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### ABSTRACT

The formulation of drugs has generated a new innovative concepts, based on bionanoparticle nanocarrier systems. These systems are useful as drug carriers for efficient transport of poorly soluble drugs. The aim of this work is to incorporate plant extracts into biopolymeric chitosan nanostructures in order to protect the antioxidant properties. This study presents the synthesis of chitosan nanoparticles by the ionic gelation method with sodium tripolyphosphate as a cross-linking agent and the encapsulation of *Vaccinium myrtillus* L. extract. The antioxidant properties of the *Vaccinium myrtillus* L. Extract, encapsulated in chitosan nanoparticles, were studied using in vitro non cellular assays, respectively chemiluminescence method in an luminol hydrogen peroxide system, DPPH(2,2-diphenyl-1-picrylhydrazyl) free radical scavenging assay and ABTS (2,2'azinobis-(3-ethylbenzthiazoline-6- sulfonic acid) methods. In addition, Dynamic Light Scattering DLS was used to measure the hydrodynamic size and polydispersity index, and UV-Vis reveals a series of spectral features as well as the encapsulation efficiency EE%, monitored by evaluating the total phenolic contents (TPC) expressed as gallic acid equivalent/g (mg/GAE g<sup>-1</sup>) using the Folin-Ciocalteu reagent. The results obtained revealed a significant value for antioxidant activity as a consequence of the nanoencapsulation process.

**Keywords:** chitosan nanoparticles, ionic gelation, antioxidant activity

## AGROTECHNICAL CONTROL MEASURES AGAINST FUNGAL DISEASES IN THE POMEGRANATE PLANT UNDER THE CONDITIONS OF THE ABSHERON REGION

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### ABSTRACT

The article describes the application of agrotechnical control measures against fungal diseases in the pomegranate plant under the conditions of the Absheron region. Fungal diseases were observed in the pomegranate plant in the Absheron region where the study was conducted. They were pre-marked and monitored by agrotechnical control measures.

Agrotechnical measures are of great importance in the fight against fungal diseases in the production of ecologically safe pomegranate products. In order to eliminate fungal diseases, the pruning of damaged plants and the removal of cut plant residues from the field led to the control and reduction of the disease.

In the method of agrotechnical control, fertilization occupies one of the most important places as an agrotechnical measure. Fertilizers change the chemical composition of the soil, direct the soil reaction in the direction of less infection of cultivated plants with disease agents, that is, the conditions created in the soil after fertilization have a negative effect on the growth and development of fungi. The application of fertilizers changes the structure and physiological properties of the plant, which affects issues such as disease resistance or immunity.

As a result of the research, it was found that it is important to clean the damaged and infected fruits. If fruits infected with the fungus are not collected, they mummify, and at other times, fruit rot causes the spread of the disease.

Pomegranate bushes should be shaped, old branches should be cut and removed from the field.

Weed control measures should be implemented because some weeds can play an intermediate role in the spread of fungal diseases.

In order to eliminate fungal diseases, as a preventive measure, around the trees with a diameter of 1-1.5 m should be softened to a depth of 10-12 cm, and the rows should be plowed.

**Key words:** Pomegranate (*Punica granatum L.*), fungal diseases, gray rot, fruit rot, agrotechnical control

### ABŞERON BÖLGƏSİ ŞƏRAİTİNDƏ NAR BİTKİSİNDƏ GÖBƏLƏK XƏSTƏLİKLƏRİNƏ QARŞI AQROTEXNİKİ MÜBARİZƏ TƏDBİRLƏRİ

#### XÜLASƏ

Məqalədə Abşeron bölgəsi şəraitində nar bitkisinde göbələk xəstəliklərinə qarşı aqrotexniki mübarizə tədbirlərinin tətbiqi şərh olunmuşdur. Tədqiqat aparılmış Abşeron bölgəsində nar bitkisinde göbələk xəstəlikləri müşahidə edilmişdir. Onlar əvvəlcədən nişalanmış və aqrotexniki mübarizə tədbirləri aparılmaqla izlənmişdir.

Ekoloji təhlükəsiz nar məhsulu istehsalında göbələk xəstəliklərinə qarşı mübarizədə aqrotexniki tədbirlərin böyük əhəmiyyəti vardır. Göbələk xəstəliklərini aradan qaldırmaq məqsədilə zədələnmiş bitkilərin budanması, kəsilmiş bitki qalıqlarının sahədən kənarlaşdırılması xəstəliyin idarə olunmasına, azalmasına səbəb olmuşdur.

Aqrotexniki mübarizə üsulunda gübrələmə bir aqrotexniki tədbir kimi önəmli yerlərdən birini tutur. Gübrələr torpağın kimyəvi tərkibini dəyişir, torpaq reaksiyasını mədəni bitkilərin xəstəlik törədiciləri ilə az yoluxması

istiqlamətinə yönəldir, yəni gübrələmədən sonra torpaqda yaranan şərait göbələklərin böyümə və inkişafına mənfi təsir göstərir. Gübrələrin tətbiqi bitkinin quruluşu və fizioloji xassələrini dəyişir, bu isə xəstəliklərə qarşı davamlılıq və ya immuntent kimi məsələlərə təsir edir.

Tədqiqat nəticəsində məlum olmuşdur ki, zədələnmiş, yoluxmuş meyvələrin təmizlənməsi vacibdir. Göbələklə yoluxmuş meyvələr yığılmadıqda mumyalaşaraq digər vaxtlarda meyvə çürüməsi xəstənin yayılmasına səbəb olur.

Nar kolları formaya salınmalı, yaşlanmış budaqlar kəsilməklə sahədən kənarlaşdırılmalıdır.

Bitki aralarında yayılmış alaq bitkilərinə qarşı mübarizə tədbirləri həyata keçirilməlidir. Çünki bəzi alaq bitkiləri göbələk xəstəliklərinin yayılmasında aralıq rol oynaya bilər.

Göbələk xəstəliklərinin aradan qaldırılması məqsədilə profilaktiki mübarizə tədbiri kimi ağacların ətrafı 1-1,5m diametrində 10-12 sm dərinlikdə yumşaldılmalı, cərgə araları şumlanmalıdır.

**Açar sözlər:** Nar (*Punica granatum L.*), göbələk xəstəlikləri, boz çürümə, meyvə çürüməsi, aqrotexniki mübarizə

## UDC 632.9/4 PROPHYLACTIC CONTROL MEASURES AGAINST FIELD MICE IN IRRIGATED AND DRY GRAIN CROPS

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### ABSTRACT

According to the World Health Organization (WHO) and the Food and Agriculture Organization (FAO), about 5% of the food produced worldwide is destroyed by rodents. The negative impact of rodents manifests itself in agricultural fields and after crop production. Therefore, it is appropriate to organize preventive measures against field mice in cereal crops.

In the presented article, the organization of prophylactic control measures against field mice in irrigated and dry grain crops of the Mil-Karabakh region was explained.

Protection of plants from pests and diseases is based on the biological method of reducing the number of harmful organisms or the use of biological preparations. This method is completely safe in the fight against pests and diseases and has a number of advantages for the environment and people, as well as in comparison with the use of chemicals.

As a result of the research, it became clear that preventive control measures should be focused on the clearing of wild vegetation. The presence of weeds is considered an optimal shelter for the development of rodents. Overpopulation of rodents also depends on the microclimate conditions in the area. This includes habitat, presence of weeds, intensity of available light, their activity, duration of floods and changes in groundwater levels. From this point of view, the destruction of weeds in the area where cereal plants are cultivated and on the edges of the field should be considered as one of the important measures.

In the field where deep plowing was carried out in the grain crops, the intensity of spread of field mice was low.

**Key words:** Fields, rodents, field mice, structure of nests, preventive control measures, grain crops

## УДК 632.9/4 СУВАРИЛАН ВƏ ДƏМЯƏ ТАХИЛ ƏКИНЛƏРИНДƏ ÇÖЛ СИÇАНЛАРИНА ҚАРŞИ ПРОФЛАКТИКИ МЎБАРИЗƏ ТƏДБИРЛƏРИ

### XÜLASƏ

Ümumdünya Səhiyyə Təşkilatının (ÜST) və Ərzaq və Kənd Təsərrüfatının Təşkilatı (FAO) məlumatına görə dünya səviyyəsində istehsal edilən qidaların təxminən 5%-i gəmiricilər tərəfindən məhv edilir. Gəmiricilərin mənfi təsiri əkin sahələrində və məhsul istehsalından sonrada özünə biruzə verir. Ona görə də dənli-taxıl bitkiləri əkinlərində çöl siçanlarına qarşı profilaktiki mübarizə tədbirlərinin təşkili məqsədəuyğundur.

Təqdim olunmuş məqalədə Mil-Qarabağ bölgəsinin suvarılan və dəmyə taxıl əkinlərində çöl siçanlarına qarşı profilaktiki mübarizə tədbirləri təşkili şərh olunmuşdur.

Bitkilərin zərərvericilərdən və xəstəliklərdən qorunması bioloji üsula zərərli orqanizmlərin sayını azaltmağa və ya bioloji preparatlardan istifadəyə əsaslanır. Bu üsul zərərvericilərə və xəstəliklərə qarşı mübarizədə tamamilə təhlükəsiz ətraf mühit və insanlar üçün bir sıra üstünlüklərə malik olması ilə və həm də kimyəvi maddələrin istifadəsi ilə müqayisə baxımından fərqlənir.

Tədqiqat nəticəsində məlum oldu ki, profilaktiki mübarizə tədbirləri yabani bitki örtüyünün təmizlənməsinə yönəldilməlidir. Alaq bitkilərinin mövcudluğu gəmiricilərin inkişafı üçün optimal sığınacaq yeri hesab olunur. Gəmiricilərin həddən artıq çoxalması həm də ərazidəki mikroiklim şəraitindən asılıdır. Bura daxildir yaşayış yeri, alaq otlarının olması, mövcud işığın intensivliyi, onların fəaliyyəti, müddəti daşqınlar və qurut

sularının səviyyəsinin dəyişməsi. Bu baxımdan dənli-taxıl bitkilərinin becərildiyi sahədə və tarlanın kənarlarında olan alaq bitkilərinin məhv edilməsi vacib tədbirlərdən hesab olunmalıdır.

Taxıl əkinlərində dərin şumun aparıldığı sahədə çöl siçanlarının yayılma intensivliyi aşağı olmuşdur.

**Açar sözlər:** Əkin sahələri, gəmiricilər, çöl siçanları, yuvaların quruluşu, profilaktiki mübarizə tədbiri, taxıl əkinləri

## CROSS-SECTIONAL STUDY, AMR BACTERIA IN ANIMAL PRODUCTS IN AZERBAIJAN, 2022

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### ABSTRACT

**Introduction.** Intensive animal production involves giving chickens large quantities of antibiotics to promote growth and prevent infection. The use of antibiotics in food animal production has been implicated as the contributing factor to the emergence of drug resistance in human foodborne pathogens. Certain antibiotics, when given in low, subtherapeutic doses, are known to improve feed conversion efficiency (more output, such as muscle or milk, for a given amount of feed) and may promote greater growth, most likely by affecting gut flora. The regular and irresponsible use of antibiotics in modern veterinary practices is associated with the emergence of different multidrug-resistant (MDR) bacteria. These MDR pathogens of animal origin may be disseminated to humans via the wider environment including food products, sewage, and agricultural system. Salmonella is an important pathogen highly associated with poultry products such as eggs and chicken meat.

**Material and Methods.** The fresh chicken samples (294) were collected from 19 small and large commercial farms between April – December 2022. The samples were processed in the bacteriology laboratory of the Azerbaijan Poultry Company. Different mediums (TSB, TSA, Mueller-Hinton Agar, and MacConkey Agar) were used for isolation and counting the number of colonies. Premi Test R-Biopharm AG was implemented for the detection of antibiotic and sulfanilamide residues in fresh meat. Difco Salmonella O antiserum Poly A – I and Vi, Anti Salmonella H serum was used as a screening test for detection of Salmonella spp. and Anti-coli A O1, O2, O8, O78 – for screening E.coli. Cefotaxime 30ug, Imipenem 10ug, Colistin 10ug, Amoxicillin+Clavulanic acid 20ug/10ug, Aztreonam 30ug, Chloramphenicol 30ug, Sulfamethoxazole+Trimethoprim 23.75ug/1.25ug, Ciprofloxacin 5ug, Gentamicin 10ug antibiotic discs were used for phenotypical identification to AMR ability to isolated Salmonella spp. and E.coli.

**Results.** The acquired results showed that 286 samples were positive for antibiotic and sulfanilamide residuals in fresh chicken meat. Moreover, antimicrobial resistance patterns were identified in all 294 samples. Totally, 8 bacterial strains (4 Enterococcus spp., 2 E.coli, 2 Salmonella spp.) were isolated from the meat of the different poultry farms in Azerbaijan.

**Conclusion** Total bacterial counts were underestimation and that shows that all the farms follow ISO standards. The results proved that the same antibiotics were used in different farms because the AMR ability was the same for all the samples. AMR mechanism can be a contagion and a burden on human health.

**Keywords:** antibiotic, gut flora, residual

## ANTIBACTERIAL AND ANTI- OXIDANT ACTIVITIES OF EXTRACTS FROM MEDICINAL PLANTS

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### ABSTRACT

The algerian flora provides a diverse range of aromatic plants with a high therapeutic interest due to their secondary biologically active metabolites, which have sparked scientific interest.

In this study, we are interested in the plants *Ocimum basilicum* L. of the Lamiaceae family and *Artemisia campestris* A. of the Asteriaceae family, which are well known locally and have a variety of curative properties in traditional medicine. The first part of this study is devoted to the quality control of the plant powder and the investigation of the metabolites. The phytochemical screening revealed the presence of flavonoids, tannins, coumarine, essential oil, and other metabolic compounds. The HE were obtained using hydrodistillation with a yield of 2.4% for *O.basilicum* L. and 1.8% for *A.campestris* A. The phenolic compounds were obtained by a series of extractions with four solvents of increasing polarity. The concentration of these extracts in total polyphénols, flavonoids, and tanins was determined by using the reactif Folin Ciocalteu, aluminum trichlorure, and vanilline with the addition of chlorhydric acid. In the second section, we investigated the antioxidative capacity of extracts (HE and phenolic compounds) in vitro using the DPPH method.

The results show that our extraits have interesting antioxidant properties, with ethyl acetate being the most effective. Furthermore, the essential oil has a very low antioxidative activity when compared to the benchmark for the two plants.

Finally, we assessed the antibacterial activity of our extracts against ten pathogenic bacteria using the MH diffusion method.

The results show that phenolic extracts of *O.basilicum* L. have higher activity for HE. Unlike *A.campestris* A., the acétate of éthyle extract is the most active on the majority of Gram+ souches.

**Keywords:** *O.basilicum* L., *Artemisia campestris* A, Antibacterial, oxidant activities



**QSAR MODELING USING GAUSSIAN PROCESS APPLIED FOR A SERIES OF FLAVONOIDS AS POTENTIAL ANTIOXIDANTS**

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**ABSTRACT**

For decades, flavonoids have been the core of diverse research, especially for their significant antioxidant activity. They have several biological activities, and they are used as anticancer, antileishmanial, anti-inflammatory, and antiaging compounds. However, current researchers are very much interested in the antioxidant activity of flavonoids since oxidative stress is strongly related to several diseases. In this study, we have chosen to elaborate on a quantitative structure-antioxidant activity relationship (QSAR) using a statistical method called Gaussian process (GP). The main advantage of this method compared to other techniques currently used in QSAR studies is that it does not increase the complexity of learning tests. Typical QSAR studies use common techniques such as the artificial neural method, multiple linear regression, and partial least squares regression. The aim of this work was to use a statistical technique little known in pharmaceutical chemistry, the Gaussian process regression which is rarely used to build a QSAR model. Finally, we have also demonstrated that GP is reliable and capable of predicting the antioxidant activity with a respectable record ( $R^2_{pred}$ ) which is equal to 0.86, so it is much higher than the reference value of 0.6. Therefore, we estimate that this reliable model can be used to predict the antioxidant activity of a series of new molecules. Also, based on the HC results, our set was divided into four separate clusters according to the presence of glycosides and the molar weight of the flavonoids.

**Keywords:** Flavonoids, Antioxidant, QSAR, Gaussian process, PCA, HCA.

**QUANTITATIVE STRUCTURE ACTIVITY RELATIONSHIP (QSAR) INVESTIGATIONS AND MOLECULAR DOCKING ANALYSIS OF PLASMODIUM PROTEIN FARNESYLTRANSFERASE INHIBITORS AS POTENT ANTIMALARIAL AGENTS**

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**ABSTRACT**

The development of farnesyltransferase inhibitors based on the benzophenone scaffold directed against *Plasmodium falciparum* is considered a strategy in malaria treatment. In this work, quantitative structure–activity relationship (QSAR) was performed to predict the protein farnesyltransferase (PFT) inhibitory activities for a series of 36 benzophenone derivatives. The data set was divided into two subsets of training and test sets, and the best model using multiple linear regression (MLR), with the values of internal and external validity ( $R^2 = 0.884$ ,  $R^2_{adj} = 0.865$ ,  $R^2_{pred} = 0.821$ ,  $Q^2_{cv} = 0.822$  and  $R^2_p = 0.811$ ) was found in agreement with the Tropsha and Golbraikh criteria. The applicability domain (AD) was determined using the Williams plot to describe the chemical space for the model used in this study. The model shows that antimalarial activities of benzophenone depend on  $\log P$ ,  $bpol$ ,  $MAXD_n$ , and  $FMF$  descriptors. These indications prompted us to design new benzophenones PFT inhibitors and predict the value of their antimalarial activities based on the MLR equation. Docking results reveal that the newly designed benzophenones bind to the hydrophobic pocket and polar contact with high affinity. The predicted results from this study can help to design novel benzophenone as inhibitors of human PFT with high antimalarial activities.

**Key Word** : QSAR, docking, benzophenone, PFT inhibitory, antimalarial.

## CONTRIBUTION TO DRUG DISCOVERY THROUGH COMPUTATIONAL ANALYSIS OF SEVERAL SERIES OF HETEROCYCLIC MOLECULES

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### ABSTRACT

Breast cancer is the most common type of female cancer. One class of hormonal therapy for breast cancer drugs -non steroidal aromatase inhibitors- are triazole analogues. In this work a fundamental and original research was made on the molecule of triazole heterocyclic, whose the aim is to predict the reactivity and biological activity studied of the compound. It is based on different computational and approaches used in computer aided -drug-design. (SPR, QSAR, molecular docking, ADMET).

A study of structure – property relationships (SPR) for 1,2,3 triazole derivatives has been carried. A linear quantitative structure activity relationship model is obtained using Multiple Linear Regression (MLR) analysis as applied to a series of triazole derivatives with inhibitory activity of the aromatase. The accuracy of the proposed MLR model is illustrated using the following evaluation techniques: cross validation, and external test. Docking process, the interaction and binding of ligands – protein were done and visualized using software Molegro Virtual Docking.

Molinspiration and ADMETSAR web servers used to calculate ADMET and physicochemical properties of the target compounds respectively. The results are reported and discussed in the present investigation. A close agreement with experimental results was found which improves the affinity of the present work.

**Key Word:** 1,2,3-triazole, aromatase inhibitory, density functional theory, QSAR, MLR, ADMET, docking molecular

## IN SILICO INVESTIGATION OF SEVERAL SERIES OF HETEROCYCLIC MOLECULES FOR DRUG DISCOVERY

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### ABSTRACT

Drug discovery and design are inextricably linked to various branches of chemistry, particularly organic chemistry. Many aspects of chemistry must be involved in order to translate knowledge of the molecular, genetic, and cellular bases of cancer into effective therapies. Thus, the goal of this research is to identify promising active compounds for coumarin as CK2 protein kinase inhibitors using a QSAR model and drug similarity analysis. CK2 is a ubiquitous Ser/Thr-specific protein kinase that is required for cell cycle viability and progression. CK2 levels are particularly high in proliferating, normal, or transformed tissues, and transgenic mice expressing its catalytic subunit are responsible for lymphomas. The work began with the optimization of the equilibrium structures of the basic coumarin in order to select the most reliable forecasting approach compared to experimentation and at the lowest computational cost. Following our research, we conduct a multiple linear regression (MLR) analysis to generate QSAR models. An external validation research was done because the results show that the QSAR model of CK2 inhibitory activity is robust and has extremely strong prediction capacity, as indicated by R<sup>2</sup> values of 0.951 and 0.927, respectively, following linear regression analysis. The investigation using QSAR models is successful in screening 34 candidate chemicals. Following that, the compounds under consideration were evaluated for drug-likeness and reactivity (ADME, golden triangle, lipophilicity indices). The results reveal that when supplied orally, the majority of the substances have no bioavailability issues.

The data also aid in determining which chemicals do not have clearance issues, as well as which are the most stable and reactive among those examined. The anticipated findings of this study may aid in the development of novel coumarins with significant CK2 inhibitor activity.

**Keywords:** coumarine, CK2, QSAR, MLR.

## EVALUATING THE EFFECT OF BOKO HARAM INSURGENCY ON EDUCATION AND STUDENTS OF TERTIARY INSTITUTIONS IN NORTHEAST NIGERIA

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### **ABSTRACT**

The main objective of this research is to Evaluate the effect of the Boko Haram Insurgency on Education on Students of tertiary institutions which affects their performance in northeast Nigeria. The study examined the effect of the Boko Haram insurgency on education in some selected tertiary institution in northeastern states of Nigeria. The primary data will be sourced through the circulation of 500 survey forms to the affected institutions in the region this will include some affected Polytechnics and Universities all from northeastern Nigeria. Descriptive analysis was used either qualitative or quantitative, the research adopt qualitative analysis so as to verbally summarise the information generated for secondary data in the research, and the primary data chi-square X<sup>2</sup> was implemented to analysed the Data. Human capital investment was affected by school enrolment, school attendance, and school infrastructure which is seriously affected by the Boko Haram insurgency. It is extreme religious beliefs, unemployment, and illiteracy that contributed to the emergence of the Boko Haram insurgency. Boko Haram insurgency indirectly and significantly affects human capital investment through school enrolments, school attendance, and school infrastructure due to fear in minds of students and their parents. The lack of modern facilities installed to detect the availed of Boko Haram on the campus is the major effect and lack of security personnel in all the institutions in the region. Therefore government should provide employment opportunities for the citizens and encourages self-reliance in programs such as entrepreneurship, and agricultural borrower's schemes. Free education to grow the learning percentage of every citizen, and government should be in persistent discourse with Boko Haram religious leaders (Muslims) to find a lasting solution to this problem.

**Keywords:** Education, Institutions, Insurgency, Human Capitals Investment, Boko Haram, and Studen

## CHALLENGES IN LEARNING ENVIRONMENT TOWARDS QUALITY EDUCATION AND IMPLEMENTATION OF OUTCOME BASED APPROACH

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### **ABSTRACT**

Challenges in quality education systems impacts all stakeholders including academia, administration and regulatory bodies and students. A thorough understanding and holistic approach can be used to make Comparisons between do's and don't and there are numerous ways to implement such processes gradually to ensure improvement in practice. However there are constituents challenges that need to be addressed by all stakeholders at the time of argument. They may be considered from time management, personal level management, mindset change to leadership crises. Faculty training and development activities are still in infancy stage in our country although higher education commission is working on it, but limited exposure and weak responsiveness are still the major causes of lack of training and availability of opportunities to faculty members. It training of faculty cohort from junior to senior management levels is required to bring change in culture and practice standards. If such programs are initiated at institutional own level, then all faculties can be benefitted and trained accordingly. This presentation slot is based on these parameters of faculty development needs and challenges identified during the time of research and ways to address them to bring quality culture in practice for quality education outcomes.

**Keywords:** Faculty training, education Quality, Challenges, time management, mindset change

**KNOWLEDGE AND PRACTICE OF PERSONAL HYGIENE AMONG PRIMARY SCHOOL PUPILS IN PAKI COMMUNITY IKARA LOCAL GOVERNMENT AREA OF KADUNA STATE**

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**ABSTRACT**

Background: Good knowledge and practice of personal hygiene plays a major role in reduction of the burden of communicable diseases, when school pupils are educated on the knowledge and practice of personal hygiene that will promote and protect their health. Aims: Assess knowledge and practice of personal hygiene among primary school pupils in Paki community. Methods: This study adopted Simple random sampling technique and stratified random sampling technique was conducted among 300 primary school pupils of class four to six from four (4) selected primary schools in paki community, age group 7 to 14 years. Closed ended questionnaire was used for data collection. Results: Hypothesis tested significant gender influence on knowledge of personal hygiene with  $p = 0.024$ , Females pupils with 170(56.7) adequate knowledge while males primary pupils has 130(43.3%). Conclusion: Gender has an influence on knowledge of personal hygiene among primary school pupils in Paki community. Recommendation: Government should intensify efforts in health education with emphasis on the importance of personal hygiene in all the primary schools in the state and Schools in Paki community should encourage inter school competition on personal hygiene to increase awareness of personal hygiene among others.

**Keywords:** Knowledge, Practices, Personal hygiene, Primary school pupils, Class, Gender



**RAMBUAI AND HUMAN SUFFERING IN MALASWAMI JACOB'S 'ZORAMI: A REDEMPTION SONG'**

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**ABSTRACT**

The darkest period of the Mizo people in their history happened during 1966-1986 when the Mizo National Front Party decided to declare Independence against the government of Assam, the twenty years period of fighting between the Mizo National Front Party and the Indian Army was called Rambuai (troubled land) or Insurgency. The Indian army was armed with AFSPA (Armed Forces Special Power Act) and they could exercise their power to an extreme extent to control and erase any form of resistance, they can prohibit any mass gathering and even arrest any suspect without any warrant, the army took an advantage of the circumstance to abuse their power to commit unimaginable atrocities to the MNF (Mizo National Front) insurgents and the innocents alike. The atrocities of the army which involved raping, sexual assault, killing, and depriving the people of their rights and freedom were horrifying and traumatizing for the people, particularly the women. Malsawmi Jacob's 'Zorami: A redemption song' is the first historical novel written in English which is one of the best literary representation of Mizo insurgency. The present paper aims to examine how Rambuai memories narrated in the novel records the unheard voices. It also tries to highlight the series of human sufferings, sexual assault and killings that followed the twenty years war which tormented the Mizo people.

**Keywords:** Indian Army, Mizo National Front (MNF), Rambuai (troubled land)

## EXPLORATION OF THE IMPACT OF ASSISTIVE TECHNOLOGY IN INCLUSIVE ENGLISH LANGUAGE CLASSROOM

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### ABSTRACT

Recent research indicates that having students with visual impairments in a classroom can be very challenging for teachers, and the learning environment of the English language classroom is no exception. In response to such challenges, use of assistive technology is currently applied to language teaching and learning at any stage of education, and assistive technology is viewed as both a tool and a catalyst for change in language pedagogy. This paper explores the impact of assistive technology on undergraduate visually impaired students' teaching and learning in the context of an inclusive English language classroom. Using the example of the Centre for Preparatory Studies at Sultan Qaboos University, it specifically looks into teaching English to visually impaired students' practices currently in place at the institution. It also examines advancements in such practices potentially leading to English language education that is universally accessible, equally usable, more inclusive and tailored to student needs, including use of assistive technology viewed as both a tool and a catalyst for change in language pedagogy. In addition to the emphasis on technology, the issues related to teacher training and professional development will be discussed. Pedagogical implications suggested in the paper include directing English language educators on how to access and effectively use assistive technology that supports the practice of inclusive education enhances student teaching and learning.

**Key words:** Sultan Qaboos University, assistive technology, English language classroom, inclusive education, visually impaired students

## THE FUTURE DEVELOPMENT OF THE EU ENERGY SECURITY AFTER THE INTRODUCTION OF RESTRICTIVE MEASURES

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### ABSTRACT

Over the past two decades, energy security has become a significant challenge in relation to the EU sanctions in place. In the context of climate change, but also the crisis in Ukraine, this topic is of interest to the scientific community. The reason for this is the fact that Russia is the largest supplier of energy resources to the EU. In the center of interest of the researchers is the energy security of the EU and the diversification of its natural gas supplies. In recent years, events such as the gas crisis (2006 and 2009) and the conflicts in Ukraine (2014 and 2022) have brought this topic to the fore, prompting representatives of the international scientific community to address these issues. The case of bilateral energy cooperation has attracted the attention of economists, political scientists and energy and international relations specialists from different countries, which has led to the existence of a significant amount of research (Cebotari, 2022). The main goal of the article is to examine the impact of the European Union's economic sanctions on energy carriers on its energy security and to establish possible recommendations in the examined issue. In order to thoroughly fulfill the main goal of the article, we also set partial goals. Defining the concept of energy security from the point of view of the EU energy policy plan from the point of view of availability of sources and transport routes of individual energy carriers, affordability, environment and maintaining competitiveness; theoretical definition of EU energy policy principles and the current state of energy security; evaluation of the impact of geopolitical changes on trade relations between the EU and the Russian Federation; evaluation of the state and development of the territorial and commodity structure of foreign trade between the European Union and the Russian Federation; review of energy security between the EU and the Russian Federation; evaluation of mutual trade intensity and mutual complementarity of trade in the energy sector.

**Keywords:** Energy security, restrictive measures, European union, energy resources

## UNDERSTANDING THE RELATIONSHIP BETWEEN UNION INSTRUMENTALITY AND UNION COMMITMENT

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### ABSTRACT

This study aims to determine the effect of union instrumentality, transformational leadership, and psychological contract violations on union commitment. The number of respondents taken in this study amounted to 380 members of the Danamon Labor Union. The sampling method used stratified random sampling. Based on the results of research and quantitative data analysis using the SPSS that has been carried out. 53.1% of the variation in the union commitment variable can be explained by the variables of union instrumentality, transformational leadership, and psychological contract violation. Union instrumentality and transformational leadership have a significant positive impact on union commitment. Psychological contract violation has a positive but insignificant impact on union commitment. Union instrumentality, transformational leadership, and psychological contract violation simultaneously affect union commitment. This research contributes to suggest some practical implications. It is important to deliver tasks according to members' abilities, provide direct direction regarding members' tasks. Manager should direct the employees with clear and detailed tasks, and pay attention to timeliness in carrying out tasks. The union represent workers in fighting for fundamental aspects of workers such as wages and unfair treatment, and participate in organizing meetings with worker representatives to discuss company development strategies.

**Keywords:** Trade Union Instrumentality, Transformational Leadership, Psychological Contract Breach

## IMPROVING THE ASSERTIVE COMMUNICATION SKILLS OF STUDENTS - FUTURE PRESCHOOL TEACHERS

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### ABSTRACT

The concept of assertiveness is multidimensional and implies standing up for personal rights and expressing thoughts, feelings and attitudes in a direct, honest, moderate and adequate way, with respect for other people. Assertiveness is defined as a form of behavior in social interactions in which we express our wishes and feelings, and refuse unreasonable demands in a way that does not cause psychological or physical harm to other persons. Given that the communication competence of students stands out as a special dimension of the quality of teaching and is a key instrument in the learning process as the co-construction of knowledge, the building of collaborative, partnership relationships, and the optimal functioning of different teams of students, action research was conducted on the population of N=60 students of the second year of preschool teacher education study programme at PTTBIC - Sirmium in Sremska Mitrovica, which aimed to improve students' assertive communication skills in the teaching process and joint activities. In the first phase, an examination of the students' current assertive communication skills was carried out with a purpose-built closed-type questionnaire in the form of a four-level assessment scale composed of 16 statements. Based on the descriptive analysis, the areas in which the intervention - student training - was to be implemented were determined. After the training, which consisted of three modules, an interview was conducted in three focus groups of N=10 students each. The results showed that students estimate that they have developed assertive communication skills that will contribute to better interaction and cooperation between students, openness to dialogue, communication dominated by ME messages, conflict prevention, and better efficiency and collaborative learning. Empowering students - future preschool teachers in the area of communication competences can be important for future educational practice.

**Keywords:** students - future preschool teachers, assertive communication, collaborative learning, teaching

**A COMPARATIVE APPROACH BETWEEN GIORGIO BASSANI AND MARCEL PROUST (THE GARDEN OF FINZI-CONTINIS AND IN SEARCH OF LOST TIME)**

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**ABSTRACT**

Not rarely does criticism find in the work of the Italian writer Giorgio Bassani a kind of concept of time and a way of writing which immediately brings to mind the French writer Marcel Proust. Their biographical elements, the feverish reading of Proust's works that Bassani admired, their common concept of memory and the consciousness of time are some of the aspects that will be analyzed in this paper, especially referring to the two most important works of both writers, *The Garden of Finzi-Continis* and *In Search of Lost Time*. The variations of time and the re-creation of its rhythms lead Bassani's narrative towards the past. The female characters and the secret code of their words make the reader experience the same feeling of Proust's work, even though for Proust writing is a way of living whereas for Bassani it remains only a way of survival.

**Keywords:** meeting points, memory, time, narrative

## POVERTY AND CORRUPTION IN THE WESTERN BALKAN COUNTRIES – A PANEL ANALYSIS

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### ABSTRACT

Poverty and corruption are considered important macroeconomic factors that affect the growth and sustainable development of a country's economy. When the countries of the Western Balkans are under discussion, which are characterized by a prolonged economic transition accompanied by numerous socio-economic and political problems, poverty and corruption become even more sensitive indicators. This study aims to analyze the relationship between poverty and corruption in six Western Balkan countries, including Kosovo, North Macedonia, Albania, Bosnia and Herzegovina, Montenegro and Serbia. The econometric model used in this study is the dynamic panel. The econometric model used in this study is fixed effect, random effect and the Hausman test. The analysis under consideration includes the period 2000-2021 using secondary data form the World Bank Indicators. The study comes to the conclusion that poverty and corruption are positively related to each other and their growth negatively affects the economic growth of the Western Balkan Countries. While other related variables such as employment, population growth rate, export, consumption have a positive impact on the economic growth of the countries of the Western Balkans.

**Keywords:** panel, economic growth, poverty, corruption, export jobs



## APPLYING UX PRINCIPLES TO FIND PRE-PATTERNS IN HANDHELD AUGMENTED REALITY GAMES

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### ABSTRACT

Reality-based interfaces that produce "embodied" game play experiences have recently attracted a lot of attention from the gaming industry and allied research areas. Handheld augmented reality (HAR) is a reality-based interface that superimposes computer-generated imagery (CGI) over a user's view of the actual world. In a HAR environment, players can use their existing physical and social skills to engage with the game system. The application of user experience (UX) design principles to augmented reality (AR) systems has received only a limited amount of research attention. In this study, we look into the potential relevance of such principles to the field of handheld augmented reality game development. The UX design tools such as shadowing, ethnographic research, people and context research, empathy mapping and experience map are used to define the pre-patterns in HAR games.

**Participants** - We select a sample of 23 gamers of the gaming society Indian Institute of Technology Kanpur. After the sample of 23 gamers we select diverse sample of 27 individuals to dive deep into the UX research.

**Keywords** - embodied game, handheld augmented reality (HAR), computer generated imagery (CGI), shadowing, experience map, pre-patterns.

## PHISHING WEBSITE DETECTOR

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### ABSTRACT

Phishing is a form of online identity theft. Phisher attempts to bait her casualty into clicking a phishing URL highlighting a fake page by means of spam-email to collect monetary data. The phishing movement is on the ascent and their methods become simpler and more complex. A lot of answers for moderate phishing assaults have been proposed to date. Those strategies bring site page content which bring about undesired incidental effects. In this paper, an original technique is proposed to recognize phishing URL in view of SVM. The component vector is built with 23 elements to display the SVM which 4 highlights are the construction element of the phishing URL, 9 highlights are lexical element and 10 elements are for the most part target phished brand name of site. The exploratory outcomes show the recognition arrangement accomplishes 99.0% precision on normal that the phishing URLs accomplish is downloaded in PhishTank.

**Keywords:** spam-email, view of svm, phishtank.

## A SELF DIAGNOSIS MEDICAL CHATBOT USING ARTIFICIAL INTELLIGENCE

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### **ABSTRACT**

Now a days we are living in a technological world. Especially the technology in medicine grows abruptly. Telemedicine is a technology where people can take medical advice from a physician through video conferencing without going to the hospital. This includes medical chat-bot which is a virtual assistant that helps the person who is in need for medical advice at preliminary level. This medical chat-bot will diagnose the disease according to the symptoms provided by the patient and gives the basic details about the disease. In addition to that this chat-bot also provides the details of the specialist for that particular disease. These chat-bots provide a text-to-text diagnosis and it is easily accessible. This helps to reduce the cost of healthcare and can improve medical knowledge. There are three types of chat-bot, Informative, Conversational and Prescriptive. Here we are going to create Conversational chat-bot. The medical chat-bot is created with the help of Machine Learning Algorithms which comes under Artificial Intelligence. And the algorithm we are using to create this chat-bot is Decision tree Classifier. Whenever the user enters the symptom he is experiencing, those symptoms are compared with the symptoms in the dataset and provide the accurate disease as a result. Chat-bots can play an important role in reshaping medical industry with the help of predictive diagnosis.

**Keywords:** Text-to-text diagnosis, symptoms, comparison

## HUMAN-CENTRIC UX DESIGN PRINCIPLES AND DESIGN THINKING: AN EMPIRICAL STUDY USING DESIGN CHALLENGES

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### ABSTRACT

Do not make the user think is the fundamental design principle. The people-centred design combines analysis and creative design with research about people. Any business or profession can use design thinking as a tried-and-true method for solving issues. The design thinking procedure begins with problem definition and continues through prototyping, gathering feedback, and redefining the problem statement. It covers an individual's experience with a product and overall satisfaction with it. This research aims to demonstrate how design innovation theories and concepts—which are drawn from the principles of user experience design—can be objectively comprehended. The UX design procedure is explained using two design challenges. In-depth research is conducted on the implementation and demonstration of the known-unknown map, stakeholder mapping, journey mapping, affinity mapping, concept generation matrix, and prototyping to refine the problem statement and generate "how may we?" statements to turn those challenges into opportunities for design.

Participants - We posed a questionnaire to a diverse sample of 198 individuals of varying ages and professions. After the questionnaire, we select some individual of 72 people for direct observation. For this research, we have conducted interviews which include 14 doctors, 18 pharmacists, 23 individuals and 17 senior citizens (age above 65) to deep dive into the UX research.

**Keywords-** people-centred design, known-unknown map, journey mapping, affinity mapping, concept generation matrix

## UX STUDY ON HANDHELD AUGMENTED REALITY GAMES BY APPLYING SPRADLEY'S NINE DIMENSIONS DESIGN PRINCIPLE

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### ABSTRACT

The first step in researching augmented reality was making a head-mounted three-dimensional display at the beginning of 1968. The idea behind a three-dimensional display is to show the user a perspective image from a different point of view that changes as the user moves. Since that time, the majority of growth in augmented reality has been driven by technology. The researcher's emphasis on AR's technological aspects, such as its hardware and software, has resulted in very few initiatives directed toward user experience and exploration studies. To address the transition of the notion of augmented reality from research/laboratories to the general user, it is necessary to approach the technology in a more user-friendly, user-centric manner. In this study, we focus on handheld augmented reality (HAR) gaming applications and propose to employ Spradley's nine dimensions to investigate components of handheld augmented reality experience so that designers may comprehend the human-centric design approach. we posted a questionnaire to a diverse sample of 215 individuals. After the questionnaire, we select 35 individuals and provide them with our iPhone11 to play AR Gamest for direct observation.

In the result, we found out 61.9% of users know about HAR games, and 8.1% of users played the AR game without understanding that it is known to handle augmented reality implying that even after utilising augmented reality, many are unaware of it. 28.2% (strongly agree) and 32.5% (agree) on the issue that it is easier to get skilled at AR games. We conclude our research by finding out there are 4 insights related to the HAR games. The detail of these insights is discussed in context with the human-centric design in HAR games.

**Keywords:** handheld augmented reality (HAR), user-centric, Spradley's nine dimensions, human-centric design

## EFFICIENCY OF WEB-BASED, COMPUTER AND MOBILE SOFTWARE APPLICATIONS IN FACILITATING TEACHING AND LEARNING OF CHEMICAL CONCEPTS

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### ABSTRACT

Technology has transformed global education from the traditional face-to-face method of talk and talk to the modern remote and virtual method of learning via electronic media. Some of the most commonly used technologies for chemistry education are web-based, mobile, and computer software applications. Thus, this study investigated the teachers' perceptions of the efficiency of web-based, mobile, and computer software applications in facilitating the teaching and learning of chemical concepts. The study adopted a survey research design to cover a large, scattered population in the shortest possible time. The survey was developed from the literature of related studies. About 266 responses were retrieved from an estimated population of 700 chemistry teachers in both public and private secondary schools, polytechnics and monotronics, colleges of education, and universities across the Sokoto metropolis. The obtained data was computed and analysed using the Statistical Package for Social Sciences (SPSS) version 25. The result of the study reveals that chemistry teachers considered web-based, mobile, and computer software applications efficient in delivering effective classroom and laboratory instructions. Many of these web tools and software applications are intended to provide students with visualisation of invisible components of the chemistry curriculum. Some of these resources include iMolview Lite, Elements 4D, H NMR Molecular, ULg Spectra, ChemSense, CHEMTrans, AutoChrom, Katalyst D2D, Luminata, Method Selection Suite, MS Fragmenter & NMR Predictors, Spectrus JS, ChemOffice (the new version includes ChemDraw Ultra, Chem3D Ultra, E-Notebook Ultra, ChemFinder, CombiChem, Inventory, BioAssay, and The Merck Index), Spectrus Processor, Gaussian, Structure Elucidator Suite, ChemSketch, Hyperchem, Betwixt, Odyssey, ChemBuddy, Monte Carlo Gas Simulator, SAVANT Laboratory Training, Atomic orbitals CD-ROM, Chemical Thesaurus, CHEM-IT, Newbyte, WinTorg, CHEMIX School, Kintecus. The study recommends that chemistry teachers should use relevant apps to deliver instructions that facilitate learning of concepts teachers and students perceive as difficult. Moreover, teachers should also test those software applications for their effectiveness in facilitating chemistry education in this century.

**Keywords:** Chemistry, Web-based tools, Mobile software application, Computer software application, Teaching, Learning.

## ANN FOR NOISE REMOVAL IN DIGITAL IMAGES

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### ABSTRACT

In order to address such problems, a solution is put out in this essay. An ANN-based SPN filter is what this study's authors suggest (ANN-SPNF). By considering the characteristics of the pixel values that are closest to the noisy pixel to be filtered, an ANN network model was developed. The training set was built using the characteristics of the eight noise-free pixels that were nearest to the noisy pixel. For every pixel, there are three properties. These are the noise-free pixel value, x and y distances, and distance in the direction of noise. The network input uses a total of 24 characteristics. The value of the noisy pixel before the noise is introduced is the network output (original value). The ANN-SPNFF was assessed using medical images tainted with a salt and pepper noise for all noise densities. Results of various strategies were contrasted with those of the algorithm methodology, which was evaluated using quality measures. The ANN-SPNFF was able to provide results that were competitive with those of other methods in the literature, and it was able to produce the best outcomes.



**EFFECT OF NONLINEAR RADIATION ON 3D UNSTABLE MHD STAGNANCY FLOW OF  
FE<sub>3</sub>O<sub>4</sub>/GRAPHENE-WATER HYBRID NANOFLUID**

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**ABSTRACT**

Three dimensional unstable magnetohydrodynamic stagnancy flow of hybrid nanoliquid with nonlinear radiation and uneven heat rise/sag is studied hypothetically. We considered Fe<sub>3</sub>O<sub>4</sub>/Graphene nanoparticles embedded in water. The physical problem is modelled mathematically and resolved it using RK4-shooting procedure. Influences of pertinent parameters on the flow and energy transport are noted numerically and graphically. Moreover, the wall friction, local Nusselt number are computed and comparative analysis of nano/hybrid nanofluids has been performed with the help of streamlines and isotherms. It is found that the drive and energy transport of nano/hybrid nanofluid is highly influenced by the variation in the particle volume fraction as well as unsteadiness factor. Also, witnessed the average temperature of nanofluid in saddle stagnation region is high when compared to hybrid nanofluid.

**Keywords:** Stagnation point, Magnetohydrodynamics, Hybrid Nanofluid, uneven heat source/sink, nonlinear radiation.

## ELECTROCHEMICAL INVESTIGATION OF FACILE MoO<sub>3</sub>/NiO/PdO/Pd NANO ELECTRODE MATERIAL FOR SUPERCAPACITOR APPLICATION

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### ABSTRACT

Sustainable synthesis of efficient and advanced electrode materials with nanostructures is a great challenge for the development of high-performance electrochemical devices. Here, a facile MoO<sub>3</sub>/NiO/PdO/Pd nanocomposite was synthesized by environmentally friendly reducing and stabilizing phyto-organic reagent of foliar extract (FE) of *Euphorbia cognata* Boiss. The free octodrine and cyclobutanol organic functional groups of FE electrostatically stabilized MoO<sub>3</sub>/NiO/PdO/Pd nanocomposite as demonstrated by X-ray photoelectron spectroscopy (XPS). The synthesized nanocomposite exhibited mixed phases of rhombohedral NiO, tetragonal PdO, and cubic Pd evident from X-rays diffraction and scanning electron microscopy. As synthesized nanocomposite showed excellent optical properties with a bandgap of 1.6 eV. The electrochemical charge storage properties of nanocomposite are investigated on Ni foam modified electrode. The nanocomposite modified microelectrode revealed a specific capacitance of 257 F/g under a voltammetric energy density of 7.2 Wh/Kg with an internal resistance value of 0.4 Ω. The large surface area of nanostructured MoO<sub>3</sub>/NiO/PdO/Pd composite with a small synergistic bandgap and advantage of Mo, Ni, and Pd played a key role in the enhancement of electrochemical energy properties for supercapacitor energy storage application.

**Keywords:** Nanocomposite, MoO<sub>3</sub>, NiO, PdO, Pd, electrochemical, supercapacitor, energy storage

**EFFECT OF MACHINING PARAMETERS ON SURFACE ROUGHNESS AND MATERIAL REMOVAL RATE IN MACHINING OF POM C GF 25% USING PCD TOOL**

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**ABSTRACT**

This study explores the influence of varying machining parameters (cutting speed ( $V_c$ ), feed rate ( $f$ ), depth of cut ( $a_p$ ), and tool nose radius ( $r$ )) on surface roughness ( $R_a$ ) and material removal rate (MRR) during turning process of the POM C GF 25% polymer utilizing PCD inserts under dry cutting conditions. A linear model featuring interaction was constructed based on a Taguchi L18 plan of experiments. The model, which includes cutting speed, feed rate, depth of cut, and tool nose radius, was developed within a 95% confidence interval for surface roughness. A contour plot displaying surface roughness for different machining conditions was generated from the equation. Additionally, a multi-objective optimization was done using of the desirability function (DF), with objective that include maximizing both quality and productivity (by minimizing  $R_a$  and maximizing MRR). In conclusion, the results of this study demonstrate that optimizing the machining parameters can lead to an improvement in both surface finish and productivity. The findings obtained may be valuable to researchers and practitioners involved in the field of mechanical manufacturing, as they seek to enhance their comprehension and control of the machining process.

**Keywords:** RSM, PCD tool, Taguchi, Desirability function.

**MODELING AND MULTI-OBJECTIVE OPTIMIZATION FOR MINIMIZING CUTTING FORCE AND MAXIMIZING PRODUCTIVITY FOR POM C GF 25% IN TURNING PROCESS USING PCD TOOL**

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**ABSTRACT**

The present study aims at investigating the influence of the different machining parameters represented by the tool nose radius ( $r$ ), the cutting speed ( $V_c$ ), the depth of cut ( $a_p$ ), and the feed rate ( $f$ ) on the output performance parameters expressed through the cutting force and the material removal rate (i.e.,  $F_z$  and MRR) during a dry hard turning operation of POM C GF 25%. The machining tests were carried out using a PCD insert according to the Taguchi design (L18). The analysis of variance (ANOVA) led to quantifying the influence of ( $r$ ,  $V_c$ ,  $a_p$ , and  $f$ ) on the output parameters. The TOPSIS (Technique for Order of Preference by Similarity to Ideal Solution) was applied in order to achieve a multi-objective optimization that encompasses the output parameters simultaneously in order to obtain an optimal cutting regime that satisfies both minimization of cutting force ( $F_z$ ) and maximization of productivity (MRR). The obtained results are expected to be of significant benefit to researchers involved in the field of mechanical manufacturing, as they aim to deepen their understanding and proficiency in the process.

**Keywords:** ANOVA, PCD tool, Taguchi, Polymer, MCDM.

## INTERVAL-VALUED Q-RUNG ORTHOPAIR FUZZY ACZEL-ALSINA OPERATIONS-BASED BONFERRONI MEAN AGGREGATION OPERATORS AND THEIR APPLICATIONS

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### ABSTRACT

As a generalization of interval-valued intuitionistic fuzzy sets, a consciousness of interval-valued q-rung orthopair fuzzy sets (IVq-ROFSs) is an efficient tool for addressing uncertain information in broader space due to the adaption of the adjustable parameter  $q \geq 1$ . In the present article, we devise Aczel-Alsina operations to interval-valued q-rung orthopair fuzzy (IVq-ROF) utilizing Aczel-Alsina t-norm and t-conorm. Based on these operations, we originate a series of aggregation operators, including IVq-ROF Aczel-Alsina weighted averaging (IVq-ROFAAWA) operator, IVq-ROF Aczel-Alsina ordered weighted averaging (IVq-ROFAAOWA) operator, IVq-ROF Aczel-Alsina hybrid averaging (IVqROFAAHA) operator, IVq-ROF Aczel-Alsina weighted geometric (IVq-ROFAAWG) operator, IVq-ROF Aczel-Alsina ordered weighted geometric (IVq-ROFAAOWG) operator, IVq-ROF Aczel-Alsina hybrid geometric (IVq-ROFAAHG) operator, IVq-ROF Aczel-Alsina weighted Bonferroni mean (IVq-ROFAAWBM) operator. Some required properties of the formulated operators are verified, and their interrelatedness is shown exhaustively. At last, based on the designed operators, a decision-making approach is devised for ranking the alternatives in the IVq-ROF environment. Further, an illustrative example is addressed to demonstrate its practicability and usefulness, which is then tested by comparing the outcomes to other prevailing approaches.

**Keywords:** Fuzzy set , Intuitionistic fuzzy set, q-rung orthopair fuzzy set, interval-valued q-rung orthopair fuzzy set

## EXISTENCE OF SEVERAL 1:1 ENTRAINMENT REGIONS IN THE ARNOLD ONION DIAGRAM

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### ABSTRACT

Entrainment is a type of synchronization in which the period of an intrinsic oscillator matches the period of time-dependent forcing. Graphically, entrainment modes are represented in terms of an Arnold tongue diagram - a V-shape diagram in the two-parameter space of the given periodic forcing in which the frequency (or period) of the external forcing lies on the x-axis and the strength (amplitude) of the periodic forcing is located on the vertical axis. Regarding the recent studies on entrainment, Khan et al. investigated entrainment properties of different types of oscillators very close to a Hopf bifurcation (supercritical or subcritical) and found the existence of multiple 1:1 entrainment (termed as polyglot entrainment). Working along similar lines, we have also observed multiple 1:1 entrainment in the Arnold Onion diagram which is the hallmark of seasonality in circadian oscillations and entrainment. We used dynamical system tools to understand this phenomenon and characterize our results for different types of oscillators.

**Keywords:** Entrainment, Synchronization, Arnold tongue, Arnold Onion.

## NUMERICAL SIMULATION OF A PROTON EXCHANGE MEMBRANE FUEL CELL (PEMFC)

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### ABSTRACT

This study presents an approach to simulate a proton exchange membrane fuel cell (PEMFC) using ANSYS Fluent and GAMBIT for mesh generation. Mesh quality is improved to obtain more accurate results and reduce computation time. The different layers of the membrane, electrodes, gas flow channels, and current collectors are included in the geometric model. The numerical simulation is prepared in ANSYS Fluent, defining materials, physical properties, boundary conditions, and physical models. Transport equations of mass, energy, and electric charge are solved using advanced numerical methods. Simulation results allow understanding of the behavior of the fuel cell in terms of efficiency and gas distribution. Analysis of the results can help optimize the fuel cell design, improve its efficiency, and reduce development costs.

**Keywords:** Proton exchange membrane fuel cell (PEMFC), mathematical modeling, ANSYS Fluent, polarization curve.

## RESOLUTION OF SCHRODINGER EQUATION WITH PSEUDO HARMONIC POTENTIAL VIA NIKIFOROV-UVAROV (NU) METHOD

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### ABSTRACT

The eigenvalues and corresponding Eigen functions of Schrodinger equation with Pseudo harmonic potential are obtained with analytical method. The anharmonic potential is a combination of harmonic oscillator with inverse square term. In this paper we used a method of approximation for solving secular equations proposed by Nikiforov and Uvarov and we applied it on the Schrodinger equation some first eigenvalues of the quantum mechanical Pseudo harmonic oscillator. The method for the calculation in this paper is proposed by Nikiforov [1] and Uvarov [2]. The Schrödinger equation is one of the most important wave equations not only in physics also in chemistry. Exact solution of Schrodinger equation for many potentials has generated much interest in last past years. Many searchers tried to solve this equation with different potential like: Yukawa [3], Morse [4], Rosen–Morse [5], Woods–Saxon [6], Mie [7], Kratzer [8] and Pseudo harmonic [9], the application of Pseudo harmonic oscillator is in nuclear structure, quantum chemistry and quark confinement.

Here we will apply the mentioned method previously on the much more complicated general quantum multiterm Pseudo harmonic oscillators potential of type  $V(r)=(1/2)\mu\omega^2 r+\lambda/r^2$  [10-11] where  $\lambda$ , is sufficiently small perturbation, which is one of essential potential in physics as we mentioned before. Which it can be used before to describe the molecular vibrations and getting the energy spectrum of linear and non-linear systems.

The Nikiforov - Uvarov method (NU) [12-23] is algebraic technique as we recognized that is based on solving the second-order linear differential equations, it has been used before successfully to solve Schrödinger, Dirac and Klein–Gordon wave equations. Also, in presence of some famous central and non-central potentials. It's used for the hyper geometric second order differential equations type appeared in the time-independent problems. It's very efficacious method for an exact solution of eigenvalues and Eigen functions. The NU-method it is very applicable method to several potentials type like exponential one and non-central type potential. This method has been used on an unlimited scale because of the efficacy, simplicity, facility and accuracy. However, there are only few potentials that can be exactly solved for in three-dimensional as Coulomb and Harmonic potentials.

This work obtained eigenvalues of ground state-energy for trial values of  $\lambda$  with fixing the value of  $\omega$ . Also we have calculated the other state-levels of energy for known value of  $\lambda$  and  $\omega$  In order to determine the Eigen function of different states. Therefore, the main object of this present work is to obtain general Eigen solutions of the radial Schrodinger equation which leads to the energy eigenvalues and wave Eigen function. We also compare the solution with results is obtained by existing method and recent works approach which is very satisfied and exact solutions.

After comparing the eigenvalues results with other earlier workers numerical values, we found that this method gives excellent results and satisfied one.

**Keywords:** Schrodinger equation; Nikiforov and Uvarov method; Pseudo harmonic potential.



## COMPARATIVE STUDY OF THE PERFORMANCE OF PEM FUEL CELLS WITH DIFFERENT FLOW FIELDS

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### ABSTRACT

This study presents an approach to simulate a proton exchange membrane fuel cell (PEMFC) using ANSYS Fluent and GAMBIT for mesh generation. Mesh quality is improved to obtain more accurate results and reduce computation time. The different layers of the membrane, electrodes, gas flow channels, and current collectors are included in the geometric model. The numerical simulation is prepared in ANSYS Fluent, defining materials, physical properties, boundary conditions, and physical models. Transport equations of mass, energy, and electric charge are solved using advanced numerical methods. Simulation results allow understanding of the behavior of the fuel cell in terms of efficiency and gas distribution. Analysis of the results can help optimize the fuel cell design, improve its efficiency, and reduce development costs.

**Keywords:** Proton exchange membrane fuel cell (PEMFC), mathematical modeling, ANSYS Fluent, polarization curve.

## THE POLITICAL SITUATION IN KARABAKH DURING THE AZERBAIJAN DEMOCRATIC REPUBLIC AND THE KARABAKH AND ZANGAZUR ISSUE IN PARLIAMENTARY DOCUMENTS

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### ABSTRACT

After the establishment of the Azerbaijan Democratic Republic (ADR), the first goal of the Armenian nationalists, who resumed their activities in order to implement the idea of creating their fictitious "Great Armenia" using the complex situation that arose in the internal and international situation of Azerbaijan, was to capture Karabakh and Zangazur.

After the declaration of state independence of ADR, one of the main tasks ahead was the elimination of border disputes and disputes with neighboring countries, ensuring the territorial integrity of the Republic. Although there were disputes over this issue with both Georgia and Armenia, the most serious problems and difficulties arose in connection with Armenia. During this period, the Armenians, who considered the situation in the Caucasus and the international conditions favorable for the realization of the idea of "Great Armenia", put forward territorial claims against Azerbaijan and began to implement the policy of "ethnic cleansing" in its districts of Nakhchivan, Karabakh and Zangazur. As a result of this, the civilians living in a number of regions of Azerbaijan, especially those districts, were subjected to targeted genocide by Andronik, Dro and Njde gangs.

In the 1918-1920s, Parliament of Azerbaijan Democratic Republic among other issues, discussed the genocides carried out by Armenians against the turkish-muslim population in Karabakh and Zangazur. According the analysis of parliamentary meetings and documents, it is clear that in 1918-1920, bloody genocides and atrocities were committed against the turkish-muslim population by the Armenian-Dashnak forces in the Karabakh and Zangazur regions of Azerbaijan. At the meetings of the Parliament of the Azerbaijan Democratic Republic, the issue of Karabakh and Zangazur was widely discussed, detailed information was given about the events taking place there and definitive decisions were made.

**Key words:** Azerbaijan Democratic Republic, Parliament, Karabakh, Zangazur

## IMPLEMENTATION OF INTERNATIONAL HUMANITARIAN LAW – CASE STUDY OF 1992-1993 ABKHAZIAN ARMED CONFLICT

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### **ABSTRACT**

After the collapse of the Soviet Union, a number of armed conflicts took place in the post-Soviet area, including in Georgia, which was partially due to the active involvement of external actors. The scientific paper presents an analysis of the 1992-1993 conflict in Abkhazia. At first, it was very difficult to argue whether the conflict in Abkhazia belonged to an international conflict due to the lack of sufficient facts. However, as a result of the analysis and assessment of the current status quo, the involvement of Russia as a third party has been confirmed, which completely changes the original classification of the mentioned conflict (from a non-international armed conflict to an international armed conflict).

The aim of the presented paper is an in-depth study of the use of international humanitarian law in the 1992-1993 Abkhazian conflict. To achieve the goal, the method of historical analysis, legal and systematic analysis, and comparative analysis is used. The first part of paper presents the preconditions and main reasons of armed conflict in Abkhazia. The second part includes discussion regarding the main characteristics of non-international and international armed conflicts and grounds of the implementation of international humanitarian law in both cases. The third part is totally dedicated to the problems that appeared during the assessment of Abkhazian Conflict in the frame of International humanitarian Law. As a conclusion author underlines the role of external actors, evaluates the aspects of the implementation of international humanitarian law and presents the main findings based on abovementioned analysis.

**Keywords:** International Humanitarian Law, Armed Conflict, Abkhazian Conflict, Occupation, Laws of War.

## THE ROLE OF EUROPEAN UNION IN CONFLICT RESOLUTION – CASE STUDY OF 2008 RUSSIA-GEORGIA WAR

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### **ABSTRACT**

The European Union, as a serious political and powerful economic actor, has a security strategy that covers not only the territory of the European Union, but also extends to its bordering territories. The 2008 Russia-Georgia war is one of those conflicts that posed a threat to regional stability, and therefore the activities of European Union was very important.

The presented paper discusses events preceded the outbreak of the conflict, the details of 5-day armed conflict and the role of the European Union in the ceasefire. For detailed analysis of discussed issue historical, legal and systematic analysis were used. These methods were addressed to identify the preconditions of armed conflict, to analyze main interests of involved parties, to underline the main strengths and weakness of the European Union as a mediator.

As a result of the research, it was revealed that European Union has the appropriate mechanisms to actively intervene in the conflicts and play an important role in their settlement. Therefore there are several factors, that influence states' decisions to support or block a conflict resolution mission. These factors are public opinion, the interests of powerful business actors within the member states, and geographical location of the conflict.

**Keywords:** Conflict resolution, European Union, Russia-Georgia War, Peacekeeping

## INDONESIA'S GEOPOLITICS AND THE IMPLEMENTATION OF THE ARCHIPELAGO'S INSIGHT

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### ABSTRACT

Geopolitics is a political system or regulations in the form of national policies and strategies that are driven by geographic national aspirations. The concept of the nation's perspective on territory began to be developed as "geopolitics" which initially discussed geography from a political perspective. Furthermore, the concept of politics developed in the sense of the distribution of power over the geographical expanse of a country. also about geopolitical theory and its implementation. This paper aims to make students know about the meaning of geopolitics, the relationship between the archipelago's insights and Indonesian geopolitics and its implementation. This research is a literature study with a qualitative approach. The source of data in this research was obtained through a review of various references such as books, articles journals, the internet, and other sources relevant to the research topic. The data analysis in this study uses content analysis techniques from existing reference sources. This paper concludes that the geopolitics of the Indonesian nation must be based on values the noble values of Pancasila are clearly and firmly stated in the Preamble to the 1945 Constitution in order to create a Unity and Unity of the Indonesian State.

**Keywords:** Indonesian geopolitics, implementation, archipelago insight

## XIX. YÜZYILIN SON ÇEYREĞİNDE RUSYA'NIN İSTANBUL BOĞAZI'NA ÇIKARMA PLANI

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### ÖZET

Bu makale, XIX. yüzyılın son çeyreğinde Rusya İmparatorluğu'nun İstanbul ve Çanakkale Boğazlarını ele geçirme planını konu almaktadır. Rusya İmparatorluğu'na 1877-1878 Osmanlı-Rus Savaşı göstermiştir ki kara savaşları sonrasında Rus ordusunun İstanbul'a ulaşması uzun zaman almakta ve yorucu olmaktadır. Ve bu zaman kaybı Avrupalı devletlerin Rus-Osmanlı ilişkilerine müdahalesini de beraberinde getirmektedir. Bundan dolayı hızlı ve beklenmedik bir deniz çıkarma operasyonu ile İstanbul ve Çanakkale Boğazlarının ele geçirilmesi fikri ortaya atılmıştır. Bu konu ilk olarak 1881 yılında İmparator II. Aleksandır başkanlığında yapılan bir toplantı da ele alınmıştır. Benzer bir deniz çıkarması fikri ilk olarak İmparator I. Nikola döneminde Kırım Savaşı öncesinde 1850 yılında olduğu da Rus kitaplarında yazmaktadır. Bu çıkarma operasyonu için ilk olarak Rusya Karadeniz filosunun güçlendirilmesi için yeni savaş gemilerinin yapılması kararlaştırılmıştır. Bu bağlamda 1881 yılından 1896 yılına kadar çeşitli boyutlarda birçok savaş gemisi inşa edilmiştir. İlki 1882 yılında ikincisi 1883 yılında Aleksandr İvanoviç Nelidov'un İmparator III. Aleksandır'a gönderdiği raporlarda Rusya'nın çıkarları için İstanbul'un bir an önce işgal edilmesi teklif edilmiştir. 5 Aralık 1896'da İmparator II. Nikola'nın başkanlığında yapılan bir bakanlar toplantısında İstanbul Boğazı'na çıkarma kararı görüşülmüştür. İstanbul çıkarma operasyonu plan dahilinde devam ederken İmparator tarafından iptal edilmiştir. Bunda iki faktör etkili olmuştur: İngiltere'nin Akdeniz filosunun olaya müdahalesi ve Rusya'nın uluslararası izolasyonu konusudur.

**Anahtar Kelimeler:** Rusya, Osmanlı, İstanbul Boğazı, Çanakkale Boğazı, 1896 İstanbul Boğazı Çıkarma Planı.

### RUSSIA'S PLAN TO LAND ON THE BOSPHORUS OF ISTANBUL IN THE LAST QUARTER OF THE XIX CENTURY

### ABSTRACT

This article is about the Russian Empire's plan to seize the Istanbul and Dardanelles Straits in the last quarter of the XIX century. The Ottoman-Russo War of 1877-1878 showed to the Russian Empire that it takes a long and tiring time for the Russian army to reach Istanbul after the land battles. This loss of time brings situation to the intervention of European states in Russian-Ottoman relations. For this reason, the idea of capturing the Istanbul and Dardanelles Straits with a rapid and unexpected naval operation was put forward. This issue was first discussed by Emperor Aleksandır II in his chaired meeting. The idea of a similar naval landing was first written in Russian books during the reign of Emperor Nicholas I before the Crimean War in 1850. For this landing operation firstly it was decided to build new warships to strengthen the Russian Black Sea fleet. In this context many warships of various sizes were built from 1881 to 1896. In the reports sent by Alexander Ivanovich Nelidov to Emperor Alexander III it was proposed to occupy Istanbul as soon as possible for the interests of Russia in 1882 and in 1883. On December 5, 1896, at a ministerial meeting held under the chairmanship of Emperor Nicholas II the decision to land in the Bosphorus was discussed. But it was canceled by the Emperor during continued Istanbul landing operation plan. For current situation two factors were effective: the intervention of the British Mediterranean fleet in the event and the international isolation of Russia.

**Keywords:** Russia, Ottoman, Bosphorus, Dardanelles, 1896 Bosphorus Landing Plan.

## XX. YÜZYIL BAŞLARINDA TÜRK-RUS İLİŞKİLERİNDE BOĞAZLAR SORUNU

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### ÖZET

Bu çalışmada XX. yüzyılın başından Birinci Dünya Savaşına kadar Osmanlı-Rus ilişkilerinde Boğazlar konusu incelenmektedir. Rusya İmparatorluğu, XVIII. yüzyılda Osmanlı Devleti ile yaptığı savaşlar sonucunda bir Karadeniz devleti olmuştur. XIX. yüzyılda Osmanlı Devleti ile yaptığı savaşlarda Boğazlardan ilk başta serbest geçiş hakkı elde etmeye çalışmış ancak Kırım Savaşı ve 1877-1878 Osmanlı-Rus Savaşı ile birlikte Boğazları ele geçirmeye yönelmiştir. Rusya er girişiminde İngiltere ve Fransa'yı karşısında bulmuş ve başarısız olmuştur. Rusya, Karadeniz filosunun yetersiz olması ve uluslararası bir izolasyona uğramamak için 1892'deki 1897'deki İstanbul Boğazı'na çıkarma planlarını iptal edilmiştir. Ancak İstanbul'u ele geçirme planları Birinci Dünya Savaşı'na kadar Rus imparatorluğu'nun en önemli gündem maddesi olmaya devam etmiştir. Rusya, 1904-1905 Rus-Japon Savaşı'ndan sonra yönünü tekrardan Orta Doğu sorunlarına çevirmiştir. Bu savaştan sonra Rusya Dışişleri Bakanı Aleksandır Petroviç İzvolksi'nin girişimleriyle İngiltere ile "boğazlardan Rus savaş gemilerinin serbest geçişi" konusu ele alınmıştır. Ancak İngiliz devlet adamları Boğazların tüm devletlerin savaş gemilerine açılması karşısında Rusya'nın teklifini kabul edeceklerini bildirmişlerdir. İmparator II. Nikola ve Dışişleri Bakanı A. P. İzvolksi Batılı devlet adamları ile temaslar kurarak boğazlar konusunda diplomatik destek aramışlar ve çeşitli işbirlikleri yapmışlardır. Rusya'nın Avrupa'da ortaya çıkacak bir kriz ortamından yararlanıp Boğazları ele geçirme planı Birinci Dünya Savaşı'na kadar devam etmişler.

**Anahtar Kelimeler:** Rusya, Osmanlı Devleti, Boğazlar sorunu, İstanbul, Karadeniz.

### THE QUESTION OF THE STRAITS IN RUSSIAN-TURKISH RELATIONS IN THE BEGINNING OF THE XX CENTURY

### ABSTRACT

The article analyzes the issue of the Dardanelles and the Bosphorus Straits in Russian-Turkish relations since the beginning of the 20th century till the beginning of the First World War. The Russian Empire became a Black Sea state as a result of the wars with the Ottoman Empire in the 18th century. The Russian Empire, in the wars with the Ottoman Empire in the 19th century, initially tried to obtain the right of free passage through the Straits, but with the Crimean War and the Ottoman-Russian War of 1877-1878, it turned to seize the Straits. Russia has found England and France against it in every attempt and has failed. Russia canceled its plans to land in the Bosphorus in 1892 in 1897 in order to avoid the inadequacy of the Black Sea fleet and international isolation. However, the plans to conquer Constantinople continued to be the most important agenda item of the Russian Empire until the First World War. After the Russo-Japanese War of 1904-1905, Russia turned its direction back to Middle Eastern problems. After this war, with the initiatives of Russian Foreign Minister Aleksandr Petrovich Izvolsky, the issue of "free passage of Russian warships through the straits" was discussed with Great Britain. However, British statesmen declared that they would accept Russia's offer in return for opening the Straits to warships of all states. Emperor Nicholas II and Foreign Minister A. P. Izvolski contacted Western statesmen and sought diplomatic support on the Straits and made various collaborations. Russia's plan to take advantage of a crisis situation that would arise in Europe and seize the Straits continued until the First World War.

**Keywords:** Russia, Ottoman Empire, Straits problem, Istanbul, Black Sea

## THE BEGINNINGS AND UNFOLDING OF THE GRAND DUCHY OF LITHUANIA

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### ABSTRACT

From the Baltic Sea down to the Black Sea, on a huge territory spread the lands of the Grand Duchy of Lithuania (furthermore GDL), which was a powerful and dynamically developing state in Eastern Europe from the early 13th up to the late 14th cc. It conquered the former territories of Kyivan Rus, thus deliberated them from the Mongol yoke, and administered them using the local variation of the Church Slavonic language. The beginnings of the GDL are the subject of debate. Some authors begin its history with the foundation of the Gediminas dynasty and the establishment of Vilnius as a new capital by Gediminas. Albeit he was not the first Lithuanian ruler and much earlier the Lithuanian state was already such powerful that the Halych-Volhynian Principality made a peace treaty with it in 1219. Therefore, the author of the paper is of that opinion the very beginning of the GDL must be counted since 1219, because it is the first documented date referring to the existing Lithuanian state in the sources. Those who begin the history of the GDL in the last years of the 13th century, such as Rowell, mean that the activity of Gediminas was a state-grounding process. On the contrary, we are of the opinion the peace treaty can be made by existing real powers, hence the state-like entity of the Lithuanians was necessary to exist in 1219. Another turning point was the coronation of Grand Duke Mindaugas for a Lithuanian King in 1253 and it is usually regarded as the beginning of the Lithuanian state. This was however a single and unique act, and nothing followed, nor a dynasty nor any state building by new administrative districts and/or newly learned elite, in comparison with the European states. Mindaugas itself was murdered by his subjects, therefore he hardly was such a conscious and determined king as the state-founder king in Europe, nor as the Grand Dukes of the Kyivan Ruś before, such as Volodymyr the Great and Yaroslav the Wise, who had not been crowned but built a new state with physical buildings and organizing a new administration as well. Those historians regard the coronation of Mindaugas as a state-building, and seem to forget the state as such is not a consequence of a mere act but the coronation itself is the consequence of the state-building. On the other hand, the Grand Dukes of the GDL were rulers of a real state, which was administered by documents on the local version of the Church Slavonic, because the most of inhabitants of these lands were Slavs who followed the Byzantine form of Christianity, thus the Orthodoxy. Consequently, we compare the different views and approaches to the GDL in the paper, and we argue that it was a real state such as the contemporary European states, although it is evidenced not by the coronation of Mindaugas, which proves nothing, but by the real acts of the Lithuanian Grand Dukes.

**Keywords:** Grand\_Duchy\_of\_Lithuania, Eastern\_Europe, Kyivan\_Ruś, state\_building



## DIGITIZED DATABASES OF OLD-PRINTED CYRILLIC BOOKS IN EAST EUROPE: THE CASES OF LITHUANIAN AND BELARUSIAN LIBRARIES

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### ABSTRACT

The old-printed sources (before the 18th century). must keep their best shape and data in the digitalized forms: researchers must have access to the old sources in such a form as by research with the physical copy. The National Library of Belarus and the Library of Belarusian Academy of Sciences created their respective digital repositories for the research of old-printed books with open access. The same has been done by the National Library of poor Ukraine, the University Library of Vilnius, and the Library of Lithuanian Academy, too.

This conference focuses on the Black Sea, thus the Bulgarian colleagues may be familiar with the problem of digitizing the Old Cyrillic books. This field requires much special knowledge and a special approach. First, the Cyrillic letters created by the pupils and followers of Cyril and Methodius in Ohrid, on West-Bulgarian language soil, were much different from the recently used Cyrillic characters. Since the activity of Clement of Ohrid up to the 18th and 19th centuries, respectively, the old forms of Cyrillic letters were much different from those used in contemporary Russia and Bulgaria. The reforms of printing under the reign of Tsar Peter the Great and the Bulgarian reform went much later and replaced the traditional system with those letters we can see in contemporary books. Hence the Russian or Bulgarian learned elite, even having some degree from the university, hardly can read their cultural heritage, respectively, unless graduated from philology, literary sciences or studied old scripture and paleography in the departments of history. Moreover, the Church Slavic script was different not only by the form, number, and kind of letters but also used abbreviations and overline markers, too, for shaping ligatures and marking the accent. Albeit these markers were not in harmony with the language, because they were of Greek origin and imposed into the Cyrillic script due the tradition, by such scribes who did not know the correct and original meaning of these markers in Greek. As a result, reading the Cyrillic texts in Church Slavic requires not only the knowledge of the particular Slavic language and the alphabet but also studies and practice in reading the ligatures and traditional markers. Consequently, digitizing the old printed Cyrillic books is not possible in the way digitizing the texts printed in Latin letters in the West. Thus those techniques and programs digitizing the enormously huge number of recently accessed pdf texts, are not eligible for doing it in the Eastern European libraries having special collections of their old printed books.

Last but not least, these libraries face practical problems in their poor countries, respectively. Lithuania underwent a difficult crisis of economy, and the small country depends on the tax paid by workers who are employed in Western Europe, mainly in Great Britain. Belarus faces even more problems with its political system, which are lately well-known and cannot ease the research trips of those scholars who need to study the special collection of old printed books in Belarusian libraries.

**Keywords:** Grand\_Duchy\_of\_Lithuania, Eastern\_Europe, Kyivan\_Ruś, state\_building

**PROTECTION OF SEXUAL INTEGRITY (FREEDOM) OF CITIZENS DURING WAR BY  
INTERNATIONAL CRIMINAL LAW: UKRAINE CASE**

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**ABSTRACT**

The article reveals the components of protection by instruments of international criminal law of sexual integrity and freedom of citizens during the war in Ukraine.

Objectives: to determine the values violated by the crimes of the Russian Federation military;

to classify such crimes according to the norms of international criminal law;

identify problems with prevention of such crimes, their termination and effective investigation;

outline measures to prevent future wartime sexual violence.

Methods: hermeneutic, formal-dogmatic, legal anthropology and sociology.

Results. It was found that the subject of criminological research by the international community should be the issues of connection between masculinity and crimes of sexual violence, as well as perversions of the criminals' consciousness who abused children. The reasons for targeting sexual crimes by the Russian military exclusively against citizens of Ukraine are subject to study. There are no answers to the question of the correlation of these crimes with homicidal mania and all their other war crimes based on the national character. As well, the author established that national systems of law and criminal justice bodies do not have the ability to properly record the huge amount of evidence of war crimes thousands.

Conclusions. Since the beginning of the Russian Federation's full-scale war against Ukraine, the Russian military has committed tens of thousands of war crimes. Among them, crimes against life, health, sexual integrity and freedom became the main ones. All of them are part of a crime against humanity, which is under investigation by the International Criminal Court of the United Nations and defined as such in a number of legal documents adopted by public bodies of states and international organizations.

**Key words:** rule of law, war crime, forensic examination, humanity, investigation, sexual violence, justice.

## ULTRASOUND AND DOPPLER INVESTIGATIONS OF THE PROJECTION OF THE FACIAL ARTERY ON THE SKIN

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### ABSTRACT

**Introduction.** The study of the projection of the facial artery on the skin, especially at the site of transition to the face, is of great theoretical and clinical importance. The relevance of the mentioned studies has increased in light of the development of plastic and cosmetic procedures performed in the facial area. It should be noted that a lack of knowledge about the vascular system of the face, in all of its anatomical variants, frequently leads to medical errors, which are exacerbated by various cosmetic flaws. The development and introduction into medical cosmetology practice of such methods as ultrasound and Doppler investigations have significantly expanded the possibilities for studying the anatomical variants of the vascular system of the face.

**Purpose of the study.** The aim of the investigation was to study the projection of the facial artery at the site of transition to the face according to ultrasound and Doppler methods.

**Material and methods.** The facial artery was studied at the site of transition to the face in seven women in their first adulthood period. Ultrasound and Doppler studies were carried out with the Clarius model L20HD3 apparatus.

**Results.** The results of the study showed that for the right and left sides, the projection of the facial artery on the skin surface at the point of transition to the face is different. The minimum depth of the facial artery on the right side was 4.6 mm, and the maximum depth was 6.8 mm. The arithmetic mean for the facial artery on the right side was 5.4 mm. On the left side, the minimum depth of the facial artery at the point of transition to the face was 4.5 mm, in other words, the minimum values for the facial artery of both sides were practically equal. The maximum depth of the facial artery for the left side was 8.6 mm. The arithmetic mean for the left side was 6.0 mm.

**Conclusion.** Ultrasound and Doppler studies of the vascular system of the face are important for obtaining a complete picture of the morphological features of the face.

**Keywords:** facial artery, mandible, Doppler investigation, ultrasound investigation

## GUT DYSBIOSIS IN DOGS WITH SPINAL CORD INJURY: IMPACT OF POLENOPLASMIN

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### ABSTRACT

**Background** Studies have demonstrated the presence of gut dysbiosis (alterations in gut bacterial homeostasis) secondary to spinal cord injury in dogs. The dysbiosis is thought to impair recovery by decreasing the production of short-chain fatty acids which play a role in suppressing inflammation within the central nervous system.

**Objective** Therefore, targeting gut dysbiosis could have significant therapeutic value in the management of spinal cord injury. The purpose of this study is to determine if gut dysbiosis occurs in dogs with spinal cord injury. Another area of potential intervention interest is in situations of spinal injury where there is an urgent need to generate new neurons. To arrive at these observations, the authors examined how Polenoplasmin and diet solve paralysis in dogs.

**Materials and methods** The most common cause of spinal problems in dogs is trauma. We are currently assessing whether indoles can also stimulate formation of neurons in dogs with paralysis.

**Results** We found that gut microbes that metabolize tryptophan-an essential amino acid-secrete small molecules called indoles, which stimulate the development of new brain cells in dogs, also demonstrated that the indole-mediated signals elicit key regulatory factors known to be important for the formation of new neurons.

**Conclusion** This study is another intriguing piece of the puzzle highlighting the importance of lifestyle factors and diet.

**In conclusion**, the link between the health of the microbiome and the health of the brain shows how microorganisms in the gut solve paralysis. Gut microbe secreted molecule linked to formation of new nerve cells in paralysed dogs.

**Keywords:** intestinal dysbiosis, indoles, paralysed dog, Polenoplasmin.

## STRUCTURE-BASED DRUG REPURPOSING TO INHIBIT THE DNA GYRASE OF MYCOBACTERIUM TUBERCULOSIS

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### ABSTRACT

Short Introduction: Drug repurposing is an alternative avenue for identifying new drugs to treat tuberculosis (TB). Although TB can be cured with anti-tubercular drugs, the emergence of multidrug-resistant and extensively drug-resistant strains of *Mycobacterium tuberculosis* H37Rv (Mtb), as well as the significant death toll globally, necessitate the development of effective drugs to treat TB.

Experiments and Key result findings: In this study, drug repurposing approach was employed to address this drug resistance problem by screening drugbank database to identify novel inhibitors of the Mtb target enzyme, DNA gyrase. The compounds were screened against the ATPase domain of gyrase B subunit (MtbGyrB47), and the docking results showed Echinacoside, Doxorubicin, Epirubicin, and Idarubicin possess high binding affinities against MtbGyrB47. Comprehensive assessment using fluorescence spectroscopy, SPR, and CD titration studies revealed that Echinacoside as a potent binder against MtbGyrB47. Further, ATPase, and DNA supercoiling assays exhibited IC<sub>50</sub> values of 2.1-4.7  $\mu$ M for Echinacoside, Doxorubicin, Epirubicin, and Idarubicin. Among these compounds, the least MIC<sub>90</sub> of 6.3  $\mu$ M and 12  $\mu$ M were observed for Epirubicin and Echinacoside, respectively. Hence, our findings indicate that Echinacoside and Epirubicin target mycobacterial DNA gyrase, inhibit its catalytic cycle, and retard mycobacterium growth. Further these compounds exhibits potential scaffolds for optimizing novel anti-mycobacterial agents that can act on drug-resistant strains.

## THE OUTCOME OF THE TREATING INDIGESTION SYNDROME ASSOCIATED WITH GALLSTONES

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### ABSTRACT

Gallbladder disease is considered one of the most common surgical pathologies of the hepatobiliary system. More than three million surgeries are performed worldwide each year for gallstones. Bile formation and secretion disorders, metabolic disorders, hormonal changes, the effects of free radicals, alcohol and drugs, pathologies associated with toxic, bacterial and viral damage, stress are important links in the etiological structure of gallstone disease. Despite the successes, biliary tract disease is accompanied by a number of complications in the preoperative and postoperative period. Among these complications, the treatment of indigestion syndrome (PHS), which manifests itself as joint pathology of digestion, absorption and transport of ingested nutrients, remains an urgent problem.

The results of our study show that liver dysfunction, especially impaired motor-evacuation functions of the gallbladder and gallbladder, and pancreatic exocrine dysfunction play an important role in the pathogenesis of PHS accompanied by biliary disease. As it is known, surgical and medicated treatment methods are applied in a complex way in the treatment of biliary tract diseases. Unfortunately, the functional state of the gastrointestinal tract during the rehabilitation of patients with cholecystectomy has not been fully investigated, and effective treatment criteria have not been developed, especially for PHS.

The aim of the study is to clinically characterize the results of conservative treatment after cholecystectomy in patients with cholelithiasis with PHS. Diagnosis of gallstones and PHS was carried out comprehensively using radiological, endoscopic and laboratory examination methods. The activities of alanine and aspartate aminotransferases, alkaline phosphatase, pancreatic amylase and lipase in the blood were determined, pancreatic elastase, zonulin, lactoferrin and calprotectin concentrations in the coprofiltrate were investigated. The results obtained were analyzed mathematically and statistically, taking into account modern recommendations. The aim of drug therapy in patients with cholecystectomy is to adapt the digestive system organs to new conditions. Since gallstone disease weakens the functions of the hepatobiliary and gastroduodenal regions, it is very important to restore the normal functioning of these organs, the activity of which is aimed at ensuring the efficiency of the digestive organization. For this purpose, enzyme replacement therapy with hepatoprotective drugs and pancreatic drugs, treatment with laxatives that reduce spasm of the sphincter of Oddi and do not cause hypotension of the pelvic muscles, and antibacterial therapy for decontamination of the duodenum were used.

Outcomes of drug therapy were evaluated at 3 months, 6 months, and 12 months after cholecystectomy in patients with gallstones complicated with PHS. The results of the study show that postoperative complex drug therapy of patients with gallstones complicated by PHS leads to restoration of the liver, bile ducts and pancreas, normalization of digestive processes, elimination of nutritional disorders and improved quality of life of patients.

**EPIDEMIOLOGY OF FEMALE THYROID CANCER, A RETROSPECTIVE STUDY OVER 21 YEARS IN THE STATE OF BATNA, ALGERIA, BETWEEN 1995 AND 2015**

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**ABSTRACT**

**OBJECTIVE:**To study the epidemiological characteristics of female thyroid cancer, in the state of Batna between 1995 and 2015.**METHODS:**A descriptive retrospective study of female thyroid cancer cases. The data used have been obtained from Batna cancer registry, for a period of 21 years (1995-2015). Age-standardised incidence rates were calculated using direct standardization method.The reference used population was WHO's (World Health Organization) 2000-2025.**RESULTS:**During the study period, in Batna, 386 new cases of thyroid cancer were recorded, with an overall age standardized incidence rate of 4.1 cases / 100,000 women. Between 1995 and 2015, the rate of female thyroid cancer increased by almost 10 times, from 1.3 / 100,000 in 1995 to 11.9 / 100,000 in 2015.The average age at onset was 45.0 years (sd = 0.8 years). The predominant histological type was papillary adenocarcinoma (38.3%), and only 10% of the cases had a marked grade, of which 4.4% were grade I. **CONCLUSION:** In latest years in Batna as all other parts of the country, the number of thyroid cancer diagnosed women has been remarkably increasing.

**Keywords:** Cancer,Female, Thyroid, Epidemiology.

## DETERMINANTS OF BREAST CANCER SURVIVAL IN BATNA, ALGERIA, 2010-2012

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### ABSTRACT

Disclaimer Where authors are identified as personnel of the International Agency for Research on Cancer/World Health Organization, the authors alone are responsible for the views expressed in this article and they do not necessarily represent the decisions, policy or views of the International Agency for Research on Cancer /World Health Organization.

Introduction: Breast cancer is the first female cancer and a public health problem in Algeria. The goal of this study was to estimate the survival rate and its determinants among breast cancer patients living in the state of Batna. Methods: Prognostic study conducted among patients diagnosed with breast cancer from 2010 to 2012, living in Batna, recorded in the local cancer registry. The date of inclusion in the study corresponded to the date of histological confirmation of the cancer. Information on vital status was obtained through an active research on medical files, hospital mortality registers, by calling the patients or their relatives, and as a last resort, we made a research at local Civil registry Center. The medical records of patients were made in 2018 to get info on disease stage and treatments. 5- year survival was estimated by the Kaplan Meier method. The log rank test and the Cox model were used to study determinants of survival. Results: 396 cases of breast cancer were included in the study, of which 21.49% had died (N=77), and 08.3% were lost to follow up (N=33) before 31 Dec. 2017. The clinical stage was recorded for 275 patients, stage III and IV represent 49.4% and 5.8% respectively. Overall survival was 78.5% at 5 years (95%CI 72,0-81,6). In analyses, 5-year survival was significantly lower in patients with advanced clinical stage ( $p < 10^{-4}$ ), metastases (HR =7, 95%CI [3,39-14]), not operated, not treated with chemotherapy, radiotherapy or hormonal therapy Conclusion: The advanced clinical stage and the presence of metastases were factors of poor prognosis of female breast cancer, in Batna as elsewhere. Early detection, and timely access to treatments are essential in order to improve the survival of our patients.

Note: This work was partly funded by the IARC

**Keywords:** Determinants, Breasts, Cancer, Survival, Batna.



## SUSCEPTIBILITY OF AVIAN CORONAVIRUS INFECTIOUS BRONCHITIS VIRUS TO THYMOQUINONE IN VITRO

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### ABSTRACT

The objective of the present study was to evaluate the antiviral properties of Thymoquinone (TQ), an active component of *Nigella sativa*, on avian infectious bronchitis virus (IBV) using embryonated eggs.

49 conventional embryonated eggs aged between 9 and 11 d were randomly divided into 8 groups (G1 to G8) and inoculated allantoically as follows: G1 with Argan oil (0.2ml), G2, G3 and G4 with TQ, diluted in Argan oil, at concentrations of 40 µg/0.2 ml, 20 µg/0.2 ml and 10 µg/0.2 ml respectively. G5, G6 and G7 were inoculated, in addition to the TQ in Argan oil at the above concentrations, with the IBV Italy 02 strain at the 10<sup>-4</sup> DIE50 load. The G8 acted as a negative control.

This protocol was previously developed to select the appropriate solvent and non-embryotoxic concentrations of TQ. For all assays, eggs were incubated at 37°C and 54% relative humidity from day 11 to day 18 and were examined (candled) daily during the incubation period.

As a result, tests with the following solvents: DMSO, Argan oil, kerosene oil and PBS revealed that only DMSO was embryotoxic. The choice of the solvent to be used for the other experiments was therefore Argan oil, since no study has shown any interaction with the immune system.

As for the concentrations of TQ used in these experiments, the doses of 10mg/0.2ml and 200µg/0.2ml were found to be toxic, while the doses of 100µg/0.2ml and 40µg/0.2ml did not cause high mortality or external abnormalities in the embryos. However, both pure fixed oil and ½ diluted fixed oil of black cumin caused 100% mortality, revealing very acute toxicity.

The results obtained showed that the survival rates were 100% for G1 (HA) and G2 (40 µg TQ), 60% for G3 (20 µg), 80% for G4 (10 µg), 37.5% for G5 (40 µg + virus), 62.5% for G6 (20 µg + virus) and G7 (20 µg + virus) and 100% for G8 (negative control). Macroscopic study revealed no lesions or alterations in the external appearance of the embryos, and real-time RT-PCR gave negative results demonstrating that TQ neutralized the virus.

**Keywords:** *Nigella sativa*, Thymoquinone, antiviral activity, virus, infectious bronchitis, chicken.

**INCESTUOUS ABUSE BY BLOOD RELATIVES**  
**(A Case Study of Forensic Medicine Forensic Linguistics)**

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**ABSTRACT**

The focus of this research was children as the subject of sexual violence perpetrated by blood relatives which was commonly referred to as incest in Medan city. The main questions are: 1) what is the mode of the blood relative in committing sexual violence; 2) what is the physical and psychological impact caused to the victim; and 3) how is the handling provided by the authorities in an effort to rehabilitate victims from post-accident trauma? 4) How do forensic science view this phenomenon, especially in terms of medicine and linguistics. Data collection was carried out through interviews, observation and document analysis. The findings show that blood relatives commit sexual violence with the following modus operandi: Isolating the victim from the surrounding environment, taking the victim out for a trip, threatening the victim with murder or beating, tempting the victim by offering something he/she wants, or poisoning. victim with drugs. The physical effects on the victims were vaginal infections with pus and blood oozing from the wounds, dysfunction of the reproductive organs, high-risk pregnancies, lack of vitality and paleness. Thus, victims experience post-accident trauma by living in constant fear and avoiding contact with people, isolating themselves from crowds, social condemnation and exclusion that cause internal disharmony in the family or parental divorce, and difficulty speaking or communicating with other people. other. Apart from that, notes were also found which indicated the events that the victim had experienced so far. Such as how the incident began, took place and ended which also made the victim experience severe, prolonged trauma if not addressed immediately. In addition, the role of the closest person also contributes to the victim's recovery period after the incident, thereby avoiding more severe impacts such as self-harm, other people or even suicide which has been rife so far in the mass media both online and offline.

**Keyword:** Incestuous abuse, blood relatives, forensics

## CONVENTIONAL TOURISM AND HALAL TOURISM: A COMPARATIVE STUDY

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### ABSTRACT

Tourism is an important thing for humans that is useful as a means of recreation during their busy lives. Currently, the trend of halal tourism is gaining popularity, especially among Muslims. This study aims to describe the comparison between conventional tourism and halal tourism. This research is a literature study with a qualitative approach. The data sources in this study were obtained through the study of various references such as books, journal articles, the internet, and other sources relevant to the research topic. The data analysis in this study uses content analysis techniques from existing referral sources. The results showed that every element in conventional tourism and halal tourism is similar. The difference is that in halal tourism every element in it must be following sharia principles. This includes aspects of tourist destinations, food and beverages, travel, lodging, and even the financial aspects. The principle of sharia in halal tourism aims to uphold the maqashid sharia, namely: protecting religion, protecting lives, protecting minds, protecting property, and protecting offspring. Halal certification is important to support the development of halal tourism. Through halal tourism, Muslim tourists not only travel for worldly purposes but can also be intended as a form of worship to get closer to Allah SWT.

**Keywords:** Conventional Tourism, Halal Tourism, Comparative Study.

## HALAL LABELS ON COSMETICS AS A FACTOR TO CONSIDER IN MAKING PURCHASING DECISIONS

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### ABSTRACT

Halal is the principle of consumption for Muslims. Halal lifestyle has become a global and influential trend, including in the competitive world of the cosmetic industry market. The inclusion of a halal label on cosmetic product packaging is a marketing stimulus to increase consumer purchasing power. In Islam, halal goods will bring blessings and health so the halal label printed on the product packaging guarantees that the product is safe for consumption. This study aims to determine the factors that influence consumer decisions in choosing cosmetic products labeled halal. This study uses the literature study method by examining and evaluating various references and previous research findings to develop a theoretical framework for the problem under study. The findings of this study reveal that individual awareness of the halalness of a product, advertisements, and celebrity endorsements appropriately and effectively are factors that influence the buyer's decision when choosing cosmetic items labeled halal.

**Keywords :** Islam, halal, cosmetic, and product

## **THE ROLE OF COMMUNITY WAKAF TOWARDS THE DEVELOPMENT OF THE SOVEREIGN ECONOMY OF INDONESIA**

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### **ABSTRACT**

This study aims to explain the role of community waqf in the development of a sovereign economy in Indonesia. This study uses a systematic literature review method. The data sources for this research come from books, scientific journals, and other literature related to the role of the Waqf Community in the development of a sovereign economy in Indonesia. This research analysis uses Nvivo as an application used by researchers to process and analyze qualitative data and literature review data. This study concludes that the role of community waqf is the main means of distributing assets or wealth of the people and is public in nature. Through community waqf, it is hoped that economic resources will not only be concentrated in wealthy people, but also make it possible to distribute them to some groups who really need them. In Islam waqf is a religious doctrine, whereas in the economy, waqf is a significant means of realizing prosperity. Waqf is a solution for the development of productive assets in the midst of society and a solution for personal greed and government arbitrariness simultaneously. Waqf in particular can help the activities of the general public as a form of concern for the people, and future generations, so as to create a sovereign Indonesia.

**Keywords:** Waqf, Economy, and Sovereignty.

## HALAL FOOD BUSINESS: POTENTIAL AND OPPORTUNITIES IN INDONESIA

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### ABSTRACT

**OBJECTIVE.** This objective is intended to describe the potential and opportunities for halal food exports

**METHOD.** This study uses a systematic literature review method. The data sources for this research come from books, journals, and other literature relating to the potential and opportunities for exporting halal food. Analysis of research data using VOSviewer-Visualizing Scientific Landscapes

**RESULTS.** The results of this study conclude that the world is currently facing the same problems, namely food security, price inflation and supply chain disruptions due to the climate crisis and geopolitical conditions. entering the modern retail industry which means that Indonesian UMKM products are of high quality and certified for Indonesia's achievements in the halal food sector, which is ranked second in the world based on data from The State of The Global Islamic Economy Report (SGIE Report) 2022, also carries a strong message that Indonesia has great capital and potential in terms of halal food business

**KEYWORDS :** Export, Halal Food, UMKM

## VERSES AND HADITH ECONOMIC MOTIVATION

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### ABSTRACT

The purpose of this study is to explain verses and hadiths about economic motivation.

This study uses a systematic literature review method. Sources of data for this research come from books, journals, and other literature related to verses and hadiths of economic motivation. Analysis of research data using VOSviewer - Visualization of scientific landscapes.

The findings in this literature review study conclude that economic motivation is the hope that drives someone to take economic action. In general, forms of economic motivation include compensation in the form of money, direction and control, establishing effective work patterns, and benevolence. motivation comes from two directions, namely, from within (inside motivation) and from outside (outside motivation).

There are five levels of fundamental human needs, namely: physiological, security, social, esteem and self-actualization needs. There are three formulations of human needs in Islam, namely; dharuriyat, hajiyat, and tahsiniyat needs.

Economic motivation in Islam has been explained in the Al-Qur'an and Hadith. Among them in the letter Al-Mulk verse 15 regarding the recommendation to seek sustenance with the earth as a foothold, in the letter Al-Jumu'ah verse 10 concerning the recommendation to seek halal sustenance, and in the letter Ar-Ra'd verse 11 concerning the recommendation to seek sustenance so you can update a situation. Economic motivation is also explained in several hadiths, as narrated from HR Thabrani regarding the obligation to work, HR Ahmad regarding seeking sustenance in virtue and trust in seeking sustenance.

**Keywords:** Economic Motivation, Verses and Hadith, Humans, Fortune

## **PUBLIC RELATIONS MANAGEMENT STRATEGIES AND TECHNIQUES**

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### **ABSTRACT**

The purpose of this study is to explain the theory of Public Relations management, Public Relations strategy, Public Relations planning, and budget management for Public Relations.

This study uses a systematic literature review method. The data sources for this research come from books, journals, and other literature related to Public Relations management strategies and techniques. Analysis of research data using VOSviewer - Visualization of scientific landscapes.

The findings in this literature study conclude that the notion of Public Relations management can be concluded that Public Relations management is an activity of research, planning, implementation and evaluation of a communication activity within an organization to achieve common goals. From this understanding the position of public relations is as part of management. Strategy is the program's 'how', not the detailed 'what' to bridge between program goals and tactics. Therefore strategy and tactics are always related. The basic Public Relations planning that needs to be considered is the environment, business goals, Public Relations goals, Public Relations strategies, and Public Relations programs or tactics. To carry out the Public Relations activity program, of course, requires a budget, the budget can function as a guideline or work list that must be fulfilled. After an activity is completed, the results can be compared with the budget earlier to find out whether the funds provided are sufficient or not.

**Keyword** : Public Relation, strategy, and tactics.



## IMPLEMENTATION OF DEMOCRACY IN INDONESIA

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### ABSTRACT

This study intends to describe the concept of democracy. This study uses a systematic literature review method. The data sources for this research come from books, journals, and other literature related to democracy. Analysis of research data using VOSviewer - Visualization of scientific landscapes. The findings in this literature review study conclude that the word democracy refers to the concept of state or community life, in which adult citizens participate in government through their elected representatives through elections. The definition of democracy is a form of government that originates from the people, is carried out by the people, and is used for the benefit of the people. One of the main pillars to support a democratic political system is through elections. Elections are held with the aim of electing representatives of the people both at the central government and regional government levels, goals as mandated by the preamble to the 1945 Constitution of the Republic of Indonesia. General elections are carried out by the Indonesian state in the context of realizing people's sovereignty as well as implementing democratic principles or values, increasing people's political awareness to participate actively in general elections for the realization of the ideals of a democratic Indonesian society. In the course of the nation's history, there have been four types of democracy in the political field that have been implemented in Indonesian constitutional life, namely, Parliamentary (liberal) Democracy, Guided Democracy, Pancasila Democracy in the New Order Era, Pancasila Democracy in the Reform Order Era.

**Keyword :** democracy, government, people

## **SHARIA FINANCIAL LITERACY FOR DISABILITIES COMMUNITIES: CASE STUDY OF DISABILITIES COMMUNITIES IN INDONESIA**

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### **ABSTRACT**

This study aims to identify Islamic financial literacy in the disabled community

The method in this study used a systematic literature review. Data sources were obtained from books, journals and other scientific works related to Islamic finance guidelines for the disabled community. Research analysis using VOSviewer Visualizing scientific landscapes.

The conclusion of this study is that one or more types of disabilities can experience at the same time. Limitations in accessing education and employment, discrimination and stigma, as well as lack of support and facilities are among the factors increasing poverty and disability requiring assistance in overcoming challenges and obtaining prosperity. The potential of this research is to break down poverty by increasing the need for action to help people with disabilities overcome challenges and gain prosperity. The potential of this research is to break down poverty by increasing education towards easy and efficient access to Islamic financial services. In addition, Islamic finance can play a role in helping manage individual, family and community interests in accordance with sharia objectives (maqashid).

**Keywords:** Poverty, Disability, sharia

## **PUBLIC RELATION: TEORI AND CONCEPT**

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### **ABSTRACT**

This study intends to explain the definition, function, and objectives of public relations as well as the scope of public relations work and how to become a public relations professional. This study uses a systematic literature review method. The data sources for this research come from books, journals, and other literature related to definitions, objectives and functions, as well as the scope of public relations work. Analysis of research data using VOSviewer - Visualization of scientific landscapes. The findings in this literature review study conclude that Public Relations are all forms of planned communication, both internally and externally, in order to achieve specific goals based on mutual understanding. The goal of public relations is to develop goodwill and obtain favorable public opinion or create partnerships based on harmonious relations with various publics. One of the functions of Public Relations is to create mutual understanding with the public through two-way communication. Two-way communication is carried out through the help of the media or directly. In general, Public Relations activities are aimed at two types of targets/publics, namely the Internal Public and the External Public. Public relations has now become a skill that is needed in various organizations. A public relations practitioner is required to be a good communicator, advisor, and planner.

**Keywords:** Public relations, communication, and goodwill.

## **EXPORT OF HALAL COSMETIC PRODUCTS: POTENTIAL AND OPPORTUNITIES IN INDONESIA**

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### **ABSTRACT**

This study intends to describe the potential and export opportunities for halal cosmetic products in Indonesia. This research uses a systematic literature review method. The data sources for this research come from books, journals, and other literature related to the potential and opportunities for exporting halal cosmetic products in Indonesia. Analysis of research data using VOSviewer - Visualizing scientific landscapes. The findings in this literature review study conclude that in Indonesia, the cosmetics industry is a manufacturing sector that grows and develops along with people's lifestyles. Its market potential can be maximized through proper branding or product design imaging and expanding market access overseas. In Indonesia, the cosmetic market is quite large and promising for manufacturers. This is in line with the increasing population and also the increasing trend of society to go back to nature which can encourage the emergence of new innovative products in the form of cosmetics made from natural ingredients. This opportunity has been well utilized by the traditional medicine and cosmetic industries because it is supported by Indonesia's diverse biological wealth. Other findings explain that the existence of the ASEAN Economic Community (one single market) is an opportunity for the national cosmetics industry to increase exports given the similarities in climate, socio-culture, purchasing power, and consumer preferences that are not much different from Indonesia.

**Keywords:** Halal cosmetics, exports, potential, and opportunities.

## **PUBLIC RELATIONS AND CRISIS MANAGEMENT: THEORY AND CONCEPT**

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### **ABSTRACT**

This research aims to explore the study of Public Relations and Crisis Management. This research uses literature review as the main source. The results of the study show that first, a crisis is a condition or situation that is unstable, unpredictable, and unwanted with various possibilities that can threaten, create chaos, and disrupt the sustainability or goals of individuals and organizations. This crisis is commonly referred to as a precarious situation, in which this situation can make good or bad for the company. Second, in overcoming a crisis, a company creates a crisis team to handle the ongoing crisis. In dealing with a crisis, a Public Relations must recognize the stages of a crisis. Knowledge of these stages is used to determine the next steps to overcome a crisis. There are 3 stages in a crisis, namely Pre-Crisis, Crisis Response, and Post-Crisis. The third role of Public Relations during a crisis is as a communication bridge between the community and the company by spreading positive news.

**Keywords:** Crisis, Public Relations, Situation

## ORGANIZATIONAL MANAGEMENT ARTICLES

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### ABSTRACT

Every job or activity requires cooperation between one party and another to achieve goals more easily and efficiently. One static tool that can bring people together to collaborate is one of organization. Therefore, organizations need to be driven by a function or process to easily achieve the goals of each organization which is called management. This article aims to describe the study of management in organizations. In addition, this article aims to find out about the importance and need to understand management in an organization, so that in an organization there needs to be good management practices to achieve the expected goals. Success in an organization requires key elements of performance management that influence each other. success between for-profit and non-profit organizations is different. therefore, management within the organization must continue to be developed to achieve the proper goals of an organization. The method used in making this article is literature review research. Where this method is the result of an analysis obtained from various information and conceptual data from various previously published scientific articles and books related to this article. The conclusion in this article is that good and effective management enables organizations to progress, and without effective management with human ethics, any organization, including companies, banking, education, government, will experience turbulence, falter and even collapse due to lack of management good and fit.

**Keywords :** Organization, Management, Organization goals

## INDONESIAN NATIONAL IDENTITY

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### ABSTRACT

National identity is a characteristic that belongs to a country. Everyday national identity also deserves to be developed and maintained. This writing aims to find out the definition of National Identity, the Forming Factors of National Identity, the Forming Elements of National Identity, the Sources of Indonesian National Identity, the Character and Functions of National Identity, Challenges and Efforts to Defend Indonesian National Identity. This writing uses a qualitative method of literature review. National identity can be interpreted as "national identity" or "national personality". The identity of one nation with another is of course different. National identity has factors and elements forming national identity. National characteristics are traits that are created naturally from a habit and lifestyle of the people who inhabit a nation. National identity has several functions, one of which is to differentiate it from other nations in the world. In forming a national identity, there are challenges in maintaining it. However, in facing these challenges, there are several efforts that we can make to maintain the Indonesian national identity. From the explanation in this paper, it can be concluded that national identity is a special characteristic possessed by a country. All forms of characteristics, types and elements contained in Indonesian philosophy constitute a national identity.

**Keywords:** National Identity, Indonesian Identity

## THE CONCEPT OF REGIONAL AUTONOMY AND ITS IMPLEMENTATION IN INDONESIA

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### ABSTRACT

Regional autonomy is the authority to regulate self-governance and the interests of its people which are carried out by a region. In the freedom to exercise the right to manage and manage their own household, the regions cannot exercise these autonomous rights and authorities outside the boundaries of their regional territory. An autonomous region is a region that carries out regional autonomy. The implementation of regional autonomy has not only brought the local government closer to the community, it has also encouraged citizen participation. Although the implementation of regional autonomy is more concerned with increasing regional income, as shown from a summary of research on decentralization in 13 districts/cities in Indonesia, the implementation of regional autonomy has not only brought local government closer to the community, it has also encouraged citizen participation. Regional autonomy, on the other hand, introduces a new trend, namely many new social institutions aiming to overcome conflicts, ethnic differences, and socio-economic problems with minimal assistance from the local government. The positive impact of regional autonomy is regional authority, providing potential for developing regions, triggering regional progress, time efficiency, and cost efficiency. The negative impact is the emergence of conflicts between regional and central governments, causing conflicts between regions, and the emergence of disparities between regions with high incomes and regions that are still developing.

**Keywords:** Regional autonomy, rights, authority



## SWOT ANALYSIS OF COMPANIES IN INDONESIA

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### ABSTRACT

Currently, many people start a business by entrepreneurship or create jobs in various fields. One of the analyzes used in business and entrepreneurship is to use a SWOT analysis. This study aims to determine the meaning, analysis, purpose of implementation, and decision solutions in overcoming the decline in the value of SWOT products in the company. This research uses a qualitative approach to literature study. Sources of data in this study were obtained through reviewing various references such as books, journal articles, the internet, and other sources relevant to the research topic. The results of the study show that there are two areas of study related to SWOT analysis, namely: Strengths and Weaknesses to analyze the business level (individual company), while Opportunities and Threats are used at the level of the industry that will be involved. SWOT analysis can provide a map of the conditions that occur based on existing realities, and is better able to provide confirmation of decisions to be made in the future. Another purpose of the need for a SWOT analysis is that every product circulating in the market will definitely experience ups and downs in its sales or known as the product life cycle. Solutions that are carried out in general to avoid decreasing product value are based on a SWOT perspective, namely the perspective of building strengths and minimizing weaknesses, as well as increasing opportunities and minimizing threats. Analysis, purpose of implementing SWOT.

**Keywords:** Definition, Analysis, Objectives, Solutions, SWOT.

## REALIZING THE CONCEPT OF CIVIL SOCIETY IN INDONESIA

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### ABSTRACT

Civil society is commonly known as urban society, which is a civilized society that has high insight and tolerance. This paper aims to describe the application of the concept of civil society in Indonesia. This research is a literature study with a qualitative approach. The data sources in this research are obtained through the study of various references such as books, journal articles, the internet, and other sources relevant to the research topic. Data analysis in this research uses content analysis techniques from existing reference sources. The results show that basically civil society is a society based on the people, and the sovereign government. And it can be said to be a democratic society, where its members are aware of their rights and obligations. The implementation of a democratic system in a country must coexist with the concept of civil society. Communities in developed countries, such as Indonesia, have been able to apply the concept of civil society. In relation to the formation of civil society in Indonesia, Indonesian citizens need to be developed to become intelligent, democratic and religious citizens characterized by faith and piety (imtak), critical argumentative and creative, clear thinking and feeling in accordance with the rules, accepting the spirit of Unity in Diversity, organizing consciously and responsibly, choosing prospective leaders honestly and fairly, and so on.

**Keywords:** realizing, civil society, indonesia

## VERSES AND HADITH REGARDING WAKAF EMPOWERMENT

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### ABSTRACT

The purpose of this paper is to find out about the meaning of waqf, types of waqf, empowering waqf, and also hadith verses about waqf. The paper method uses a library approach that originates from books and journals that are in accordance with the purpose of writing papers. The results of the literature review in this study concluded that waqf is to hold or stop or stay in place, which means holding assets that may be benefited without spending or destroying the objects and used for good. The types of waqf are expert waqf and khairi waqf. The number of Islamic waqf is numerous and spread throughout Muslim-majority countries which can spur national economic growth rates. Waqf is a solution for the development of productive assets in the midst of society and a solution for personal greed and government arbitrariness simultaneously. Waqf in particular can help the activities of the general public as a form of concern for the people, and for future generations. With regard to the potential and problems of productive waqf, the following points should be of concern to various parties in waqf management. First, greater attention to empowering unproductive waqf, the majority of which are based on mosques and educational institutions as well as empowering waqf that are still neglected. Second, increasing Nazhir's human resources related to issues of management and professionalism as well as expertise in optimizing the economic potential of waqf needs to be a priority.

**Keywords :** the nomor, waqf, verses and hadiths

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### **ABSTRAC**

The purpose of this paper is to find out about public relations consultants, types of public relations consultants, categories of public relations, and about the professionalization of the public relations industry. The method of preparing this paper uses a library approach that originates from books and journals according to the topic and focuses on the purpose of writing the paper. The results of the literature review in this study concluded that public relations consultants are providers of certain technical and creative services by a person or group of people who have expertise based on experience and training they have received before and in carrying out these functions they have a corporate identity. lawful. The public relations consultant selects and implements the right strategy regarding how the company communicates with the public, and determines the steps that must be taken to be on target. Everyone can set themselves up as a public relations practitioner and there are no requirements for people working in public relations to be members of the Chartered Institute of Public Relations (CIPR) or the Public Relations Consultants Association (PRCA) or even attend any form of training. When companies object that public relations is a 'waste of time' or that they make no money' from public relations consulting, in-depth investigation will reveal that their poor public relations experiences stem from using practitioners who are inexperienced or have no understanding of public relations. strategic relations or how to implement an appropriate and structured program.

**Keywords:** Consultants, Public Relations

## CONSTITUTION AND UUD 1945

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### ABSTRACT

The constitution is the basic rules for forming a country and as the highest law of a country, while the Constitution is the written basic law or written constitution that regulates the laws under it. Because Indonesia is a constitutional state, therefore, as the people of Indonesia, they must know about the constitution and constitution to become legal guidelines in the life of society, nation and state. The purpose of this writing is to find out the meaning, position of the 1945 Constitution as a constitution, the nature of the constitution and the 1945 Constitution, the types and functions of constitutions, the functions of the 1945 Constitution, the purpose of the constitution and the 1945 Constitution, the constitution that was once in effect in Indonesia. This research is a literature study with a qualitative approach. Sources of data in this study were obtained through reviewing various references such as books, journal articles, other sources relevant to the research topic. The data analysis in this study uses content analysis techniques from existing reference sources. The results of the research show that the constitution can be interpreted as the basic regulations regarding the formation of a state while the 1945 Constitution is the constitution of the Republic of Indonesia. The constitution is written and unwritten. The 1945 Constitution is brief and flexible. The function of the constitution d, namely to limit government power, as a protector of human rights and freedom of citizens. While the function of the Constitution is as a guideline in regulating the implementation of state life, guidelines in drafting laws and regulations and as a means of legal control. The position of the 1945 Constitution is the highest law in the country. According to the power of the constitution, namely the unitary constitution, federalist constitution and confederalistic constitution. Indonesia has experienced several constitutional amendments in use.

**Keywords:** constitution, state, law.

## PANCASILA IN THE CONTEXT OF PHILOSOPHY, IDEOLOGY AND IDENTITY

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### ABSTRACT

Pancasila is a very complex concept and has an important role in guiding various aspects of social, political and economic life in Indonesia. Pancasila is not only a political doctrine, but also has various contexts, such as philosophy, ideology and identity that underlies its existence as the basis of the state. This study aims to explain in detail Pancasila in the context of philosophy, ideology and identity. This research is a literature study with a qualitative approach. Sources of data in this study were obtained through reviewing various references, such as books, articles, journals, the internet, and other sources relevant to the research topic. The data analysis in this study uses content analysis techniques from existing reference sources. The results of this study concluded that Pancasila in the context of philosophy is a value system that forms the basis of the philosophy of the Indonesian state. Pancasila as a system of philosophy, meaning that the philosophy of Pancasila is not only aimed at seeking truth and wisdom, but also used as a guide for daily life. Pancasila in the context of ideology is used as the ideology of the Indonesian state which describes the ideals, goals and principles that form the basis of social and political development in Indonesia. Meanwhile, in the context of identity, Pancasila shows that the Indonesian people have an awareness that Pancasila are values that must be upheld as the basis of the state and as a distinctive attribute or national identity.

**Keywords:** Pancasila Context, Philosophy, Ideology, and Identity.

## EJAAN DAN PERISTILAHAN BAHASA INDONESIA

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### ABSTRACT

The purpose of this research is to describe Indonesian spelling and terminology. This study uses a systematic literature review method. The data sources for this research come from books, journals, and other literature related to Indonesian spelling and terminology. Analysis of research data using VOSviewer - Visualization of scientific landscapes. The findings in this literature review study conclude that spelling is a rule for describing sounds (words, sentences, etc.) in written form (letters), as well as using punctuation. The spelling is the result of the agreement of the users of the language concerned and is compiled by a committee consisting of several linguists, then legalized or formalized by the government. The scope of spelling includes the use of letters, the use of capital letters and italics, the writing of words (rewriting words, combinations of words, prepositions, abbreviations and acronyms, numbers and symbols of numbers), writing absorption elements, and using punctuation marks. What is meant by the term is a word or a combination of words that accurately expresses a concept, process, condition or characteristic that is specific to a particular field. Terms consist of two types, namely general terms and special terms. General terms are terms that are elements of language that are used in general, while special terms are terms whose use and meaning are limited to a particular field.

**Keywords:** Spelling, terminology, and use of letters.

## PERAN PUBLIC RELATION DALAM PEMERINTAH DAN SEKTOR PUBLIK: STUDY KASUS DI INDONESIA

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### ABSTRACT

The purpose of this study is to find out the meaning of work ethic, work recommendations in Islam, the principles of a Muslim work ethic, and economic hadith verses. This research is a systematic literature review. The source of this research comes from the Al-Qur'an, Book of Hadith, books, journals, and other literature related to verses and hadiths about work ethic in Islam. Research data analysis using VOSviewer-Scientific Landscape Visualization. Work ethic is a work spirit (ethos) that characterizes a person or a group of people based on ethics (attitude) which can then manifest genuine determination in doing work. Work has actually become a part of our lives. In a broader sense, work is defined as all forms of our activities that bring both material and non-material benefits. Islam is a religion that highly values work. work is not just a mundane activity but also has transcendental value. The work ethic in Islam itself is the basis for a Muslim to work while at the same time intending himself to get closer to God because according to the belief in Islam all activities carried out and oriented to good things will get rewards, because in Islam it is not only the result of a job that is valued but the intention and also the process become a benchmark for God's judgment for His servant. Therefore, the Islamic work ethic must be a characteristic of a Muslim who is able to harmonize world knowledge and religious knowledge.

**Keyword:** work ethic, Islamic, muslim



## THE BASIC CONCEPTS OF ISLAMIC ECONOMY

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### ABSTRACT

This study intends to provide an understanding of the basic concepts of Islamic economics. This study used a literature review method. The data sources for this research come from books, journals, and other literature related to the basic concept of Islamic economics. The findings in this literature review study conclude that humans are created with the aim of realizing themselves to be more perfect. Islamic economics in Arabic is termed al-iqtishad al-Islami. Iqtishad (economics) is defined as knowledge of the rules relating to wealth production, distribution and consumption. Every Economic Actor Aims to Get Mashlahah To realize falah welfare, economic activity must be directed to meet the needs to produce mashlahah. Maslahah as an Intermediate Goal to Achieve Falah, a noble and prosperous life in this world and the hereafter, can be realized if the needs of human life are met in a balanced manner. The fulfillment of community needs will have an impact called mashlahah. Maslahah is all forms of circumstances, both material and non-material, which can increase the position of humans as the most noble creatures. The basic mashlahah for human life consists of five things, religion (dien), soul (nafs), intellectual (aql), family and offspring (nash), and material (wealth).

**Keywords:** Islamic Economics, and Humans.

## ISLAMIC MARKET MECHANISM

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### ABSTRACT

The purpose of this study is to describe the working mechanism of the Islamic market. This study uses a systematic literature review method. Sources of information for this research are books, journals and other literature related to the working mechanism of the Islamic market. Analysis of research data using VOSviewer - Visualization of scientific landscapes. The results of this literature review conclude that the concept of a market mechanism is related to freedom of pricing in Islam, meaning that the market regulates the price itself. In addition, several scholars such as Al-Ghazali, Ibn Taimiyah and Ibn Khaldun also developed the concept of market mechanisms. According to Al-Ghazali, the market is part of a natural order, market price provisions can be caused by strong demand and supply. Ibn Taimiyah argues that market price setting is based on the forces of supply and demand. If demand increases and supply decreases, prices automatically increase and vice versa. Meanwhile, according to Ibn Khaldun, there are several factors that influence the market, namely price theory, value theory, work specialization, and the state. There are two transactions in the market, namely forms of buying and selling that are prohibited and forms of buying and selling that are permitted.

**Keywords:** Mechanism, Work, Islamic Market.

## DEVELOPMENT OF ISLAMIC FINANSIAL INSTITUTIONS IN INDONESIA

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### ABSTRACT

Abstract The purpose of this study is to describe the development of the Islamic economy in Indonesia, Islamic financial institutions in Indonesia and contemporary issues of Islamic financial institutions in Indonesia. In this study using a systematic literature review method, with research sources that refer to research results, journals and other reference sources, which are analyzed using a qualitative descriptive method. The results of the study show some developments in the Islamic economy at this time, which are marked by the establishment of Bank Muamalat as the first Islamic bank in Indonesia. In terms of asset growth, Islamic Banks increased by 13.51%. Islamic Financial Institutions that have been practiced in Indonesia, namely, among others; Sharia Commercial Banks, Sharia Business Units, Sharia People's Financing Banks, Sharia Financing Companies, Sharia Venture Capital, Sharia Pension Funds, Sharia IKNB, Sharia Investment Management, and Sharia Investment Management Units. In addition, there are contemporary issues that have arisen in Islamic financial institutions, namely the problem of the aspect of commitment to the application of sharia principles that is still low, the problem of the aspect of human resources that is less qualified and professional, and the problem of aspects of marketing strategy that are less adaptive and responsive. Previous research explained that the development of the Islamic economy in Indonesia is inseparable from the conditions and lives of the people who are increasingly interested in halal and thayyib products, as well as increasing government support to encourage the development of the Islamic economy.

**Keywords:** Islamic financial institutions, LKS Practices, Contemporary Issues

## LANGUAGE AS PART OF NATIONAL IDENTITY A STUDY OF THE LOCAL LANGUAGES OF INDONESIA

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### **ABSTRACT**

The local language is one of the assets of variety that displays Indonesia's cultural richness. The researcher's goal in doing the research is to examine the local languages that exist in Indonesia as a resource that represents the nation's identity. This research approach is a qualitative literature review that includes books, journals, and recent news related to the research issue. According to the findings of this study, Indonesia's greatest wealth is its cultural variety. The local languages are cultures that should preserve since they are ancestors' legacy and gifts from children and grandchildren. Indonesia has 718 local languages spread across the country. Now a day, technology, science, and civilization may develop. Yet, language as a culture must protect from the threat of extinction. The protection and development of local languages need to promote into a policy by involving the participation of the wider community as an effort in its preservation. The older generation transmits and teaches the younger generation, the habit of using local languages, being proud of the rich local languages, and the important role of the government that facilitating the revitalization of local language and literature. The importance of the existence of local languages attracted the attention of various international cultural parties to give birth to the mother tongue policy. Indonesian people should respect, use, and preserve local languages is an important part of love for the Republic of Indonesia.

**Keywords:** Local language, identity, and culture.

**ASSESSMENT OF SOME WHEAT VARIETIES UNDER COVID 19 AT HADEJA STATION,  
JIGAWA WITH LAKE CHAD RESEARCH INSTITUTE MAIDUGURI BORNO STATE, NIGERIA**

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**ABSTRACT**

A two-year trial was conducted during the 2020/21 and 2021/22 dry seasons at Hadeja Station (lat .11 039'N, long. 08027 ' E and 500 m above sea level) to evaluate the assessment of twelve wheat varieties. The varieties were laid out in Randomized Complete Block Design with three replications. The results revealed that plant height of wheat was influenced by variety in 2021/22 season only while number of tillers/plant, number of grains/spike, grain weight/spike /1000 - grain weight and grain yield were significantly affected in both seasons. Variety Tody-6 and Anser-8 out- yielded the other varieties in 2020/21 and 2021/22, respectively. Thus, the two varieties could be selected for higher yields of wheat in the study area.

**Keywords:** Wheat Varieties, Grain yield, Hadeja Station, Sudan savanna, Nigeria.

**CLIMATE CHANGE AND MEGA FLOOD 2022 OF GUAVA INTERCROPPING WITH MUNGBEANS IN LARKANA**

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**ABSTRACT**

This research investigates Climate Change and Mega flood 2022 of Guava intercropping with Mungbeans in Larkana. Data were collected from 20 growers from Mahota, Wada Mahar, Quaid-ie-Awam research station and Naudero District Larkana. It was revealed that after Maga flood 2022 that affect not only yield performance of Guava but also derange Guava orchards in all areas. This year 30 percent yield was decreased compare to last two years. It was further revealed that insect pest attacked most of the Guava orchard except Saraj-ddin-Rashidi farm who is producing organic Guava in NauDero. Due to market demand of Guava average price was Rs.100. According to results Mungbeans production increased by 20 percent and also yield performance of Guava also increased by 10 percent. Mungbeans are also reduced the intake of DAP fertilizer.

**Key Words:** Climate Change, Mega flood 2022, Guava Production.

## AZERBAIJAN CONDITIONS OF TECHNOGENIC SOILS MICROBIOTAS IN THE COMPOSITIONS OF QUANTITATIVE AND QUALITATIVE CHANGES

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### ÖZET

Makalenin genel amacı Azerbaycan koşullarında teknojenik toprakların mikromisetlerinin tür bileşimlerinde niceliksel ve niteliksel değişiklikleri tatqiqat etmektir.

Sunulan çalışmada, kirletici kaynağında farklılık gösteren teknojenik toprakların mikobiyotası incelenmiştir. Teknojenik faktörlerin, eko-trofik ilişkilerin yanı sıra belirli bir sayısal ve tür kompozisyonu ile çalışılan, her alanda mikobiyota oluşumuna katkıda bulunduğu tespit edilmiştir.

Çevre üzerinde ekolojik izleme sistemi tüm dünyada önemli bir görev daşımaktadır. Aynı zamanda, toprak ortamı da dahil olmak üzere farklı seviyelerdeki ekosistemler üzerindeki teknojenik etkinin derecesini belirlemek önemlidir. Çevre koruma alanındaki modern başarılarla rağmen, günümüzde çevre üzerindeki artan insan yapımı yük ile karakterize edilmektedir. Çünkü endüstrinin etkisi altında çevrede önemli değişiklikler meydana gelir. Değişikliğe uğramış bölgeleri eski haline getirmek için, toprak oluşumu ve fitosenozların gelişimi için en uygun koşulları yaratmayı amaçlayan biyolojik önlemler de dahil olmak üzere bir dizi çalışmanın uygulanması gerekmektedir.

Çalışmalar Azerbaycan Cumhuriyeti'nin Abşeron Yarımadası topraklarında yürütüldü ve örnekleme için kirliliğin doğası bakımından farklılık gösteren 6 alan (50x50 m boyutlarında, 4 tekrarda) seçildi. Türü belirlemek için mantar, örnekler önceki çalışmalarımızda da kullanılan geleneksel mikolojik ve mikrobiyolojik analiz yöntemleri ile incelenmiştir.

Mantarların yerleştirilmesi, mantarların kültürel, morfolojik ve tarihsel özelliklerine göre derlenen biçimler çeşitli kullanılarak gerçekleştirilmiştir. Yürütülen yapılar, teknojenik merkezin kaynağına bağlı olarak, çalışılan toprakların mikobiyotasının hem sayısal hem de türsel gruplarında gruplarında ve bunun sonucunda incelenen her alana özgü bir özellikli olan bir mikokompleks oluştuğunu bulmuştur. Yani mantarın 4 türü (Chaetomium celluloliticum, Gliocladium virens, Trichoderma asperillum ve T. harzianum) sadece temiz topraklarda bulunurken, sadece petrole kirlenmiş topraklarda bulunan mantarlar 8 tür (Aspergillus apicalis, Candida alpicans, C.lipolytica, Cladosporium oxysporum, C.sphaerospermum Penicillium brevis - compactum, P.cuclopium, P.granulatum P.oxalicum ve Trichoderma viride) içerir. Kimyasal olarak kirlenmiş, sulanan topraklar ve düzenli depolama için kullanılan topraklar için sırasıyla 6, 5, 2 ve 6 türdür. Araştırma sırasında sadece 43 tür sözde "evrensel" idi, yani her alanda bulundular.

Uygulamanın önemi: Bu materyal, Yüksek öğretim kurumlarında seminerlerde görevlilerinde kullanıla bilir.

**Anahtar kelimeler:** toprak, teknojenik etki, fitosenoz, mikobiyota, çevre, eko-trofik ilişkiler

## QUANTITATIVE AND QUALITATIVE CHANGES IN TYPE COMBINATIONS OF MICROMYSETS OF TECHNOGENIC SOILS IN AZERBAIJAN CONDITIONS

### ABSTRACT

The main aim of the research is to explore Quantitative and qualitative changes in the species composition of micromycetes of technogenic soils in Azerbaijan conditions.

In the presented study, the mycobiota of technogenic soils, which differ in their pollutant source, was investigated. It has been determined that technogenic factors contribute to the formation of mycobiota in all areas studied with a certain numerical and species composition, as well as eco-trophic relationships.

Ecological monitoring system on the environment has an important task all over the world. At the same time, it is important to determine the degree of technogenic impact on ecosystems at different levels, including the soil environment. Despite modern achievements in the field of environmental protection, today it is characterized by an increased man-made burden on the environment. Because under the influence of industry, significant changes occur in the environment. To restore the modified areas, a number of studies are required, including biological measures aimed at creating optimal conditions for soil formation and the development of phytocenoses.

The studies were carried out on the territory of the Absheron Peninsula of the Republic of Azerbaijan, and 6 sites (50x50 m in size, 4 replicates) were selected for sampling, differing in the nature of pollution. In order to determine the species, fungal samples were examined with traditional mycological and microbiological analysis methods, which were also used in our previous studies.

Identification of fungi was carried out using various markers compiled according to cultural, morphological and physiological characteristics of fungi. Conducted studies have found that, depending on the source of the technogenic pollutant, there are differences in both the numerical and species composition of the mycobiota of the studied soils, and as a result, a mycocomplex with a certain specificity is formed in each studied area. That is, 4 species of fungus (*Chaetomium celluloliticum*, *Gliocladium virens*, *Trichoderma asperillum* and *T. harzianum*) are found only in clean soils, while 8 species of fungi (*Aspergillus apicalis*, *Candida alpicans*, *C.lipolytica*, *Cladosporium oxysporum oxysporum*, *C. -compactum*, *P.cuclopium*, *P.granulatum* *P.oxalicum* и *Trichoderma viride*). Similar data for chemically contaminated, irrigated urban soils and soils used for landfill were 6, 5, 2 and 6 species, respectively. At the time of research, only 43 species were so-called "universal", that is, they were found in all areas.

Importance of application: this material can be used in seminars and lectures in HEIs.

**Key words:** soil, technogenic effect, phytocenosis, mycobiota, environment, eco-trophic relationships



## BIOLOGICAL ACTIVITY OF OLIVE OIL FROM ARID AREA IN ALGERIA

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### ABSTRACT

Many recent studies show the positive effect of phenolic compounds in olive oil on health. They are known for their biological properties, which they have shown potential activity as antioxidant, anti-inflammatory, and antimicrobial agents. However, this characteristic is rarely studied in olive oil from arid areas in Algeria.

Different samples collected from the region of Tissemsilt (Western Algeria) were evaluated for their polyphenol content and their antimicrobial effect. This region is characterized by low rainfall and high temperature especially at the fruit formation stage.

The obtained results demonstrated that this oil is rich in polyphenols and revealed high antimicrobial activity against *Staphylococcus aureus* and *Escherichia Coli*. Also, this study has shown that this oil has a low acidity which conforms to international standards.

This study disclosed the nutritional and pharmaceutical importance of olive oil grown in this region.

**Keywords:** Olive oil; polyphenols; antioxidant activity; antimicrobial activity.

**SAFFLOWER SEED MEAL (CARTHAMUS TINCTORIUS L.) QUALITY AS AFFECTED BY ENVIRONMENTAL CONDITIONS**

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**ABSTRACT**

Safflower is a major oilseed crop grown in many countries in tropical climatic zones and hot in the dry season. It is an ancient plant, known and used by the people of antiquity and holds an important place in traditional medicines. All parts of the plant have a positive effect on human health including the oil from the seed, which is considered an anticoagulant, anticholesterolic and also used to prevent hemorheological abnormalities. However its meal has been considered as a source of protein which is used in livestock feed in many countries of the world especially in Pakistan, USA.

Water deficit and heat stress are the main abiotic constraints that greatly limit the crop production of all crops in arid and semi-arid zones. Our study investigated the effect of these stresses on protein content and polyphenols content of safflower meal. The results showed that the cultivated safflower seed in Algeria seem to have a rich protein and polyphenols content. Also, these parameters are a little affected by these abiotic constraints.

**Keywords:** Safflower; Water deficit, Polyphenols; Algeria.

## **RAPID AND NON-DESTRUCTIVE TECHNIQUES FOR SUPERVISION OF FOOD PROCESSES**

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### **ABSTRACT**

Due to the food processing operations, there are changes and in physical, chemical, microbiological and sensory parameters of the foods. Traditionally, conventional methods are being used at industrial level to supervise the changes during the food processing operations. These traditional methods are laborious, time consuming and need chemicals for quantitative determination of the various physicochemical parameters. Therefore, it is important to develop some rapid and non-destructive approaches for supervision of food processing operation. Spectroscopic techniques are well equipped to determine the physicochemical parameters changes taken place during the food processing operations. There are different spectroscopic techniques such as vibrational spectroscopy, fluorescence and nuclear magnetic resonance spectroscopy, which can serve the purpose well. Each spectroscopic approach has its own merit and demerits but it provide a tool to supervise the food processing operation rapidly and non-destructively for online and off line monitoring of the food processing operations. These techniques have been vastly used in cereal and dairy industry and prototypes have been also developed to supervise the food processing operation smartly. Such techniques are important for process supervision and definitively increase the efficiency of the process during the food manufacturing operation

**Keywords:** Innovative techniques; Non-destructive approaches; Food Processing; Spectroscopic techniques.

## **BIODIVERSITY AND MEDICINAL PLANT RESOURCES OF SOUTHEAST MOROCCO: AN ETHNOBOTANICAL INVESTIGATION**

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### **ABSTRACT**

Southeast Morocco is home to a rich diversity of medicinal plants that have been used for centuries by local communities to treat various ailments. However, the valorization of these plants has been limited, and their potential remains largely untapped. In recent years, there has been growing interest in the development of sustainable and equitable systems for the conservation and utilization of medicinal plants in the region.

The study covered the Ouarzazat province, including the communes of Ouisselsat, Siroua, Iznaguen and Taznakht which are renowned by a very important botanical biodiversity. The research team conducted field surveys and interviews with 800 respondents, including herbalists, healers, and local people who use medicinal plants for their health and well-being.

According to the survey responses we identified 27 endemic botanical species suspected of possessing healing abilities against various diseases, as well as innovative preparation techniques and medical uses.

**Keywords:** Ethnobotany, Biodiversity, Local Medication, Endemic Plants, Southeast Morocco.

## STUDY OF THE PERFORMANCE EVALUATION OF THE EL-KALA WASTEWATER TREATMENT PLANT (North-East Algeria)

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### ABSTRACT

The purpose of the wastewater treatment plant is to collect and then purify wastewater before discharging it into the natural environment, in order to get rid of the pollution with which it is loaded. Our work consists of a hydrochemical study on the wastewater from the sewage treatment plant of the city of El-Kala which is located in the wilaya of El Tarf (North-East Algeria), based on analyzes of the parameters physico-chemical tests which were carried out in the STEP El-Kala laboratory ( $T^{\circ}$ , pH, MES, BOD<sub>5</sub>, COD, PO<sub>4</sub>-3, N-NO<sub>2</sub>, N-NO<sub>3</sub>) during two periods (summer periods, winter period) in different treatment channels (Inlet basin, Aeration basins, Decanter, Outlet basin).

The spatio-temporal evolution of the physico-chemical parameters shows that the values recorded in the station are generally within the WHO discharge standards, on the other hand certain parameters at certain times exceed the threshold with values of 15.14 for the pH and 3.44 [mg/l] for PO<sub>4</sub>-3. These results show the urban and non-industrial nature of these discharges.

The aeration tank significantly increases the rate of multiplication of microorganisms which causes an increase in pH,  $T^{\circ}$  and a total drop in COD. For nutrient pollution, WWTP presents two seasonal phenomena: denitrification (summer period) and nitrification (winter period). The analysis of the data recorded in the various basins show that the WWTP of El-Kala has a low pollutant removal efficiency, consequently the weak treatment generated by the presence of micro-algae (the importance of this NO<sub>2</sub>) to a direct impact on the environment.

**Keywords:** Algerian Northeast; Waste ; Wastewater treatment plant ; Processing channels; Pollutants.

## ŞAĞIRDLƏRİN MÜQAYİSƏETMƏ BACARIQLARININ FORMALAŞDIRILMASI SİSTEMİ

Əskərova Fidan Zəmani qızı

ADPU-NUN ÜMUMİ Pedaqogika kafedrasının, "Pedaqogika nəzəriyyəsi və tarixi" ixtisasının, 2-ci kurs magistrı

### XÜLASƏ

Müasir şəraitdə mövcud bilik, bacarıq və vərdislərdən səmərəli istifadə insanın onların mənimsənilməsinə fəal, məsuliyyətli münasibəti ilə bağlıdır. Müasir şagird bu gün, heç vaxt olmadığı kimi, müstəqil yaradıcı bilik əldə etməyə hazır olmalıdır. Bunun üçün artıq məktəbdə təhsil fəaliyyətinin subyekt kimi fəal mövqe tutmaq lazımdır. Belə bir hazırlıq və mövqe bir gecədə inkişaf etmir, həyat boyu və xüsusilə məktəb tədrisi prosesində əldə edilmiş bilikləri əldə etmək, zənginləşdirmək və fəaliyyətdə istifadə etmək üçün sabit bacarıqların formalaşması nəticəsində formalaşır. Şagirdlərin öyrənmə fəaliyyəti zamanı bilik və bacarıq əldə etməklə yanaşı, düşünmə, təhlil etmə, müqayisələndirmə, müstəqil qərar qəbul etmə bacarıqları da formalaşır. Bu idraki proseslər şagirdlərin yetişərək kamil insan olmasına təkan verir. Müstəqil fikir yürütmə "şagird şəxsiyyətinin" formalaşmasında mühüm rol oynayır. Müqayisə vasitəsilə şagirdlər onlara təqdim edilən obyektlərdəki oxşarlıqları və fərqlilikləri tapıraq onlar haqqında fikir irəli sürür. Aparılan araşdırmalar nəticəsində məlum olmuşdur ki, ibtidai sinif şagirdləri obyektləri müqayisə edərkən onlara müqayisə ediləcək obyektlərdən başqa yeni obyekt təqdim edilsə, onlar obyektlərdəki oxşarlıqları daha asan tapacaqdılar. Keyfiyyətli bilik əldə etmək şagirdlərin təfəkkürünün hansı səviyyədə olması ilə bağlıdır. Əgər təfəkkür məntiqi cəhətdən yüksək inkişaf etmişsə biliyi mənimsəmək daha asan olacaqdır. Kifayət qədər inkişaf etməyən yaddaş (əsasən məntiqi yaddaş), verilənləri təhlil edə bilməmək şagirdin verilən materialları anlamasına və qavramasına mane olacaqdır. Aparılan pedaqoji-psixoloji tədqiqatlar nəticəsində məlum olmuşdur ki, kiçik yaşlı məktəblilər psixoloji işin ümumiləşdirilmiş metodlarını mənimsəməkdə həssasdırlar. Məntiqi hərəkətləri ardıcılıqla yerinə yetirmək anadan gəlmə bacarıq deyildir. Bu bacarıqlar tədrisən qazanılır. Bunun üçün ibtidai sinif müəllimləri şagirdlərdə məntiqi bacarıqları formalaşdırmalıdır. Çünki ibtidai sinif təhsil məzmununa fənn bilik və bacarıqlarından savayı, məntiqi komponentlər də daxildir.

Şagirdlərin məntiqi əməliyyatlardan düzgün istifadə etməsi onlarda aşağıdakı bacarıqların formalaşmasına səbəb olur.

- obyektlərdəki fərqli və oxşar cəhətləri tapmaq;
- obyektləri adlandırmaq və sıralamaq;
- obyektlərin əsas xüsusiyyətlərini qeyd etmək.

Bütün bu sadaladığımız keyfiyyətlər şagirdlərdə idraki fəallığına və intellektual bacarıqlar əldə etməsinə yol açacaqdır.

**Açar sözlər:** kiçik yaşlı şagirdlər, müqayisəetmə bacarıqları, müqayisəetmə bacarıqlarının formalaşdırılması, müqayisəetmə bacarıqlarının formalaşdırılması sistemi.

### SYSTEM OF FORMING STUDENTS COMPARATIVE SKILLS

#### ABSTRACT

Effective use of existing knowledge, skills and habits in modern conditions is related to the active, responsible attitude of a person to their assimilation. Today, more than ever, the modern learner must be ready to acquire independent creative knowledge. For this, it is necessary to take an active position as a subject of educational activities at school. Such preparation and position does not develop overnight, it is

formed as a result of the formation of stable skills to acquire, enrich and use in action the knowledge acquired throughout life and especially in the process of school education. In addition to acquiring knowledge and skills during the learning activity of students, thinking, analyzing, comparing, and independent decision-making skills are also formed. These cognitive processes encourage students to mature and become perfect people. Independent reasoning plays an important role in the formation of "student personality". Through comparison, students find similarities and differences in the objects presented to them and put forward an opinion about them. As a result of the research, it was known that when comparing objects, primary school students present a new object to them other than the objects to be compared. If done, they will find similarities in objects more easily. Acquiring quality knowledge depends on the level of students thinking. If the thinking is logically highly developed, it will be easier to absorb knowledge. Insufficiently developed memory (mainly logical memory), inability to analyze the data will prevent him from understanding and comprehending the given materials. As a result of the conducted pedagogical-psychological studies, it was known that young schoolchildren are sensitive in mastering the generalized methods of psychological work. Perform logical actions in sequence learning is not a skill from birth. The skills are acquired gradually. For this, primary school teachers should form logical skills in students. Because the content of primary school education includes logical components besides subject knowledge and skills.

Students from logical practices proper usage to do in them the following your skills causes formation.

- finding the differences and similarities in object;
- naming and sorting objects;
- to note the basic properties of objects.

All these qualities that we have listed will open the way for students to be cognitively active and acquire intellectual skills.

**Key words:** younger students, comparative skills, formation of comparative skills, system of formation of comparative skills.

## COMPARATIVE ANALYSES OF PERSONNEL MANAGEMENT MODELS

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### ABSTRACT

In a company there are senior executives who are responsible to make a management model .In this model goals are defined, efforts are motivated, activities are coordinated and resources are allocated .In another saying, this management model illustrates how management works. Effective business models are created with the help of clear management models which is a great dictation for the company how to make money. Otherwise, management model creates value from a business opportunity. By this way, the company with improved operation and growth appears in a competitive market. Personnel Management is identified as gaining, using, as well as, maintaining a satisfied workforce. It is a crucial part of management concerned with employees at work and with their affair within the organization. Personnel manager provides assistance to top management.The top management are the people who determine and generate the primary policies of the concern. All kinds of policies pertaining to personnel or labor force can be frame up influentially by the Personnel Manager.He recommends the line manager as a staff expert.Personnel Manager acts like a staff advisor and lend assistance to line managers in dealing with various personnel issues. As a counsellor, personnel manager affiliates problems and grievances of employees and lead them. He attempt to solve them in best of his capacity.Personnel Manager acts as a mediator.He is a linking pin between management and workers.He acts as a spokesman.Since he is immediate contact with the personnel, he is required to act as agent of organization in committees determined by government. He represents company in training programmes.

**Key words:**management,model,personnel,skill,employment

### ÖZET

Bir şirkette bir yönetim modeli yapmaktan sorumlu üst düzey yöneticiler vardır. Bu modelde hedefler tanımlanır, çabalar motive edilir, faaliyetler koordine edilir ve kaynaklar dağıtılır. Başka bir deyişle, bu yönetim modeli yönetimin nasıl çalıştığını gösterir. Etkili iş modelleri, şirket için nasıl para kazanılacağı konusunda büyük bir dikte olan net yönetim modelleri yardımıyla oluşturulur. Aksi takdirde, yönetim modeli bir iş fırsatından değer yaratır. Bu şekilde, gelişmiş operasyon ve büyüme gösteren şirket, rekabetçi bir pazarda ortaya çıkar. Personel yönetimi, tatmin olmuş bir işgücünün elde edilmesi, kullanılması ve sürdürülmesi olarak tanımlanır. İşteki çalışanlarla ve onların kuruluş içindeki ilişkileriyle ilgili yönetimin çok önemli bir parçasıdır. Personel yöneticisi, üst yönetime yardım sağlar. Üst yönetim, işletmenin temel politikalarını belirleyen ve üreten kişilerdir. Personel veya işgücü ile ilgili her türlü politika, personel yöneticisi tarafından etkili bir şekilde çerçvelenebilir. Bölüm yöneticisini bir personel uzmanı olarak önerir. Personel yöneticisi, bir personel danışmanı gibi hareket eder ve çeşitli personel sorunlarının ele alınmasında bölüm yöneticilerine yardım eder. Bir danışman olarak, personel yöneticisi çalışanların sorun ve şikayetlerini ilişkilendirir ve onlara liderlik eder. Bunları elinden geldiği kadar çözmeye çalışır.Personel yöneticisi arabulucu görevi görür.Yönetim ile çalışanlar arasında köprü görevi görür.Sözcülük yapar.Personel ile anında temas halinde olduğu için vekil gibi davranması gerekir. Hükümet tarafından belirlenen komitelerde örgütlenme. Eğitim programlarında şirketi temsil eder.

**Anahtar kelimeler:**yönetim,model,personel,beceri,istihdam.



## NİZAMİ GƏNCƏVİ MƏSNƏVİLƏRİNDƏ HİKMƏTLİ İFADƏLƏRİN DİL XÜSUSİYYƏTLƏRİ

MƏMMƏDOVA Əsmətəxanım

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Hikmətlər kanı olan “Xəmsə” eyni zamanda Yaxın və Orta Şərq təfəkkür tarixində yeni epoxanın əsasını qoymuş dahi Azərbaycan şairi Nizami Gəncəvinin (1141-1209) etik-estetik, poetik-fəlsəfi görüşlərinin məcmusudur. Biz bu araşdırmamızda artıq uzun əsrlərdən bəri leksikonumuzda zərbi-məsəl, aforizm, atalar sözləri kimi kök salan “Xəmsə” məsnəvilərindəki hikmətamiz ifadələrin fonetik-qrafik dil xüsusiyyətlərindən bəhs edəcəyik.

Əvvəla, qeyd edək ki, Qədim fars dilindən Orta və müasir fars dilinə doğru uzun inkişaf yolu keçmiş, bu zaman çərçivəsində çoxsaylı təsirlərə məruz qalmış fars dilinin bir sıra maraqlı fonetik-qrafik dəyişikliklərini özündə ehtiva edən Nizami bədii irs nümunələri dilin inkişaf tarixini öyrənmək baxımından da maraq doğurur. Bildiyimiz kimi, fars dilində biri diftonq, altısı monofonq olmaqla yeddi sait: /a/, /u/, /i/, /ə/, /o/, /e/, /ou/; iyirmi üç samit fonem mövcuddur. Araşdırma zamanı məsnəvilərdən iqtibas etdiyimiz misallar nəticəsində daha böyük tezliklə işlənən fonetik dəyişikliklərin: - /a/ → ə (adətən /h/-dan əvvəl baş verir): شاه ← شاه /šah → šəh/; راه ← راه /rah → rə /; /i/ → /o/ رون ← رون /birun → borun/; /ou/ → /o/ گوه ← گوه /qouhər-qohər/; /i/ → /o/ رون ← رون /birun → borun /; /u/ → /o/ خاموش ← خاموش / xamuş → xamoş/; və inkar əlamətində olan /ə/, /e/, /o/ saitlərində olduğunu aşkar etdik. Məlumdur ki, fars dilinin ana məhdudiyyət qanununa görə sözün əvvəlində iki samit fonem; morfem birləşmələrində isə iki sait fonem yanaşı gələ bilmir. Dil bu vəziyyətdən çıxış yolu kimi müxtəlif fonetik hadisələrdən, çevrilmələrdən istifadə edir. Nizami əsrlərində bu fonetik dəyişikliklərin ən müxtəlif formalarına rast gəlinir: /ke+ab/ → /kab/; /ke+afət/ → /kafət/; /ke+atəş/ → /katəş/; /ke+an/ → /kan/; /ke+in/ → /kin/; /ke+u/ → /ku/ və s.

Nizami məsnəvilərinin fonetik-qrafik kontekstdə araşdırılması bu məsnəvilərin istər sait, istərsə də samit fonemlərdə baş verən fonetik çevrilmələrlə, klassik dildə mövcud olmuş, indi isə unudulmuş, yaxud tələffüzü dəyişilmiş fonemlərlə zəngin olmasını bir daha təsdiqləyir.

**Açar sözlər:** Nizami, Xəmsə, hikmətli ifadələr, fars dili, eliziya, fonetik çevrilmə

## THE LANGUAGE CHARACTERISTICS OF WISDOM QUOTES IN NIZAMI GANJAVI'S MASNAVIS (EPIC WORKS)

## ABSTRACT

"Khamsa," a collection of wisdoms, is also a set of ethical-aesthetic, poetic-philosophical views of the great Azerbaijani poet Nizami Ganjavi (1141-1209), who established a new era in the history of Near and Middle Eastern thought. The phonetic-graphic language features of the wisdom quotes in the "Khamsa" masnavis, which have been rooted in our lexicon for many centuries as proverbs, aphorisms will be discussed in this study.

To begin, let us note that the examples of Nizami's artistic heritage, which contain a number of interesting phonetic-graphical changes of the Persian language, which has undergone a long development path from the Ancient Persian language to the Middle and modern Persian language, and has been subjected to numerous influences within this time frame, are also interesting for studying the history of the language's development. As is common knowledge, Persian includes twenty-three consonant phonemes and seven vowels, one diphthong, and six monophthongs: /a/, /u/, /i/, /ə/, /o/, /e/, /ou/. As a result of the examples we quoted from Masnavis during the research, the phonetic changes used with greater frequency: - /a/ → ə (usually occurs before /h/): شاه ← شاه / shāh → shāh/; راه ← راه /rāh → rāh /; /i/ → /o/ رون ← رون /birun → borun/;

/ou/ → /o/ گ و هر ← گوه / gowhar-gohær; /i/ → /o/ رون ← رونیب /birun → borun /; /u/ → /o/ خاموش ← خامش / xāmush → xamosh/; and we found out that it is in the vowels /æ/, /e/, /o/ which are negative. The basic restriction rule of the Persian language is that two vowel phonemes in morpheme combinations and two consonant phonemes at the beginning of a word cannot be combined. To get around this, the language employs a number of phonetic phenomena and transformations. The most diverse forms of these phonetic changes are found in Nizami's works: /ke+ab/ → /kab/; /ke+afæt/ → /kafæt/; /ke+atæsh/ → /katæsh/; /ke+an/ → /kan/; /ke+in/ → /kin/; /ke+u/ → /ku/ etc. The study of Nizami masnavis in a phonetic-graphical context demonstrates once more that these masnavis are rich in phonetic alterations that take place in vowel and consonant phonemes, phonemes that were present in the classical language but are now lost or whose sound has changed.

**Key words:** Nizami, Khamsa, wisdom quotes, Persian language, elision, phonetic conversion

## ANLATI SÖYLEMİNDE UZAMSALLAŞMA VE BİR UYGULAMA

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## ÖZET

Bu çalışmanın amacı, anlatı söylemi araştırmalarının temel konularından biri olan uzamın daha belirgin hale getirilmesine yönelik bir yaklaşım ortaya koymaktır. Bunun için anlatıbilim sahasında çalışan çeşitli bilim insanlarının bugüne kadar uzam konusunda dile getirmiş olduğu görüşlerinden yararlanarak Sabahattin Ali'nin "Bir Aşk Masalı" isimli öyküsünde uzamsallaşma süreci incelenmiştir. Araştırmada uzamsallaşmayı mümkün olduğunca kapsamlı şekilde ortaya koymak için ilk olarak "Bir Aşk Masalı" (2019) anlatısının genel zamansal ve uzamsal geri planı aydınlatılmıştır. Yapısalcı yaklaşım çerçevesinde "kapsayan uzam" olarak da ele alınabilen genel zamansal ve uzamsal geri plan, anlatıdaki alt uzamların yanında karakterler ve figüranlar gibi diğer anlatı varlıklarını ve içinde pek çok nesneyi barındıran uzamsal bir anlatı evreni olarak görülebilir. İkinci olarak, anlatıda anlatıcının anlatım eylemini gerçekleştirdiği "söylem uzamı" başlığı altında incelemek mümkündür. Ancak araştırmada incelenen anlatıda söylem uzamına yönelik bir veri yoktur. Bunun sebebi anlatıda "örtük bir üçüncü şahıs" anlatıcının bulunmasıdır. Bu yüzden araştırmada uzamsallaşmanın üçüncü nesnesi olarak "öykü uzamları" incelenmiştir. Öykü uzamları anlatıdaki olayların gerçekleştiği bütün mekanlar olarak tanımlanabilir. Anlatıda uzamsallaşmaya yönelik "söylem ve öykü uzamı" kavramları ünlü araştırmacı ve eleştirmen Seymour Chatman'a aittir (1980). Üzerinde halen tartışmalar olmasına karşın bu iki kavram, anlatı uzamlarının belirlenmesi için son derece etkili çözümlenme araçlarıdır. Araştırmaya dahil edilen son bir anlatı unsuru ise, genel zamansal geri plan, söylem ve öykü uzamlarını oluşturan ve onlarla bütünleşmiş karakter, figüran veya cansız nesnelere işaret eden "yerdeşlikler"dir. Bu kavram ilk bulan kişi olmasa da anlatı araştırmalarında ilk kullanan göstergebilimci A. J. Greimas'dır. Bu üç farklı uzam sınıflandırmasının her birinde yerdeşlikler gözetilerek araştırmada anlatının genel zamansal geri planını "kadın hükümdarın yönettiği ülke" oluşturduğu ortaya çıkmıştır. Anlatıcının örtük olması sebebiyle söylem uzamı belirsizdir. Anlatıda öykü uzamları arasında, "kadın hükümdarın sarayı", "sarayın bulunduğu şehirdeki semtler" ve "dervişin kulübesi" olmak üzere toplam üç farklı uzam ve bunları oluşturan alt uzamlar tespit edilmiştir.

**Anahtar Kelimeler:** anlatı söylemi, uzam, Sabahattin Ali

## SPATIALIZATION IN NARRATIVE DISCOURSE AND AN APPLICATION

## ABSTRACT

This study aims to present an approach to revealing space, one of the main topics of narrative discourse research. For this purpose, the spatialization process has been studied in Sabahattin Ali's story "A Love Tale" utilizing the opinions about space expressed by various scientists working in narratology. In order to elicit the spatialization as comprehensively as possible in the research, the general temporal and spatial background of "A Love Tale" (2019) was first highlighted. The general temporal and spatial background (setting), which can also be considered as a "covering space" within the framework of the structuralist approach, can be seen as a spatial narrative universe containing other narrative entities, such as characters and walk-ons, as well as many objects in it and the subspaces in the narrative. Secondly, it is possible to examine the "discourse space," where the narrator performs the act of narration in the narration. However, there is no data for the discourse space in the narrative examined in the research because the narrative has an "implicit, third-person" narrator. For this reason, "story spaces" have been examined as the third object of spatialization in the research. Story spaces can be defined as all the places where the narrative events occur. The concepts of "discourse and story space" for spatialization in narrative belong to the famous researcher

and critic Seymour Chatman (1980). Although there are still discussions on these two concepts, they are highly effective analysis tools for determining narrative spaces. A final narrative element included in the research is the “isotopies” that make up the general spatial background and point to the discourse and story spaces and characters, walk-ons, or inanimate objects integrated with them. Although he is not the first to find this concept, a semiotician, A. J. Greimas, is the first to use it in narrative research. Considering the isotopies in these three different space classifications, it has been revealed that the general spatial background of the narrative is “the country ruled by a female ruler”. The discourse space is ambiguous due to the implicit nature of the narrator. Among the story spaces in the narrative, a total of three different spaces and the subspaces constituting them have been identified: “the palace of the female ruler,” “the districts in the city where the palace is located,” and “the deckhouse of the dervish.”

**Keywords:** narrative discourse, space, Sabahattin Ali

## AZƏRBAYCAN ŞAİRİ HÜSEYN CAVIDİN “TOPAL TEYMUR” ƏSƏRİNDƏ MİLLİLİK DÜŞÜNCƏSİ VƏ MİLLİYYƏTÇİLİK

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### ÖZƏT

Məqalədə dahi Azərbaycan yazarı Hüseyn Cavidin “Topal Timur” pyesində türk milliyyətçiliyi araşdırılmışdır. Müəllif bu tarixi eserin hala tahlil edilməmiş yanlarını, kahramanların tarixdəki yerini, eserin bədii-estetik dəyəri və çağdaşlıq tərəflərinə işıq tutmağa çalışmışdır. Həmçinin Timurun dünya fəthlərindən biri kimi obrazını, onun ideyalarını və şəxsiyyətini dərinlən araşdırır. Cavid bu esərində türk dünyasının acılı tarixini göstərməklə bərabər, Timurun müsbət keyfiyyətlərini, dövlət erkənini, milliliyini, ədalətli və maarifpərvər olduğunu təsvir edir. Tarixdə Timur kəniçən, vahşi və kəddar bir hökmdar kimi xatırlanır, amma Cavid onu kəddar olmaqla yanaşı, həm də ağıllı, təbasının kayqısını çəkən, dövlətin bəkasını düşünen bir dövlət adamı kimi təqdim edir. “Topal Timur” esərində hadisələr Anqara savaşı dönməndən bəhs etdiyi üçün burada Yıldırım Beyazıt obrazı ilə də qarşılaşırıq. Şair Yıldırım tekebbürlü, sorumsuz, dövlət gələnlərini unutmş bir hökmdar kimi göstərir. Aynı zamanda, Yıldırımın kahramanlıqları və mērdliyi də diqqətdən kaçırmır. Timur dövləti ilə Osmanlı arasında olmuş savaş, bizim yorumumuza görə, həm də göstərilən esərdə türklük tarixində ən kanlı kərdəş savaş kimi təsbitləne bilər. Böyük edib Hüseyn Cavid də gēnc insanlara tarixlərini dərinlən bilməli və ondan dērs çikarmalı olduklarını təvsiyə etmiş olur. Bütün bu mēseleləri mēkələmizdə müqayiseli şəkildə tahlil edilməyē ve bu esər vasitəsiylə türk dünyasının ideoloji yapısının kurula biləcəyini göstərməyē çalışmışıq. Onu da qeyd etmək lazımdır ki, Hüseyn Cavid bir yazar olaraq tək cə Azərbaycan ədəbi-bədii fikrinə deyil, bütün türk dünyasına hitab etmiş sənətkardır. O, bütün esərində türk dünyasının çağdaş problemlərini kabartmış ve tarixdən dērs çikartmağı önermişdir.

**Açar sözlər:** Hüseyn Cavid, Topal Teymur, Yıldırım Beyazıt.

### NATIONAL THINKING AND NATIONALITY IN THE WORK OF THE AZERBAIJANI POET HUSEYN JAVID "TOPAL TEYMUR"

### ABSTRACT

The present study examines Turkish nationalism in the play "Topal Teymur" by the great Azerbaijani writer Huseyn Javid. The author tries to shed light on the aspects of this historical work that have not yet been analyzed, the place of the heroes in history, the artistic-aesthetic value of the work, and the aspects of modernity. While analysing these aspects, comparative method have been used. The paper also deeply explores Teymur, the turkic character, as one of the world conquerors, his ideas and personality. In this work, Javid shows not only the painful history of the Turkic world, but also describes Teymur's positive qualities, statesmanship, nationality, justice and enlightenment. In history, Teymur is remembered as a brutal and cruel ruler, but Javid presents him not only as a cruel, but also as a wise statesman who cares about the fate of his nation and the future of the state. In "Topal Teymur" we also meet Yıldırım Beyazıt character, since the events occurred in the work are about the period of the Angara War. The poet presents Yıldırım as an arrogant, irresponsible ruler who has forgotten state traditions. At the same time, Yıldırım's heroism and bravery haven't overlooked. According to our interpretation, the war between the Teymur's state and the Ottomans can be identified as the bloodiest civil war in the history of Turkey. Huseyn Javid, the prominent writer, advises young people that they should know their history deeply and learn from it. Through the investigation of "Topal Teymur", the author shows that this work can give the model of ideological structure of entire Turkic world. It should also be noted that Huseyn Javid, as a writer, is an artist who appealed not

only to the literary and artistic opinion of Azerbaijan, but to the entire Turkic world. In all his works, he highlighted the contemporary problems of the Turkish world and suggested learning lessons from the history.

**Keywords:** Huseyn Cavid, Topal Teymur, Yildirim Bayazit.

## “DALĞA”YA ÇEVRİLƏN ARX VƏ YA GÜNEY AZƏRBAYCANIN İGİD QIZI

NƏSİROVA FİDAN YAQUB qızı

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### XÜLASƏ

İctimai-siyasi proseslərin, sosial münasibətlərin təkəverici qüvvəsi, bayraqdarı kimi strateji mövqə sərgiləyən Güney Azərbaycan ədəbiyyatı özünün bütün dövr və mərhələlərində mübarizə meydanı olmuşdur. Təbii ki, bu etnik azlıqlara qarşı yürüdülmən qeyri-proporsional siyasət, haqq və hüquqların diskriminasiyası, sosial-sinfi bərabərsizlik kimi ən müxtəlif səbəblərin məntiqi nəticəsi idi. Gerçək həyat həqiqətləri təəssübkeş qələm ustalarını, xalqın aydınlarını ədəbiyyata bir məqsəd kimi deyil, bir vasitə kimi baxmaq reallığı ilə üz-üzə qoyurdu. Milli azadlıq hərəkatının gedişatının istiqamətləndirilməsi, kütlələr arasında ideoloji təbliğat və təşviqat məsələləri xalqın mübariz aydınları Əlirza Nabdil Oxtay, Səməd Behrəngi, Mərziyə Üskuyi, Səhəndin əsərləri vasitəsilə reallaşırdı. Onlar bu təməlin daha möhkəm, güclü olması məqsədi ilə uşaqlara üz tutur, nəticədə bu əsərlər sayəsində uşaq ədəbiyyatının mündəricəsi, ideya-tematik arealı zənginləşir, genişləndir. Uşaq ədəbiyyatında solçu yönümlü təbliğatdan formalaşan yeni, inqilabçı, üsyankar, baş alıb gedən zülm, istibdadı qarşı haqq səsinı ucaldan uşaq obrazları yaranırdı. Ölkəni qan çanağına döndərmiş Pəhləvi rejiminə qarşı mübarizəyə səsləyən belə qələm sahiblərindən biri də Mərziyyə Əhmədi Üskuyi (1945-1974) idi.

1945-ci ildə Təbriz yaxınlığındakı Üskü qəsəbəsində dünyaya göz açan, cəmi 29 il ömür sürmüş şairə, müəllimə, inqilabçı, şah rejiminə qarşı müqavimət hərəkatının, İran Xalq Partizan Fədailəri təşkilatının tanınmış qadın üzvlərindən olan Mərziyyə Əhmədi Üskuyi (1945-1974) 1974-cü ildə SAVAKla silahlı atışmada qəhrəmancasına qətlə yetirilmişdir. Şeirələrini “Dalğa” təxəllüsü ilə yazan şairənin ədəbi camiadə böyük rezonansa səbəb olan eyni adlı şeirini oxuyarkən sanki, onun özü, xarakteri, həyatının qısa xülasəsi, avtobiografiyası göz önündə canlanır. Bu poetik nümunədə Səməd Behrənginin dövrün azadlıq manifesti sayılan “Balaca Qara balıq” hekayəsindən təsirlənmələr də açıq-aşkar sezilir. O, uşaqlar üçün yazdığı “Can günəşim, parla çıx!”, “Mən günəşi sevirəm!” kimi sətraltı mənə çalarlarının zənginliyi ilə seçilən şeirlərində də əqidəsinin diktə etdiyi mübariz fikirləri təbliğ edir. Əsarət, sosial bərabərsizlik, ədalətsizliyə qarşı barışmaz mövqə dərin ictimai məzmunu, sərt realizmi ilə seçilən Mərziyyə yaradıcılığının leytmotivini təşkil edir.

**Açar sözlər:** Güney Azərbaycan uşaq ədəbiyyatı, Mərziyyə Əhmədi Üskuyi, İran Xalq Partizan Fədailəri təşkilatı, “Dalğa”, solçu yazarlar.

### DITCH THAT TURNED INTO A "WAVE" OR THE BRAVE SOUTH AZERBAIJAN GIRL

### ABSTRACT

South Azerbaijani literature has been a battleground throughout all of its eras and phases, demonstrating a vital position as a catalyst and standard bearer of socio-political processes and social connections. Of course, this discriminatory policy against ethnic minorities was the inevitable outcome of the widest range of factors, including social class inequality and rights discrimination. The facts of real life confronted the bigoted pen masters and the intellectuals of the people with the reality of looking at literature not as a goal, but as a means. By the works of Alirza Nabdil Okhtay, Samad Behrangı, Marziye Uskuyi, and Sahandin, the issues of directing the direction of the national liberation movement, ideological dissemination, and agitation among the masses were realized. In order to strengthen this foundation even further, they turned to children, and as a result, the substance, idea, and theme areas of children's literature were extended and enlarged as a result of these works. In the children's literature, new, revolutionary, rebellious children's characters were born, who raised the voice of truth against the ongoing oppression and tyranny, formed by left-oriented

propaganda. Marziyya Ahmadi Uskuyi (1945-1974) was one of those authors who called for the struggle against the Pahlavi regime, which turned the country into a bloodbath. Marziyya Ahmadi Uskuyi, a poet, teacher, and revolutionary who was born in 1945 in the town of Usku near Tabriz and lived for just 29 years before being bravely slain in a gunfight with SAVAK, was a well-known female member of the resistance movement against the Shah's dictatorship. When reading the poem of the same name, which caused a great resonance in the literary community, the poetess, who wrote her poems under the pseudonym "Dalga", seems to see herself, her character, a brief summary of her life, and her autobiography come to life. The narrative "Little Black Fish" by Samad Behrangi, which is regarded as the era's independence credo, is strongly sensed in this beautiful example. For young readers, he wrote, "My beloved sun, shine!" and "I love the sun!" In his poems, which stand out for the depth of their underlined meanings, he teaches the radical concepts that his views need. The main theme of Marziyya's work, which is characterized by its intense social content and severe realism, is an unwavering opposition to slavery, social inequity, and injustice.

**Key words:** South Azerbaijani children's literature, Marziyya Ahmadi Uskuyi, Iranian People's Partisan Loyalty organization, "Dalga", leftist writers.



## EDEBİ ÇEVİRİDE BİÇEM SORUNSALI: A HAUNTED HOUSE ÖRNEĞİ

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### ÖZET

Çeviribilim her ne kadar 1990'lerden itibaren kültürel bir dönemeçten geçerek bilhassa ideolojik unsurları gündemine alsada dilbilimsel yaklaşımların etkisi hiçbir zaman tamamen kaybolmamıştır. Özellikle edebi çeviride dilsel öğelerin yanı sıra biçemin de çevirmen açısından yarattığı zorluklar azımsanmayacak ölçüdedir. Biçembilim, antik çağdan bu yana çeviri çalışmalarında yer edinmiş, çeviride biçemsel özelliklerin nasıl ele alınması gerektiğiyle ilgili farklı görüşler ortaya atılmıştır. Biçem; yazara, çevirmene veya metne atfedilebileceğinden bu çalışmada yazarın dili kullanım şekliyle sınırlandırılarak ele alınmış ve çeviri metinlerdeki biçem sapmalarını tespit etmek üzere karşılaştırmalı bir analiz yapılmıştır. Virginia Woolf'un 1921 yılında kaleme aldığı küçürek öyküsü A Haunted House'da okur geleneksel düzyazı formunun şiirsel bir anlatımla birleştirilmesine tanık olur. Woolf, modern anlatı tekniklerini kullandığı bu eserde hayalet hikayesi türünün biraz dışına çıkarak okurun gerçeklik algısını sarsmayı ve farklı duygular deneyimlemesini sağlamayı amaçlar gibi görünür. Yarım kalmış cümleler, devrik yapılar ve şiirsel motiflerle kendine has bir biçeme sahip olan bu öykünün Alev Bulut ve Tuğçe Ayteş tarafından icra edilen Türkçe tercümelemleri karşılaştırıldığında birtakım nüanslar ortaya çıkmıştır. Yazarın biçemini olduğu gibi aktarmak çevirmen açısından pek mümkün olmasa da biçemsel özelliklerin öne çıktığı eserlerin çevirilerinde benzer etkiyi yaratmak önem arz eder. Buna istinaden çalışmanın nihai amacı, çevirmenlerin tercih ettikleri stratejilerle biçemi ne ölçüde korudukları ve biçemdeki sapmaların metnin anlam ve duygu dünyasını nasıl etkilediği hakkında bir yargıya varmaktır. Çeviriler incelendiğinde Tuğçe Ayteş'in yazarın biçemine daha sadık bir şekilde aktarım yaptığı görülmüştür.

**Anahtar Kelimeler:** A Haunted House, biçem, çeviri stratejileri

### THE QUESTION OF STYLE IN LITERARY TRANSLATION: A HAUNTED HOUSE

### ABSTRACT

Although translation studies has gone through a cultural turn since the 1990s, and it has particularly focused on ideological elements, the influence of linguistic approaches has never completely disappeared. Especially in literary translation, the difficulties that the style creates for the translator as much as the linguistic elements are not to be underestimated. Stylistics has occupied a place in translation studies since ancient times, and different views have been put forward about how stylistic features should be handled in translation. Since style can be attributed to the author, translator, or text, in the current study, it has been limited to the author's diction, then a comparative analysis has been carried out to determine the stylistic shifts in the translated texts. Virginia Woolf's short story A Haunted House written in 1921 features a traditional prose form adorned with poetic expressions. In this work, Woolf benefits from modern narrative techniques and it appears that she aspires to shake the readers' perception of reality and let them experience different emotions by moving a little away from the ghost story genre. The story has been written with a unique style that is characterized by incomplete sentences, inverted structures and poetic motifs. While comparing the Turkish translations by Alev Bulut and Tuğçe Aytes, some nuances have emerged. Although it is not possible for the translator to convey the author's style as it is, it is important to create a similar effect in the translations of works where stylistic features stand out. Based on this, the ultimate aim of the study is to make a judgment about the extent to which the translators preserve the style with their preferred strategies and how the deviations in the style affect the meaning and emotional world of the text. When the translations

were examined, it was seen that Tuğçe Ayteş produced a more faithful translation regarding the author's style.

**Keywords:** A Haunted House, style, translation strategies

## TOPLUM MÜHENDİSLİĞİ YAKLAŞIMINDAN HALKLA İLİŞKİLERİN DÜNYÜ, BUGÜNÜ ve YARINI ÜZERİNE BİR ARAŞTIRMA

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### ÖZET

Toplum; sosyal gereksinimlerini karşılamak amacıyla etkileşim içerisine giren ve ortak paydası kültür olan insan topluluğunun oluşturduğu bir birlikteliktir. Aynı zamanda toplum ortak bir kültürü paylaşan, iletişim içinde olan kişiler olarak tanımlanabilir. Tarih içerisinde çeşitli şekillerde betimlenen toplum tiplerinin günümüzdeki karşılıklarından biri ise enformasyon toplumdur. Bu noktada günümüzde iletişime ve iletişim yönetimine duyulan ihtiyaç göz ardı edilemez ölçüdedir. Sosyolojik yaklaşımlarda iletişim, sosyal düzenin üretimi veya yeniden üretimi olarak ele alınır. Bu açıdan iletişim, organizasyonları (sosyal gruplar, kurumlar vb.) oluşturan çimentodur. İletişim kendi başına bir grubun birlikte düşünmesini, birlikte görmesini, birlikte hareket etmesini mümkün kılar.

Toplumsal düzlemde, toplumsal hareketlerin ve değişimlerin, toplumsal düzenin sağlanması üzerine sosyal alanda yapılan çalışmalar da toplum mühendisliği olarak anılmaktadır. Söz konusu anlayışın gerisinde yatan temel düşüncenin her ne kadar Platon'un Devlet adlı eserine kadar uzanan uzun bir geçmişi olsa da, toplumsal değişmeyi belli bir modele göre önceden belirleme ve düzenleme anlayışı, bilime dayanan teknolojinin ve bunun sonucunda oluşan düşüncelerin toplumsal problemleri çözme gücüne duyulan inancın bir sonucudur. Bu düşünceye göre insanların fikirlerini değiştirme ve davranışlarını yönlendirme çabaları insanların topluluk halinde yaşamaya başladığı tarih öncesi zamanlara dek uzanmaktadır.

Toplum mühendisliği, bilimsel yöntemleri sosyal konular üzerinde uygulama olarak da anılabilir. Toplum mühendisliğinin toplumun demografisinde, sosyal dokusunda, tarihten gelen yapısında değişiklik yapmak, tepkilerini, duygu ve düşüncelerini, isteklerini yönlendirebilmek, kontrol altında tutabilmek gibi belirgin hedefleri vardır. Bu noktada halkla ilişkilerin rol ve işlevleri arasında yer alan gündem yönetimi, onay üretimi, rıza üretimi, kanaatlerin şekillenmesi, yeni hayat tarzlarının yaratılması, popüler kültürün ve egemen düşüncenin devam etmesi üzerine yapılan çalışmalar da toplum mühendisliği uygulamalarının alanları olarak karşımıza çıkmaktadır.

Bu çalışmada toplum mühendisliği yaklaşımı, halkla ilişkilerin kavramsal çerçevesi, toplumsal/ideolojik işlevleri, teorik altyapısı, uygulama alanları ve başvurduğu bazı teknikler çerçevesinde incelenmiştir. Bu çalışmanın temel amacı, toplum mühendisliği yaklaşımından halkla ilişkileri irdelemek ve halkla ilişkiler aracılığıyla "toplumsal iyiyi inşa modeli" ortaya koymaktır. Bu bağlamda tüm boyutlarıyla geçmiş ve günümüzde var olan uygulamaları ele almak, bu alandaki kavramsal çerçeveyi oluşturmak, kesişim noktalarını belirlemek, bu konuda akademisyen ve sektör çalışanlarının görüşlerini bir araya getirerek ortak bir uzlaşma elde etmek, toplumu etkileme gücünü elinde bulunduran bir disiplin olan halkla ilişkilerin bir toplumsal uzlaştırma aracı olarak kullanımı konusunda gerekenlere yönelik bir gelecek projeksiyonu oluşturmak araştırmanın diğer amaçları arasındadır. Çalışmada yöntem olarak "Delphi Tekniği" seçilmiş ve araştırma iki turdan oluşmuştur. Birinci turda, 13 akademisyen ve 8 sektör çalışanı olmak üzere toplam 21 kişiyle yarı yapılandırılmış derinlemesine görüşmeler yapılmış, bu görüşmeler MAXQDA aracılığıyla analiz edilmiş. Bu analizden elde edilen sonuç toplam 50 ifadeden oluşan bir anket haline getirilmiş ve tekrar katılımcılara sunulmuştur. Katılımcıların uzlaşmış olduğu ifadeler ve elde edilen kod haritaları derlenerek bir model ortaya konulmuştur.

**Anahtar Kelimeler:** halkla ilişkiler, toplum mühendisliği, halkla ilişkiler teorileri, halkla ilişkiler modelleri

## **A RESEARCH IN TERMS OF SOCIAL ENGINEERING ON THE PAST, PRESENT AND FUTURE OF PUBLIC RELATIONS**

### **ABSTRACT**

Society; it is a unity formed by human existence, which interacts for social welcome and whose common denominator is culture. At the same time, the society guides as people who share a common culture and communicate. One of the present-day equivalents of the types of society depicted as groups in various historical contexts is the information gateway. At this point, the need for communication and communication management cannot be ignored today. In sociological approaches, communication is considered as the production or reproduction of social order. These extensions are the composite cement of communication organizations (social groups, organizations, etc.). Communication on its own makes it possible for a group to think together, see together, and act together.

On the social level, social movements, changes and social order studies are also referred to as social engineering. Although the basic idea behind this understanding has a long history dating back to Plato's *The Republic*, the understanding of predetermining and arranging social change according to a certain model, the belief in the power of science-based technology and the resulting thoughts to solve social problems. is a result. According to this idea, the efforts of people to change their minds and direct their behaviors date back to prehistoric times when people began to live in groups.

Social engineering can also be referred to as the application of scientific methods on social issues. Social engineering has specific goals such as making changes in the demographics, social fabric, and historical structure of the society, directing and controlling their reactions, feelings and thoughts, wishes. At this point, studies on agenda management, production of consent, production of consent, shaping of opinions, creation of new lifestyles, and the continuation of popular culture and dominant thought, which are among the roles and functions of public relations, appear as fields of social engineering applications.

In this study, the social engineering approach has been examined within the framework of the conceptual framework of public relations, social/ideological functions, theoretical background, application areas and some techniques it applies. The main purpose of this study is to examine public relations from the social engineering approach and to present a "model of building the social good" through public relations. In this context, to address the past and present practices with all its dimensions, to create the conceptual framework in this field, to determine the intersections, to gather the views of academicians and sector workers on this subject, to achieve a common consensus, to form a part of public relations, which is a discipline that has the power to influence the society. Creating a future projection for what is necessary for its use as a social mediation tool is among the other aims of the research. The "Delphi Technique" was chosen as the method in the study and the research consisted of two rounds. In the first round, semi-structured in-depth interviews were conducted with a total of 21 people, including 13 academics and 8 industry employees, and these interviews were analyzed through MAXQDA. The result obtained from this analysis was turned into a questionnaire consisting of a total of 50 statements and presented to the participants again. A model was put forward by compiling the statements that the participants agreed with and the code maps obtained.

## TÜRKLERDE ÖLÜM ANLAYIŞI VE DEFİN TÖRENLERİNE DAĞ KÜLTÜ BAĞLAMINDA BİR BAKIŞ

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### ÖZET

Türk Dil Kurumu lügatinde “din” anlamına gelen kült ifadesi, Türk mitolojisindeki doğaüstü varlıklar şeklinde tasvir edilen yüce ve kutsal varlıklara olan saygı, ihtiram ve zaman zaman tapınma olarak da ifade edilir. Bu tanımlamalar kült kavramının içinde bir inanma barındırdığını ve canlı ya da cansız bir unsurun etrafında inanç geliştirildiğini ve kutsiyet atfedildiğini gösterir.

Bir inancın kült haline gelebilmesi için gerekli şartları üç maddede ifade eden Ahmet Yaşar Ocak, kült kavramının zihnimize yerleşmesi ve hangi unsurlar etrafında kültler oluşmuş olabileceği konularında bizi bilgilendirir. Kültlerin oluşabilmesi için gereken üç şart şu şekilde sıralanır:

- Külte konu olabilecek bir nesne veya şahsın olması,
- Bu nesne veya şahıstan insanlara fayda ya da zarar gelebileceği inancının bulunması,
- Bu inancın sonucu olarak faydayı celbedebilecek ve zararı uzaklaştıracak ziyaretler, adaklar, kurbanlar ve benzeri uygulamaların varlığı.

Türk düşünce ve inançlarında yukarıda zikredildiği gibi birçok kült görebilmekteyiz. Bu kültlerden bir tanesini de dağlar ve dağlar etrafında ortaya çıkan inançlar oluşmuştur.

Dağın zirvesinde insan, kendisini Tanrı'ya daha yakın hisseder ve öyle olduğuna inanır. Bu Türklerin Tanrı'yı yukarıda/gökte tasavvur etmelerinin bir sonucudur. Bu anlayışın bir sonucu olarak dağlar, insanüstü varlıkların yaşam alanları olarak da kabul edilmiştir.

Tanrı'ya en yakın yerler olarak kabul edilen dağ başları, aynı zamanda kağanların ve önemli kişilerin defnedilecekleri zamanlarda öncelikli tercih yerlerinden biri olmuştur. Bir “kut” ile ve Tanrı fermanıyla tahta oturmuş olduklarına inanılan bu kişilerin, ölümden sonra dağ başlarına ve yüksek yerlere defnedilmelerindeki maksat Tanrı'ya yakınlık ve Tanrı'yla iletişimin devamının sağlanması isteğidir.

Bu bildiride Türklerin ölüm anlayışı ve defin törenlerine dağ kültü bağlamında bir bakış denemesi yapılacaktır.

**Anahtar Kelimeler:** Kültler, Dağ Kültü, Ölüm

## AN APPROACH TO THE SENSE OF DEATH AND ENTOMBMENT CEREMONIES IN THE CONTEXT OF THE MOUNTAIN CULT OF TURKS

### ABSTRACT

The cult expression, which means "religion" in the dictionary of the Turkish Language Institution, is also expressed as respect, honour and sometimes worship to the supreme and holy beings depicted as supernatural beings in Turkish mythology. These definitions show that the concept of cult contains a belief in it and that belief is developed around an animate or inanimate element and that sanctity is attributed.

Expressing the necessary conditions for a belief to become a cult in three conditions, Ahmet Yaşar Ocak informs us about the establishment of the concept of cult in our minds and about which elements cults might have formed. The three conditions required for cults to form are listed as follows:

- a) Presence of an object or person that may be the subject of a cult,
- b) Belief that people may benefit or harm from this object or person,
- c) As a result of this belief, the existence of visits, offerings, sacrifices and similar practices that can attract benefit and repel harm.

As mentioned above, we can see many cults in Turkish thoughts and beliefs. One of these cults was formed by the mountains and the beliefs that emerged around the mountains.

At the top of the mountains, man feels closer to God and believes that he is. This is a result of the Turks' envisioning God above/in the sky. As a result of this understanding, mountains have also been accepted as the living spaces of superhuman beings.

The peaks of the mountains, which are considered to be the closest places to God, have also been one of the primary places of choice when khans and important people are to be buried. The purpose of these people, who are believed to be enthroned with a "kut" and a divine decree, are buried on mountain tops and high places after death, to be close to God and to ensure the continuation of communication with God.

In this paper, an attempt will be made to look at the Turks' understanding of death and entombment ceremonies in the context of the mountain cult.

**Keywords:** Cults, Mountain Cult, Death

## ANADOLU İRFANI BİR TANIMLAMA DENEMESİ

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### ÖZET

Dini literatürde “bir şeyin izini sürmek, onu algılamak” anlamına gelen irfân, bilgiye isabet etmek, dokunmak manaları, âriflerin bilge kişiliklerine dair bizleri malumat sahibi yapar. Hz. Peygamber’in “Kendini bilen Rabb’ini bilir” mealindeki hadis-i şerifi, âriflerin bir nevi çıkış noktasını teşkil eder. “Bilmek, tanımak, ikrar etmek” olarak kısa tanımlaması yapılan mârifet; “tanıyan, bilen, âşına olan, halden anlayan” gibi kelimelerle izah edilen âriflerin fiilidir.

Felsefe ve kelimeler dallarında ilimle aynı anlamda kullanılan irfân kelimesi, tasavvuf ilminde ise ilmin kardeşi olarak zikredilir ve her iki kelime genel olarak bir arada telaffuz edilir. Ve hatta ilim ve irfânın yanına bir de hikmet kelimesi yerleştirilir ki, ilim, irfân ve hikmet kavramları bizi âlim, ârif ve hakîm kişilere götürür.

İrfânın daha çok sûfi çevrelerce üzerinde durulduğunu ve sûfi kimliği de olan ilim erbabı tarafından hayata tatbik edildiğini birçok eserde görebilmekteyiz. Hünkâr Hacı Bektaş-ı Veli Makalat’ında on makam olarak marifeti açıklarken, bir hayat tarzını da takipçilerine sunmuş oluyordu. Ahmed Er-Rufai’nin Marifet Yolu, Hacı Eminzâde Erzurumî’nin İrfan Yolu, Yunus Emre’nin şiirleri, Hoca Ahmed Yesevî’nin hikmetleri ve daha sayısız eseri ârif/irfân/mârifet konularına doğrudan ya da dolaylı olarak temas etmeleri bakımından burada saymak mümkündür. Bu, Anadolu insanı tarafından o kadar içselleştirilip, benimsenmiştir ki bugün Anadolu irfanı dediğimiz terminoloji ortaya çıkmıştır.

Anadolu irfânından söz edilebilir mi? Anadolu irfânı nedir ve hangi temeller üzerinde kurulmuştur, hayatımızın hangi safhalarında ve ne şekilde yer edinmiştir? İrfân’ın Anadolu ile bütünleşip yeni bir kavrama dönüşmesi nasıl olmuştur? Anadolu insanı “irfân” kavramını zaten özünde mevcutmuşçasına nasıl bu kadar özümsemiştir?

Bu bildiride yukarıda sorulan sorulara cevaplar aranacak; dinî, tasavvufî tanımları yapılan ârif/irfân/mârifet kavramlarının toplum hayatındaki karşılığı ele alınıp Anadolu kavramı ile beraber edebî ve kültürel bir tanımlama denemesi yapılacaktır.

**Anahtar Kelimeler:** İrfân, Anadolu İrfânı,

## ANATOLIAN WISDOM ATTEMPT OF IDENTIFICATION

### ABSTRACT

İrfân, which means "following something, perceiving it" in the religious literature, means to hit the information, to touch it, and makes us know about the wise personalities of the sages. The Prophet's hadith-i-sherîf, "Who knows himself knows his Lord," constitutes a kind of starting point for the wise men. "Ingenuity, which is briefly defined as "knowing, recognizing, confessing"; It is the verb of the wises, which is explained with words such as "who knows, knows, is familiar with, and understands the situation". The word 'irfân', which is used in the same sense as science in the branches of philosophy and theology, is mentioned as the brother of science in Sufism, and both words are generally pronounced together. And even the word wisdom is placed next to science and wisdom, and the concepts of science, wisdom and wisdom lead us to scholars, wise and wise people.

We can see in many works that lore was emphasized by sufi circles and applied to life by scholars who also have a sufi identity. While Haji Bektashi Veli was explaining ingenuity as ten maqams in his Makalat, he also presented a lifestyle to his followers. It is possible to list Ahmed Er-Rufai's Marifet Yolu, Hacı Eminzâde Erzurumî's İrfan Yolu, Yunus Emre's poems, Hodja Ahmed Yesevi's wisdoms and countless other works in terms of their direct or indirect contact with the subjects of ârif/irfân/mârife. This knowledge has been internalized and adopted by the Anatolian people so much that the terminology that we call Anatolian wisdom has emerged today.

Is it possible to talk about Anatolian wisdom? What is Anatolian wisdom and on what foundations was it established, in which phases of our lives and in what way? How did İrfan become integrated with Anatolia and transformed into a new concept? How did the Anatolian people internalize the concept of "lore" so much as if it already existed in their essence?

In this paper, answers to the questions asked above will be sought; In this study, the equivalent of the concepts of ârif/irfân/knowledge, whose religious and mystical definitions are made, in social life will be discussed and a literary and cultural definition will be made together with the concept of Anatolia.

**Keywords:** Wisdom, Anatolian Wisdom



## STUDENTS ASSESSMENT OF ONLINE EDUCATION DURING THE COVID-19 EPIDEMIC: AN ANALYSIS

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### **ABSTRACT**

The purpose of this study was to assess the online instruction given to students during the COVID-19 epidemic. At the four universities of Lahore city that were the center of the study, 650 students pursuing undergraduate, graduate, and doctoral degrees participated. A mixed method was used to design the research using both qualitative and quantitative components. An online survey was employed during the quantitative phase. Online in-depth interviews using a semi-structured interview form were carried out during the qualitative phase. Local Lahore, Pakistan, inhabitants were among the responses. The content analysis led to the identification of 21 categories and three major themes. The following themes were accomplished: "It could have been better!" for their suggestions, "Face-to-face education is better!" for the bad parts of the student's experiences, and "Better than nothing!" for the positive aspects of their experiences. It has been decided that a technology approach should be employed to further expand the distance education curriculum in the four universities that have been selected.

**Keywords:** Covid-19, Distance Education, Online Education, University Students.

## INCLUSIVE EDUCATION AND TERTIARY INSTRUCTION. NEW QUESTIONS IN THE TRADITION OF DISABILITY STUDIES

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### ABSTRACT

The proposal aims to investigate the university inclusion of students with disabilities through a review of theoretical studies on the subject. The definition of inclusion it's an aspect not free of criticality, suggesting reference to the concepts of marginality and exclusion. In this context, universities, understood as places of confrontation with diversity (Bolt & Penketh, 2016), are called to fulfil their institutional mandate. With specific reference to Law No. 17/1999, full formal recognition of the access of persons with disabilities to tertiary education is sanctioned. However, this requires a dual commitment from the institutions in the pursuit of inclusion policies (Chiang, 2019): on the one hand, at the level of implementing services; on the other, in building an inclusive community that allows the active participation of all students (Moriña et al., 2015). In particular, there is a need for the university to promote a culture of disability, providing safe spaces and opening up to a confrontation based on the recognition and appreciation of individual diversity, without falling into mere welfarism (Chiang, 2019). The subject of critical discussion in the article are, therefore, the main theoretical nodes that have emerged in the scientific literature on disability: the first concerns the relationship between disability and classical sociological thought, with particular reference to Parsonsian structural-functionalism and the sick-role theorisation (Parsons, 1951); the second refers to the Goffman interactionist approach (Goffman, 1963). From these conceptualisations, it is easy to recall the multiple forms of prejudice, which can be classified at an inter-individual and contextual-level.

**Keywords:** University inclusion, Disability studies, Education.

## PHENOMENA AND PROBLEMS ACCOMPANYING CHILD DEVELOPMENT IN OUR SCHOOLS.

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### ABSTRACT

This article explores the different forms of relationships between children, the family and the environment where they learn, based on gender and it aims to build their connections with other problems that affect their quality in school, as a bridge for building of some findings that would help the child, the young person, the family, the school and the teacher in their understanding, and giving the necessary help that can be given to them by the state, school and other national and international organizations. In this study, we will follow the path of interpreting the relationships between childhood and youth according to gender, to conclude at the problems that accompany them.

Cases observed at school: In all the relationships that children and young people build between themselves and the family, the school environment, the creative and active mindset has been the code of family, time and gender. The themes of researching the origin of the problems of violence, of gender problems, of secret abandonment, the themes of fulfilling the mission of the parent's duty, the school unanimously in the evaluation of life, characterize many studies and many initiatives from many organizations.

- a) By analyzing the child in his relations with the family, the environment on the variants of the problems that appear at school, the interpretation of the phenomena is aimed at as an innovative step.
- b) Paradigmatically, each time with its illustrative image creates opportunities to investigate with psychological and sociological methods, and after each result the investigated phenomenon is valid for creating interpretation possibilities on the standard model.

**Key words:** early childhood, family, teacher, hidden abandonment

## BİLİŞSEL ESNEKLİĞİN SAYISAL İÇERİKLE ÖLÇÜLMESİ

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### ÖZET

Bilişsel esneklik, yaratıcılık ve iletişim becerilerinin önemli bir bileşenidir. Genellikle Stroop Renk Kelime testi ve bazı bildirim dayalı testlerle ölçülmektedir. Alan yazınında sayısal içerikle bilişsel esneklik ölçüm örneğine rastlanmamıştır. Bu çalışmanın amacı bilişsel esneklik yetisini sayısal simgelerle nicelleştirmektir. Bu amaç doğrultusunda 134 kişilik elverişli örneklem oluşturan 8. sınıf öğrencisi Digital 7 fontu ile yazılmış yalın aritmetik denklemleri iki ayrı biçimde -yani hem Digital 7 Sayısal Font ile hem de geleneksel rakamların bilinen değerleri ile- algılayıp algılayamadıkları sınanmıştır. Sınav yüksek beklentili bir değerlendirme çalışmasının bir parçasıdır. Ölçüm izleyen satırlarda kısaca örneklendirilmiştir: Geleneksel rakamlarla yazıldığında  $1+1=2$ , Digital 7 Font ile yazıldığında ise 2 çubuk+2 çubuk=4 çubuk olarak ifade edilebilir. Öğrencilere iki farklı formda çoktan seçmeli dört soru sorulmuştur. İlkinde geleneksel sayılarla basit bir aritmetik denklem verilmiştir. Yanıt alternatifleri de farklı aritmetik denklemlerdir ancak Digital 7 Font ile yazılmıştır. Anahtarlı yanıt, verilen denklemin eşdeğeridir. Sonraki iki maddede de Digital 7 Font ile yazılmış 5 farklı basit aritmetik denklem bulunmaktadır. Beş seçeneğin dördü doğru, biri yanlıştır. Herhangi bir denklem, geleneksel sayılar açısından veya Digital 7 Font'taki çubuk sayısına göre doğru olabilir. Bahsedilen bu 4 madde bir genel yetenek testinin görsel kısmına yerleştirilmiştir. Bu bölümlerin geçerliliği ve güvenilirliği klasik test teorisinin göstergeleri ile belirlenmiştir. Dijital 7 Yazı Tiplerinin Sayısal, Sözel, Görsel ve İkili Algılama testlerinden elde edilen puanlar arasında anlamlı bir korelasyon olduğu ancak gereksiz olmadığı görülmüştür.

**Anahtar Kelimeler:** Bilişsel esneklik, Stroop Kelime Testi, Iraksak Beceriler

## MEASUREMENT OF COGNITIVE FLEXIBILITY WITH NUMERALS

### ABSTRACT

Cognitive flexibility is a critical component of creativity and communication skills. The purpose of the study is to determine cognitive flexibility with numerical symbols. 134 eighth graders were tested if they could perceive the arithmetic equations written with Digital 7 font in duality i.e., both in terms of Digital 7 Numeric Font, and by their nominal values in conventional numerals. When written in conventional numerals,  $1+1=2$ , but when they are written with Digital 7 Font they can be expressed as 2 bars+2 bars=4 bars. Students were asked four multiple choice questions in two different forms. In the first one a simple arithmetic equation is given with conventional numbers. Response alternatives are also different arithmetic equations but written with Digital 7 Font. The keyed response is the one equivalent to the given equation. In the next two items there are 5 different simple arithmetic equations written with Digital 7 Font. Four of the five options are correct, but one is not. Any equation can be correct either in terms of conventional numbers or with respect to the number of bars in the Digital 7 Font. These 4 items mentioned were placed in the visual part of a general aptitude test. The validity and reliability of these sections has been set by the indicators of classical test theory. The scores obtained from Numerical, Verbal, Visual and Dual Perception of Digital 7 Fonts tests were found to be significantly correlated but, they are not redundant.

**Keywords:** Cognitive flexibility, Stroop Word Test, Divergent Skills

## EĞİTSEL DONANIMLARDA ARANAN EŞLENİK NİTELİKLER

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### ÖZET

Öğrenme yasaları ve öğretme yasaları henüz bilinmiyor. Öğretim Yöntemleri ve Uygulama dersleri sağlam kuramsal temellerden yoksundur. Öğrenme ve öğretme üzerine görgül, uygulamalı, deneysel araştırmalar, medyanın öğrenmeyi kolaylaştırma bağlamındaki gizil gücüne sahip olduğuna dair kanıtlar sunar. Bu sunumun amacı, sistem düşüncesinin kavramsal çerçevesi içinde eğitim donanımlarının (eğitsel medya) işlevlerini yerli yerine koymaktır. Sistem düşüncesi, öğrenmeyi oluşturmak, kolaylaştırmak ve denetlemek için öğretim süreçlerinin örgütleniş karmaşıklığını tanımlamak, anlamak ve öngörmek için benimsenmiştir. Ayrıca sistem düşüncesi, öğretim tasarımcısının yanlış ikilemlerden kaçınmasını sağlar. Bazı eşlenik nitelikler (sistemlerin iki kutuplu özellikleri) ve öğretim ortamıyla ilgili esin alınan tasarım ilkeleri aşağıda özetlenmiştir:

**Bütünlük-çeşitlilik:** Birlik, bütünlükten ve kurumsal kimlikten sorumludur. Abartılı olduğunda birlik tekdüzellikle sonuçlanır. Uyum için çeşitlilik esastır. Elverişsiz çeşitlilikte aşırılık keşmekeşe sonuçlanır.

**Kaynaşma-Ayrışma:** Her mecra (medya, donanım) diğer mecralar tarafından desteklenmelidir. Bileşenlerin "kaynaşması" olarak adlandırılabilir nitelik budur. Her aracın, ortamın, bileşenin benzersiz yeteneklerinden olabildiğince yararlanılmalıdır. Bileşenlerin "ayrışması" ile kastedilen nitelik budur. Bir bileşenin daha iyi gerçekleştirdiği bir işlev başka bir bileşenle yapılmaya kalkışılmaz.

**Sağlamlık-esneklik:** Sağlamlık istikrar, yaşamı sürdürme ve kalıcılık için gerekli bir niteliktir, Esneklik ise dinamizm, büyüme ve uyum için zorunlu bir niteliktir. İstikrarın elverişsiz ucu katıktır. Esnekliğin aşırı ucu gevşekliliktir.

Eğitsel medyanın bunlar ve diğer bazı birleşik nitelikleri ve sonuçları, seçenekler arasında karşılaştırmalar ve karşıtlıklar yapmak için tartışılacaktır. Bu eşlenik niteliklerden bazıları için bazı nicel kriterler geliştirmek de bir zorunluluktur: zaman ve mekânda yakınlık, sıklık ve bağımsız oluşumların süresi vb. göstergelerle tanımlanabilir. Ölçülebilir tanımlar da eğitsel tasarımları uygulanabilir, uygulamaları da daha etkili ve verimli kılacaktır.

**Anahtar Sözcükler:** Öğretim donanımları, Sistem düşüncesi. Eşlenik nitelikler

## CONJUGATE QUALITIES EXPECTED OF INSTRUCTIONAL MEDIA

### ABSTRACT

Neither the laws of learning nor the laws of teaching are known yet. Methods courses lack of a sound theoretical base. Empirical research on learning and teaching yield evidence that media has the potential to facilitate learning. The purpose of this presentation is to allocate the functions of educational media within a conceptual framework of systems thinking. Systems thinking is adopted to delineate the organized complexity of the instructional processes to facilitate learning. Also, systems thinking enables the instructional designer to avoid false dichotomies. Some conjugate qualities (bipolar characteristics of systems), and the design principles inspired relevant to instructional media are summarized below:

**Unity-variety:** Unity is responsible for wholeness and for organizational identity. When exaggerated unity ends up with uniformity. Variety is essential for adaptation. Unfavorable extremity of variety is chaos.

Integration-differentiation: Every medium should be supported by the other media. That's what can be called "integration" of components. Unique capability of each medium should be exploited to the most possible extent. That's what is meant by "differentiation" of components.

Stability-flexibility: Stability is essential for survival and maintenance; flexibility is necessary for dynamism and growth. The unfavorable extremity of stability is rigidity. The edge of flexibility is looseness.

These and some other conjugate qualities of media and their outcomes will be discussed to make comparisons and contrasts between options. It is also a challenge to develop some quantitative criteria for some of those conjugate qualities: such as proximity in time and space, frequency, and duration of independent occurrences etc....

**Keywords:** Instructional media. Systems thinking, Conjugate qualities

## **E-LEARNING AND COVID-19: CHALLENGES AND RESOURCES OF WORKING MOTHERS WITH YOUNG KIDS**

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### **ABSTRACT**

Covid-19 has emerged not only as a contagious disease, whereas it has shaken the social institutions like family, education and health. The COVID-19 pandemic has caused profound changes in various dimensions of people's lives from emotional and physical breakdown to economic and social disruption. The businesses and learning all shifted from face-to-face interactions to online interaction. The closure of institutions and other learning spaces has impacted more than 94% of the world's student's population. Temporary solutions being devised for distance education range from online Google classroom to zoom and podcasts by teachers. Since, Pakistan is one of the developing countries facing the extensive issue of digitalization and women of Pakistan are on the pathways of fulfilling a balanced life of performing her motherhood and career. The sudden outbreak of pandemic was a threatening factor for a working mother especially with young kids aged from 4 to 15. It has become a tough routine for parents working online at home since they are adjusting to the new scenario and at the same time they have to ensure that their kids stay focused on learning and avoid overuse of games and social media. This was the high time for working mothers facing with challenges and find out the resources to cope with this. The aim of our study is to explore the challenges and resources of working mothers regarding E-learning of their kids using social media during the pandemic and the amount of anxiety parents facing due to it. Data is collected from the working mothers of the children who read in k-8 classes of both government and private schools. A total of 12 working mothers were selected out of which 4 were from banking sector, 4 from health and 4 from academia. The research is purely qualitative and the data is collected through in-depth interviews following the proper SOPs. Collected data is transcribed and then coding is used to identify themes across qualitative data. The themes are analyzed and the result of the study indicated three main findings (a) Working Mothers of children perceived their roles as both "parents" and "teachers" and that their role towards their children's education is increased more than before but they felt discontented over it (b) Work responsibilities have been a strong challenge to cope with the e-learning scenario of young kids. (c) Working Mothers have faced the lack of supporting resources from their work and personal life resources.

## BOOK PHOTOGRAPHS ON SOCIAL MEDIA

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### ABSTRACT

The purpose of this paper is to look at ways in which members of communities whose hobby is reading share information about recently read and bought books. They have special practices in photo sharing. The photos contain a true artistic arrangement, with everything selected in minute detail. Then the photograph is edited in order to impress even more through the use of lighting and special effects. What is suggested through these details? The present paper will present, from the observations done by the author, using netnographic research and the method of direct observation, how the other objects placed over and around the book make reference to the mood of the reader, buyer, or to various objects mentioned in the fictional world. To this, psychological theories will improve the understanding of various associations that the chosen objects have. Moreover, the findings of Nathan Jurgenson (2020) will complete the analysis, since he notices how photography has become handy for everyone as a result of the Development of smartphones' camera. Every single detail in our life can be photographed and shared on social media. Users that are members in book lovers communities enjoy sharing photos with their favourite books, in an artistic way, but also sharing the way they have arranged their personal library. Some of them have bookshelves and books everywhere in the house. Sharing photos with books in such communities is a practice that the author of the paper has noticed in American and Romanian communities.

**Keywords:** Psychology, Communication, Visual Culture, Hobby, Technology



**UNIVERSAL DESIGN FOR LEARNING: ENSURING ACCESSIBLE LEARNING ENVIRONMENT FOR STUDENTS WITH SPECIAL EDUCATIONAL NEEDS IN AN INCLUSIVE CLASSROOM SETTINGS**

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**ABSTRACT**

Universal Design for Learning (UDL), which indicates a manifold of principles and methods, which ensures accessible learning environment for students with special educational needs (SwSEs) in inclusive classroom settings. UDL discourses different learning environment and offers multiple styles of situation for SwSEs. UDL always provides multiple ways of learning discourse to its learners; it is significantly supportive for SwSEs engaged in learning process. These principles of learning framework provide appropriate guidelines for educators for integrating UDL into an accessible learning environment for SwSEs in an inclusive classroom setting. Inclusive education setting builds up a platform for SwSEs to learn in an accessible environment with normal children. UDL framework is very often held as inclusive learning process for all students within their classroom settings. The UDL framework more apprehensive about the problems faced by SwSEs in their classrooms and directs the educators to make use of multiple ways through which learns can easily accessible to the learning environment with liable results. This study explores the significance of UDL in creating a platform for better accessible environment for SwSEs in improving their academic outcomes. The UDL framework makes a task to support all the students with all the possible techniques and strategies to create an accessible classroom environment in the inclusive classroom settings. The authors emphasizes the importance of updating and ensuring accessible learning environment for SwSEs to access into inclusive classroom settings.

**Key words:** UDL, Accessible Learning Environment, Students with Special Educational Needs, Inclusive Classroom.

## **PRESCHOOL EDUCATION CHALLENGES AND THE NEED FOR ALTERNATIVE EDUCATION**

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### **ABSTRACT**

A big role in the formation of the personality of children is arising for his intellectual, physical and emotional formation and promoting learning in the family, kindergarten and school. Currently, there are a number of private, public and alternative education kindergartens in Georgia, with different planning and implementation strategies and preschool education, the main goal of which is the formation of school readiness, is actually not available to all children, when the pre-school educational process is interrupted and/or not started. This, in itself, separates children from different kindergartens and them, who cannot go to kindergarten at all. An international survey recognizes alternative schooling as a way to reduce preschool education costs and increase access to education. It represents a good alternative to existing public preschool education staff and programs and adheres to educational standards of education. Alternative education is not bureaucratic, formal and does not require the involvement of the state in the arrangement of the educational institution, food and other details. An alternative form of pre-school education can be implemented both indoors and outdoors; By allocating common financial and personal resources. Alternative education aims to align with recognized standards and may in fact be flexible and accessible where other forms of education are inadequate and/or disadvantaged. The research believes that the state should use all existing and alternative opportunities to ensure the preschool education process; In the process of authorization, to define the internationally recognized goals of preschool education as the main standard, and in their implementation, to leave the autonomy granted by our legislation to the kindergartens. According to this position, the study aims to justify the need to consider alternative forms of education in the authorization process of pre-school education institutions. In order to achieve the goal, it is planned to determine the compatibility of the kindergartens providing alternative education in Georgia with the educational goals stipulated by the existing legislation and to justify the effectiveness of the forms of alternative education in overcoming the challenges of preschool education.

**Key words:** preschool education, alternative education, preschool development

## FACTORS INFLUENCING MOTORCYCLE ACCIDENTS AMONG P-HAILING RIDERS

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### ABSTRACT

In recent years, especially during the COVID-19 outbreak, the number of riders utilizing P-hailing or food delivery apps has surged substantially. The growth in the number of P-hailing riders has also led to an increase in the frequency of motorcycle accidents. This study aims to investigate the factors that contribute to motorcycle accidents involving P-hailing riders. A quantitative methodology was adopted, and 132 P-hailing riders were given a questionnaire. Statistical Package for Social Science (SPSS), with the univariate and bivariate method was used to analyze the gathered data. The results revealed that the factors influencing the occurrence of accidents among P-hailing riders were riding experience, work experience, vehicle condition, the availability of riding amenities and equipment, and road condition. The p-values for riding experience, employment experience, and vehicle condition were below than the significance threshold of 0.05, showing a substantial association between these parameters and the occurrence of accidents. The p-values for the completeness of riding facilities and equipment components and the road quality factor were less than 0.10, suggesting a modest association. On the basis of these findings, various recommendations were made to improve the safety of P-hailing drivers at work, including the provision of safety equipment and the development of road infrastructure.

**Keywords:** Safety Riding, Accident Factor, Cause of Accident, P-Hailing, Online Food Delivery Rider, Motorcycle, Road Condition

## **PROTECTION OF MARINE RESOURCES: BASIS FOR POLICY MAKING ON ILLEGAL FISHING**

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### **ABSTRACT**

A significant marine fishing ground for pelagic fisheries resources in the province is the coast line of Zambales, which is rich in the West Philippine Sea. It is situated in the region's northwest and has a lengthy but narrow coastline of more than 110 kilometers. The deepest point of the municipal coast, at 900 meters, is typical for the entire coastline. There are areas in Zambales where illegal fishing activities have been reported. The aim of the study is to determine how to implement strict policies and guidelines regarding these issues that might have an impact on the maritime environment.

**Keywords:** Marine Resources, Illegal Fishing

**PREDICTIVE ACCURACY OF THE ALTMAN AND ZMIJEWSKI MODELS WITH COMPANY SIZE AS AN EXPLANATORY VARIABLE IN SHARIA HOTEL, RESTAURANT AND TOURISM SECTOR COMPANIES IN INDONESIA**

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**ABSTRACT**

This study aims to analyze and compare bankruptcy predictions using the Altman model and the Zmijewski model, besides that this study also aims to analyze the accuracy of the two models, and test the effect of company size on bankruptcy predictions in Sharia Hotel, Restaurant and Tourism Sector Companies that go public on the Indonesia Stock Exchange. The sample used was 21 Sharia Hotel, Restaurant and Tourism sub-sector companies listed on the Indonesia Stock Exchange from the period 2020-2022. This study uses the Altman Z-score and Zmijewski analysis methods to test potential bankruptcy. Furthermore, using the intervening test analysis tool with the help of the Microsoft Excel program and Statistical Package for the Social Science (SPSS) VERSION 24.0.

The results showed that using the Altman model there were 9 Sharia Hotel, Restaurant and Tourism Sector Companies that were potentially bankrupt, the Zmijewski model the whole company was declared a healthy company, Property companies that were predicted to go bankrupt using the Altman model, for small company groups and large companies had almost the same percentage of bankruptcy predictions, which was 44%. Using the Zmijewski model, both groups of small companies and large companies do not have the potential to go bankrupt.

**Keywords:** Altman Z-score, Zmijewski, bankruptcy, Company Size.

**STRENGTHENING GROUP INSTITUTIONAL CAPACITY IN ENCOURAGING THE  
ACCELERATION OF DIGITALIZATION TRANSFORMATION AND DEVELOPMENT OF  
OYSTER MUSHROOM MICRO AND SMALL ENTERPRISE**

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**ABSTRACT**

This community service activity aims to empower the community through service and support, by enhancing their capacity and ability to master and apply appropriate technology in mushroom breeding and cultivation. Additionally, the development of processed oyster mushroom products supports the creation of business opportunities, increases productivity, and generates higher income for business group members. The institutional capacity of business groups is also strengthened through increased knowledge and skills, which can encourage the acceleration of digitalization and business development. The training program utilizes collaborative training methods, mentoring, and monitoring, and is delivered by instructors from academia, local government agencies, and oyster mushroom entrepreneur practitioners. The main materials of the training include oyster mushroom breeding and cultivation techniques, mushroom product processing technology, product design and packaging, group business management, and digital marketing.

The training program aims to increase the capacity and individual abilities of the participants in mastering the technology of mushroom production and cultivation processes, appropriate technology for processing mushroom products, technical product design and packaging, group business management, and digital marketing of oyster mushrooms. This is supported by coaching and facilitation of assistance, social capital, economic capital, and human capital. The training program also seeks to increase the institutional capacity of business groups, encourage the acceleration of digitalization of micro, small, and medium-sized enterprises (MSMEs), and create business opportunities. Sustainable coaching and the development of cooperation and assistance services for facilitating production infrastructure, digital technology, and business or product legality (PIRT) are crucial in strengthening group institutional capacity, increasing income, and welfare of oyster mushroom business actors.

**Keywords:** Training, group institutions, digitalization, Mushroom Micro and Small Enterprises

**DIGITAL-BASED INFORMATION TECHNOLOGY FOR HEALTHY TRADITIONAL MARKETS DURING THE COVID-19 PANDEMIC: A CASE STUDY IN RENGAT CITY, INDONESIA.**

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**ABSTRACT**

During the COVID-19 pandemic, evaluating technical specifications or health criteria for markets has become more complex. Social distancing policies, physical distancing, and the implementation of Social Restriction policies have impacted the trading patterns in traditional markets. Local authorities (task forces) have been assigned to supervise traditional markets and remind traders to comply with the COVID-19 protocols. The design of digital information technology for trading transactions in the Rengat city traditional market was designed in such a way as to maximize the avoidance of physical contact between market communities, even though offline physical communication or transactions for traditional markets outside Java Island are still taking place as usual without any COVID-19 pandemic. Therefore, the existence of a digital-based traditional market information technology system is very necessary for traditional market managers in the Indragiri Hulu Regency, not only to realize a healthy traditional market, but also as a pilot project for other traditional markets in the region in facing the adaptation to new habits or COVID-19, as well as a national program to apply digitalization technology to traditional markets in Indonesia.

The goal of implementing this digital technology is to obtain a digital information technology system for a Healthy Traditional Market that is suitable for the COVID-19 pandemic and adaptation to new habits. The availability of a Healthy Traditional Market Digital Information Technology Application will save the traditional market community from the COVID-19 pandemic, which we do not know when it will end. The increase in capacity and competence of the Traditional Market Community in implementing health protocols will also occur automatically. The implementation method of this innovation to obtain the necessary data and information includes stages of interviews and field observations, stages of designing digital-based traditional market information technology, stages of making digital-based technology application modules, and stages of trials (treatments) for the traditional market community. Each stage is analyzed qualitatively and quantitatively, and the units of analysis are the regional leaders (Regent of Indragiri Hulu Regency), the Department of Industry and Trade, market managers, and traders.

The results show that the design of digital-based traditional market information technology leads to a healthy traditional market and a Low Touch Economy during the adaptation to new habits in the Rengat city traditional market in the Indragiri Hulu Regency, using the website link: [www.PASARSEHATRENGAT.COM](http://www.PASARSEHATRENGAT.COM). With this application or website, market managers can manage the

environmental health system, transaction system, product delivery management, and displayed product features. This website serves as an online trading platform for the Rengat city traditional market.

**Keywords:** Covid-19 pandemic, Digital Market Information System, Healthy Market, Digital Platform, Digitalization



## ANALYSIS OF WILLINGNESS TO PAY MORE FOR ORGANIC FOOD: COMPARISON STUDY BETWEEN TURKISH AND ALGERIAN CONSUMERS

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### **ABSTRACT**

This study has an objective to check the effect of the nationality of respondents on the willingness to pay more for the use of organic food. This type of product is presented on natural milk and natural oil generated from an olive.

The method explored in this research is an online survey masterd between January-November 2022, among 81 respondents from 2 countries; most of them (45) are from Turkey, and the rest (36) are Algerian. Then, the results were analysed through SPSS software V26 in order to use the Chi-square test and cross-tabulation.

The results indicate that the dependency between the insisting to consume green food and the nationality of respondents (Turkish/Algerian) is ensured. In the other word, it has been found that 91.66 % of Algerians are replied with yes. However, 64.44 % from Turkiye are too, it means that Algerians respondents are more aware in this issue.

**Keywords:** Consumer behaviour- Green marketing- Organics food- Chi square test- Turkiye-Algeria-SPSS.

**THE IMPORTANCE OF DEVELOPING THE HALAL INDUSTRY THROUGH  
TECHNOLOGICAL ADVANCEMENTS IN THE ERA OF SOCIETY 4.0 TO ENSURE THE  
SAFETY AND SUSTAINABILITY OF HALAL PRODUCTS**

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**ABSTRACT**

This research is motivated by the fact that the halal industry has become a trend that is currently developing. The halal industry has quite high potential to advance a country's economy. However, in practice, the halal industry players are not optimal in utilizing the technological sophistication provided in the industrial revolution 4.0

The purpose of utilizing technological sophistication in the era of society 4.0 for the halal industry includes; to increase production efficiency, ensure product halalness with existing technological sophistication, improve product quality, and increase industrial competitiveness. The target of this writing is not only specifically for consumers and producers, but also for the government. Government regulations are needed to promote, provide incentives and support, in order to increase the global competitiveness of the halal industry.

Analysis of research data using a literature study. The findings in this literature review study conclude that the use of technological sophistication that has been provided in the era of society 4.0 will make it easier for economic actors, especially in the halal industry, both in the process of production, consumption and distribution. Producers can introduce their products to a wide audience that can be reached by utilizing existing technology. Such as marketing their products on e-commerce or promoting their products through social media accounts. The use of technological sophistication to develop the halal industry is certainly the right solution.

**Keywords:** halal industry, development, and industrial revolution 4.0

## **STRATEGY FOR ALLOCATION OF ADEQUATE PLACE TO SUPPORT THE EXISTENCE OF STREET TRADER WITH THE FOOD COURT CONCEPT**

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### **ABSTRACT**

The purpose of this study is to find out how the strategy for allocating adequate space for street vendors to support their existence by using the concept of a food court. The method used in this study is literature review, namely by examining in depth literary sources both from journals and works from research results and ideas that have been produced by researchers and practitioners. Street vendors (PKL) as a component of the informal sector play a role in developing the local economy and empowering communities so they can expand employment opportunities. However, the existence of street vendors is also often considered to cause problems in terms of order and comfort in settlements. To provide a sense of comfort for all parties, the government must be able to have a strategy regarding the proper allocation of street vendors. By way of fostering street vendors, communication between the Government, and building or determining strategic relocation sites, in the sense that they are easily accessible to buyers. One strategy for the allocation of street vendors by following today's trends is the food court concept. A food court can be used as an idea by modifying it according to the capabilities of street vendors, such as providing cheap rent and other conveniences. This is because strategic location placement will bring benefits to both traders and buyers. Which later this will increase the income of traders so that indirectly able to boost the economy.

**Keywords:** umkm, street vendors, allocation

**OPTIMIZING AND IMPLEMENTING PENTAHHELIX AS AN ELEMENT OF SUCCES IN THE DEVELOPMANT OF CREATIVE ECONOMY BASED TOURISM VILLAGES IN KALIBAKUNG TEGAL HERBAL HEALTH TOURISM**

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**ABSTRACT**

Tourism villages have been widely discussed lately because they have a very good impact on economic growth if managed properly. The purpose of this study was to find out how to optimize the role of pentahelix in the success of the creative economy program for herbal health tourism villages in the Kalibakung area, Tegal. This study used a qualitative descriptive method with a library research approach. The findings of this study explain that the active role of pentahelix elements such as the Government, Academics, Communities, Business, and Media is very much needed because with the formation of pentahelix elements the herbal tourism village program can run smoothly. The government as a policy maker and participates in infrastructure development. Academics are researchers and are tasked with educating and outreach to the community through community service programs. The community helps in bridging and conveying aspirations and communication between the community and the government. Business as an element that is no less important is also to drive the wheels of the economy. As well as the role of the media in disseminating information to people all over the world so that later it can attract tourists to visit herbal health-based tourism villages. Among all these elements must work together to become a unified whole, because if one of the elements is not fulfilled optimally it will greatly affect the development of a tourist village so that it will have an impact on hampering economic growth in the area even if it is not managed properly it will result in stalled village development planned tour.

**Keywords:** Penhelix Optimization, Tourism Village, and Development Creative Economy.

والاع تبار الاد تجاج ديث من (ال قاذحة وغير ال قاذحة العلة) المعلن حدي ثال دكامأ

## THE RULINGS OF THE DEFECTIVE HADITH, INJURIOUS AND NON-INJURIOUS DEFECT IN TERMS OF ARGUMENT AND CONSIDERATION

ب اجلاندي ابراهيم اسماعيل هاشم د

HASHIM ISMAIM IBRAHIM BAJALANI

كويتية جامعة في دمساع اسد تاد

الاسلامية والدراسات الدين اصول العام ال تخصص

وعلومه الحديث الدقيق ال تخصص

### الدمس تخلص

عن ي بحث . "والاع تبار الاد تجاج ديث من ال قاذحة وغير ال قاذحة العلة المعلن حدي ثال دكام "ب الموسوم ال بحث هذا على ي توقف وبقوله الحديث صحة ب أن معلوم هو كما، الحديث عال وهو الحديث علوم مواضيع من مهم موضوع ي تطرق والم المعاصرة العلم ال بحوث أغلب ولا كن للعلة، الأجد ناس ديث من ك ثيرة والجل العلة، عن الحديث ان ت فاء نادية من مؤثرة غير أو الحديث صحة على ب المؤثرة ي سمي ما أو ال قاذحة، وغير ال قاذحة العلة إلى :العلة ت قدس ي إلى ال ظاهر أن مع الحديث، صحة في ي قدح خ في سبب العلة لأن. المسألة هذه ي علاج ال بحث ف هذا ل ذا. والاع تبار الاد تجاج طلبه معظم على وخ فانه الحديث، صحة في ت وثر رولا الحديث في ت وجد قد قاذحة غير العلة وب بعض منه، ال سلامة ال علم

أهمية: ال تالية العناصر وفيها مقدمة من ي تكون: الآتي ال نحو على وال ترتب يب ال ت قدس ي ديث من ال بحث ف جاء العلة ت تعريف ف أذكر: الأول الم بحث أما. وم بد ثين ال بحث، وخطة ال سابة والدراسات اخ ت ياره وأسد باب الموضوع ت تعريف علاقة: ال ثاني والمطلب. واصطلاحا لغة العلة ت تعريف: الأول المطلب مطالب، ث لثة وفيه، معرفتها وطرق المطلب: مطلا بان وفيه العلة أنواع أذكر: ال ثاني والمطلب. العلة معرفة طرق: ال ثلاث والمطلب ي ال اصطلاح ال لغوي ال اد تجاج في ي وأثره ال قاذحة غير العلة: ال ثاني والمطلب والاع تبار، ال اد تجاج في ي وأثره ال قاذحة العلة: الأول والاع تبار الاد تجاج ديث من المؤثرة غير ال علة المؤثرة العلة أتر من ال نتائج أهم ذكرت ال نهاية وفي. والاع تبار والمراجع المصادر ب فهرست ال بحث وخ تمت

ال قاذحة ال صحة، ال علة، ال اد تجاج، الحديث، ال كلمات مفاتيح

This research is marked with "The rulings of the defective hadith, injurious and non-injurious defect in terms of argument and consideration." It searches for an important subject of the sciences of hadith, which is the defects of the hadith, as it is known that the validity of the hadith and its acceptance depends on the negation of the hadeeth from a defect, and there are various defects in terms of the races of the defect, but most of the contemporary scientific researches did not address the division of the defect: into the injurious and non-injurious defect, or what is called influencing the validity of the hadith or not influencing in terms of argument and consideration. Therefore, this research addresses this issue. Because the defect is a hidden cause that injures the validity of the hadith, although it appears to be safe from the defect, and some non-injurious defects exist in the hadith and do not affect the validity of the hadith and are hidden from most of the students of science.

The research outlined the division and order as the following: It consists of an introduction and contains the following elements: the importance of the topic, the reasons for its selection, previous studies, the research plan, and two topics. The first topic: the definition of the defect and the ways of knowing it, which contains three requirements; The first requirement: the definition of the defect linguistically and idiomatically. The second requirement: the relationship of linguistic definition to idiomatic. And the third requirement: methods of knowing the defect. The second topic: the types of defect, and it contains two requirements: the first requirement: the injurious defect and its effect on the argument and consideration, and the second requirement: the non-injurious defect and its effect on argument and consideration. In the end, mentioned the most important results of the impacts of the effective defect and the non-effective defect in terms of argument and consideration. The research concluded with an index of resources and references.

**Keyword:**al-hadith. argument and consideration.defective, injurious and non-injurious.

**ASSESSING THE IMPACT OF THE INTERNET AS A LEARNING RESOURCE AMONG STUDENTS AT SOME SELECTED POLYTECHNICS IN NORTHEAST NIGERIA.**

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**ABSTRACT**

The primary goal of this work is to assess the impact of the internet as a learning resource among students of polytechnics in northeast Nigeria. This study, which is attached on the uses and indulgence, adopted a survey among 380 students. The students perceived that the lack of digital willingness among their staff and institution, the absence of digital library for easy accessibility to journals from the scientific database, and ineffective cybercafé and internet facility within their polytechnics locations were the main problem depressing the impact of internet within their institutions. Nonetheless, they continue to try to find ways to use the internet to help their studies through self-organization, flexibility, and inventiveness. The majority of them stated that they use their smartphones/handsets to access the internet through other internet providers' subscriptions. The most popular search engines were discovered to be Google and Google Scholar. The students agreed that using the internet allowed them to conduct research ahead of time, complete multiple assignments, broaden the scope of reading and learning, promote self-learning, encourage and enhance peer learning, and improve students' exam preparation. It was suggested that tertiary institutions in Nigeria, particularly Polytechnics, establish a digital library where students can easily access scientific journals from databases such as Elsevier, Springer, Taylor & Francis, Wiley, and Emerald. This will lessen their reliance on Google and Google Scholar while also allowing them to explore other related scientific papers, improving their educational research and learning.

**Keywords:** Internet Access, Internet Facilities, Digital Library, Polytechnics, Nigerian Students, Research and Learning.

**THE STUDY OF SOCIAL MEDIA ANALYTICS TO ENHANCE THE PERFORMANCE OF THE PLATFORM AND INCREASE THE USER ENGAGEMENT**

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**ABSTRACT:**

Social media is a platform to attract people. Social media is interrelation between people. It helps people to communicate with the world and to gain new knowledge through social media. Facebook, Instagram, WhatsApp, YouTube, twitter etc. are social media platforms to engage people. By using this social media platform, we can promote service very fast. For forecasting the business growth social media platforms are used. To increase brand awareness of product and service social media platforms are used. This article focuses on the role of social media on the consumer behavior. This article studies the passive and active engagement behavior of customer. Also this study is about customer experience regarding the content, dataset, and engagement. This article focuses on measurement of growth of Social media platform in corporate usage.

**Keywords:** Social media, Platform, Customer behaviour.

## **IMPLEMENTATION OF DIGITAL-BASED MARKET INFORMATION TECHNOLOGY IN THE PEOPLE'S MARKET, RENGAT CITY, INDONESIA**

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### **ABSTRACT**

During the COVID-19 pandemic, evaluating technical specifications or health criteria for markets has become more complex. Social distancing policies, physical distancing, and the implementation of Social Restriction policies have impacted the trading patterns in traditional markets. Local authorities (task forces) have been assigned to supervise traditional markets and remind traders to comply with the COVID-19 protocols. The design of digital information technology for trading transactions in the Rengat city traditional market was designed in such a way as to maximize the avoidance of physical contact between market communities, even though offline physical communication or transactions for traditional markets outside Java Island are still taking place as usual without any COVID-19 pandemic. Therefore, the existence of a digital-based traditional market information technology system is very necessary for traditional market managers in the Indragiri Hulu Regency, not only to realize a healthy traditional market, but also as a pilot project for other traditional markets in the region in facing the adaptation to new habits or COVID-19, as well as a national program to apply digitalization technology to traditional markets in Indonesia.

The goal of implementing this digital technology is to obtain a digital information technology system for a Healthy Traditional Market that is suitable for the COVID-19 pandemic and adaptation to new habits. The availability of a Healthy Traditional Market Digital Information Technology Application will save the traditional market community from the COVID-19 pandemic, which we do not know when it will end. The increase in capacity and competence of the Traditional Market Community in implementing health protocols will also occur automatically. The implementation method of this innovation to obtain the necessary data and information includes stages of interviews and field observations, stages of designing digital-based traditional market information technology, stages of making digital-based technology application modules, and stages of trials (treatments) for the traditional market community. Each stage is analyzed qualitatively and quantitatively, and the units of analysis are the regional leaders (Regent of Indragiri Hulu Regency), the Department of Industry and Trade, market managers, and traders.

The results show that the design of digital-based traditional market information technology leads to a healthy traditional market and a Low Touch Economy during the adaptation to new habits in the Rengat city traditional market in the Indragiri Hulu Regency, using the website link: [www.PASARSEHATRENGAT.COM](http://www.PASARSEHATRENGAT.COM). With this application or website, market managers can manage the



environmental health system, transaction system, product delivery management, and displayed product features. This website serves as an online trading platform for the Rengat city traditional market.

**Keywords:** Covid-19 pandemic, Digital Market Information System, Healthy Market, Digital Platform, Digitalization

**A STUDY OF INVESTORS AWARENESS AND PREFERENCES TOWARDS VARIOUS MUTUAL FUNDS SCHEMES IN WESTERN MAHARASHTRA WITH SPECIAL REFERENCE NIPPON INDIA MUTUAL FUND**

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**ABSTRACT**

This study is about Mutual funds and the rising awareness about it among customers. The information offered in this study is based on market research of the saving done by investors and also about their investing habits. This article also talks about the preferences provided by the investors for investing in Mutual Funds. The project also includes data and analyses gathered from a survey of 384 persons. Researcher created a questionnaire and conducted a survey to collect primary data. This project is about "A study of investor awareness and preferences towards different Nippon India Mutual Fund Schemes with special reference to Western Maharashtra." The information gathered has been effectively arranged for presentation. The research findings and conclusions will be useful mutual fund investing prospects.

**Keywords:** Mutual Funds, Investor Awareness, Investing habits.

**A STUDY OF MARKETING MIX WITH SPECIAL REFERENCE SAMPATRAO DESHMUKH  
COOP MILK UNION LIMITED. KADEPUR**

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**ABSTRACT**

The objective of this paper is to estimate the effect of brand image and marketing mix on consumer buying behaviour. The method adopted for research methodology is survey technique. The sampling techniques adopted by the researcher is simple random technique. The respondents for this study were consumers of dairy product in Kadepur taluka for Sampatrao Deshmukh Coop Milk Union Limited. Kadepur. The given questionnaire was filled and administered. The data generated from the respondents was analyzed and interpreted. This study revealed through its findings that brand image has a significant influence on consumer buying decision. This study also says that due to impact of Brand image the consumers are motivated to purchase the products and also make repeat purchase of the product, they gradually become consumer loyal to these products and recommend them to other prospects. The researcher through his study has recommended to the establishments, particularly to those institutions those who are involved in marketing of the dairy products. Researcher asks the marketers to emphasis on distinctive marketing mix strategies, hence this research has demonstrated that brand image is the best marketing strategy to persuade consumer buying decision.

**Keywords:** Dairy products, Brand Image, Marketing Mix.

## **A STUDY ON CASH FLOW STATEMENT WITH REFERENCE TO MANUGRAPH INDIA LTD.**

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### **ABSTRACT**

This research topic is concerned with “A Study of cash flow statement with reference to MANUGRAPH INDIA Ltd.” It is emerged as a printing machinery manufacturing enterprise having business internationally. In this report researcher has done analysis based on the data provided by the company. Data was collected through annual reports of the company; after analysing it was found that the company has now sound position as flow of cash is more than enough to perform the various activities of the business. From the analysis researcher suggested them the solutions to some issues. As all concepts and procedures mentioned in this study report are useful for the company for making the cash flow related business decisions. This will help the organization in increasing its overall profitability to cope up with the problematic situations. The suggestions and the conclusion given after analysis is helpful to take new initiatives regarding the business functioning. In this article researchers have tried to portrays the variations in Cash flow statement and analyse the cash position of MANUGRAPH India ltd.

**Keywords:** Cash flow statement, cash position, Investing and financing Activities

**A STUDY OF INVESTORS AWARENESS & PREFERENCES TOWARDS VARIOUS MUTUAL FUNDS SCHEMES IN WESTERN MAHARASHTRA WITH SPECIAL REFERENCE ADITYA BIRLA SUN LIFE MUTUAL FUND**

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**ABSTRACT**

Investors today need to understand their investment preferences and returns. But in order to do it, investors must be aware of their preferred investment. By examining the knowledge of and references for various investment types, one can ascertain which form of investment investors prefer. A recent innovation in the investment world is Mutual Fund; A mutual fund is a terrific way to invest, grow, and improve future savings alternatives. Nobody is aware of the extent of investors knowledge or preferences, though. This Mutual Fund thus represents a study of investor preferences and knowledge in Western Maharashtra. Hence the statement of Research Problem taken by researcher is: A study of Investors Awareness & Preferences towards various Mutual Funds Schemes in Western Maharashtra with special reference Aditya Birla sun life Mutual fund. The Objective of the Study is to provide a quick overview of the advantages of investing in mutual funds and to talk about the market trends for investing in mutual funds. The researcher in this article has tried to comprehend the idea of a mutual fund and study the awareness of customers regarding the range of different plans. This article provides an overview of the various sorts of Mutual Funds schemes that are available with Aditya Birla sun life investments.

**Keywords:** Mutual Funds, Investment Preferences, Investors.

## A STUDY ON INVESTORS BEHAVIOUR TOWARDS MUTUAL FUNDS WITH REFERENCE TO TATA MUTUAL FUND.

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### ABSTRACT

Nowadays if we think in terms of Investment, then investors have an inclination towards Mutual funds. This is considered as one of the top priority trend in investments option. In the mutual funds, the manager collects the money from the investors and invest in opportunity sectors in which he can gain maximum returns. It is observed through research that majority of investors do not think rationally while they are taking decisions regarding investments. Hence the security market has noteworthy repercussions on these findings from this research. Mutual fund investment proposes money management in all aspects. Hence is very much necessary that the fund manager is alert enough to Understand and recognize what are the opportunities available for proper investment, Design strategies for investment, participate in investing funds, process information, and monitor progress gradually. Also the investors are to be alert to understand diversification of risk, advantage of professional management of money, portfolio management, diversification, reduced transaction cost and liquidity. The data collection has been done by the researcher for 100 individual investors of Mutual Fund from Sangli District. In this article the study is undertaken to understand the investors perception towards the mutual funds. 100 sample respondents having investment in the mutual funds are purposively selected. Questionnaire were designed to collect information. The data collected was analysed and interpreted.

**Key Words:** Professional Management, Investment Option, Mutual Funds.

## **SIMULATION STUDY OF THE EFFECT OF WELD BEAD CLAMPING DISTANCE OF SHEETS ON THE TEMPERATURE GRADIENT OF ELECTRIC ARC WELDING OF A3 STEEL SHEETS**

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### **ABSTRACT**

The majority of welding techniques are usually produced under thermal phenomenon, so the temperature plays a very important role in the welding process, among the most commonly used welding techniques is electric arc welding, this technology of welding is widely used in the industrial field. The simulation of the thermal phenomenon in the weld bead aims to estimate the temperature gradients in the part(s) to fine-tune the welding parameters or avoid overheating problems. In this work, a simulation of the electric arc welding process of ordinary A3 steel sheets was carried out, to study the effect of the clamping distance of these sheets on the temperature gradient of the welding edge but with the same welding parameters in all cases.

**Keywords:** Arc welding, Thermal phenomenon, Temperature gradient, Welding parameter.

## ENERGY MANAGEMENT OF AN ELECTRIC VEHICLE WITH HYBRID STORAGE SYSTEM FUEL CELL/BATTERY

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### ABSTRACT

Global warming is a major problem that threatens the world where vehicles represent the main source of emissions, in order to fight against this problem it is necessary to develop the uses of the automobile. In this context, the electric vehicle is an effective solution because it consumes electricity stored in batteries directly, however, the main problem of these vehicles is their autonomy. The idea of combining two sources of electrical energy fuel cell-battery was chosen to have complementary characteristics in order to combine the advantages of these two technologies. It leads in principle to the concept of hybrid source fuel cell/battery in which the fuel cell is considered as the primary source that provides the majority of the demand of the load, while the battery is used to compensate for the power of the intermittent or transient load. This electrical system performs better in terms of cost, sizing, and range for some electric vehicle propulsion applications than a battery-only system. In this study, we present the hybridization technology of fuel cells and batteries as well as the study of the energy management of this hybridization in traction chain of a hybrid electric vehicle using Matlab software.

**Keywords:** Electric vehicle, energy management, storage, fuel cell, battery.



## THE USE DEMOLITION CONCRETE WASTE TO MANUFACTURE ROLLER-COMPACTED CONCRETE

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### ABSTRACT

This study examines the impact of using recycled concrete waste in roller-compacted concrete (RCC) production by replacing natural aggregates with recycled aggregates. The effect of this substitution was assessed on the properties of both fresh and hardened concrete, such as density, water absorption, compressive strength, and ultrasonic pulse velocity at seven (07) and twenty-eight (28) days. Three different mixtures were used, all of which included a replacement of natural aggregates with recycled aggregates. These were: a control concrete made entirely from natural aggregates, a concrete mixture made with 50% recycled aggregates, and a concrete mixture made with 50% recycled aggregates that had undergone pre-wetting treatment before being incorporated into the concrete. Results show that replacing natural aggregates with recycled aggregates leads to an increase in water absorption while density decreases for both types of concrete compared to reference concrete. Mechanical strength was found to decrease by 9% and 25% respectively for the 50% recycled aggregate concrete without and with pre-wetting compared to the reference concrete at 28 days. The ultrasonic velocity propagation was in good agreement with mechanical strength and density. As the concrete ages, the mechanical strength and density of all types of concrete increase...

**keywords:** Valorization, Recycled aggregate, Roller-compacted concrete, Mechanical strength

## THE EMPIRICAL STUDY OF A TURBOMACHINE IN AN INDUSTRIAL ENVIRONMENT BY EMD ANALYSIS

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### ABSTRACT

In this communication, the EMD method is used for the diagnosis of a turbomachine working in an industrial environment for the detection of faults generated by rolling bearings, plain bearings, and gears. This study shows the interest in using such an analysis as an aid to diagnosis and decision-making before a failure caused by poor vibration monitoring of rotating machinery can occur. A measured signal has hidden periodicities, which means that it is not strictly periodic but some statistical properties of the signal are periodic. This periodicity identifies the spectral correlation by integrating the MID function, which only depends on the alpha frequency, which is an indicator of the presence of modulations. The method was initially applied to a signal measured on a turbomachine bearing operating under real conditions in an industrial environment.

**Keywords:** Cyclostationarity, Intensity modulation distribution, Spectral correlation density, Spectral coherence density, Turbo-machine.

## **STUDY OF THE DURABILITY OF CONCRETE MADE WITH RUBBER TIRE: A REVIEW**

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### **ABSTRACT**

In 2017, the global tire industry produced more than 2,9 billion tires annually. About 21% of these discarded tires have been repurposed for use in civil engineering projects, this review paper was conducted to compare previous researches that studied the durability of concrete with added different rubber ratios for 5%, 7,5% and 10% as aggregate and cement replacements, it was observed that the compressive strength, flexural strength and ultrasonic pulse velocity of the rubberized concrete were less than control mix.

**Keywords:** rubber, concrete, recycling, mechanical properties.

## USE OF ACOUSTIC EMISSION AND DIGITAL IMAGE CORRELATION TO CHARACTERIZE DAMAGE TO TREATED AND UNTREATED LUFFFA FIBER REINFORCED COMPOSITE

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### ABSTRACT

In recent years, the use of plant fibers as reinforcement in composite materials has grown considerably. This gain of interest comes from the combination of several advantages such as low cost, low density, non-toxicity, biodegradable, high specific properties, and the possibility of recycling, but one of the disadvantages of such an exercise is the lack of adhesion between hydrophilic plant fibers and hydrophobic synthetic polymer matrices, this disadvantage can be reduced by a chemical treatment used on the plant fibers. In the current work, an experimental study describes the effect of alkaline treatment of different concentrations of 2% and 5% NaOH on the improvement of mechanical properties. The results obtained showed that the alkaline treatment of the 5% gave improvements on the Young's modulus and Tensile strength, while the 2% treatment showed the best improvements on the mechanical properties of which Young's modulus. Four classes of damage mechanisms have been identified by the method of non-destructive testing acoustic emission (AE), including matrix cracking, fibre pull-out, delamination and fibre breakage. The total energy and cumulative total hits of the 5% treated composite is very low compared to the untreated, which means less damage to the T5% specimen. Another digital image correlation (DIC) technique was applied, the results showed first strain appearing on the untreated (NT) composites during the tensile test compared to the treated composites and also significant strain at final specimen rupture according to (xx) displayed on the surface of the untreated NT composites (0.750%) compared to the treated T2% (0.507%) and T5% (0.197%) composites.

**Keywords:** Luffa fiber, Composite materials, Alkaline treatment, Acoustic emission (AE), Digital image correlation (DIC), Damage.

## SYNTHESIS, CHARACTERIZATION AND ANTIBACTERIAL ACTIVITY OF A TRANSITION METAL COMPLEX

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### ABSTRACT

Antimicrobial resistance is a serious problem that threatens global public health, which has been exacerbated by the irrational use of antibiotics in humans, animals, agriculture and lack of awareness, this makes the search for new antimicrobial agents an important line of research. Inorganic and organometallic complexes offer the opportunity to discover and develop new antimicrobial agents by exploiting the biological properties of different ligands to synthesize high performance antimicrobial agents. A copper complex with two different ligands was synthesized via co-precipitation process under soft chemistry conditions. The complex was characterized by SEM/ EDS and IR. According to 'Δv criterion'  $\Delta v = \nu_{\text{asym}}(\text{CCO}) - \nu_{\text{sym}}(\text{COO})$  which determine the coordination mode of the carboxylate group, in this complex the  $\nu_{\text{asym}}(\text{CCO})=1573\text{cm}^{-1}$  and  $\nu_{\text{sym}}(\text{COO})=1324\text{cm}^{-1}$ , the  $\Delta v=249 (>200)$ , the carboxylate moiety in the acid act as bidentate ligand, in addition, the composition analysis confirmed the coordination of the acid to the copper and indicated that the second ligand did not linked to the central atom. The complex will be evaluate for its antibacterial activity against several bacteria.

**Keywords:** Antibacterial activity, coordination chemistry, IR, SEM.

## CONTRIBUTION TO THE THEORETICAL STUDY OF THE ELASTIC BEHAVIOUR OF AN ORTHOTROPIC COMPOSITE MATERIAL WITH ORGANIC MATRIX

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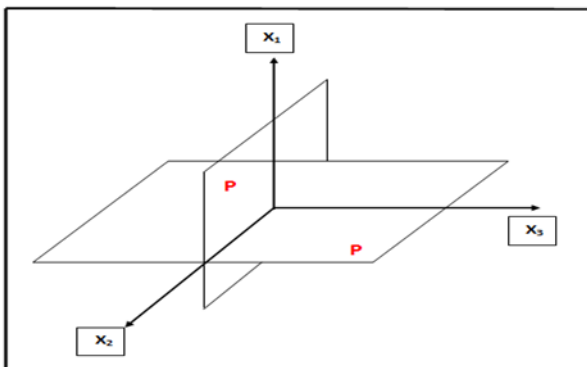
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### ABSTRACT

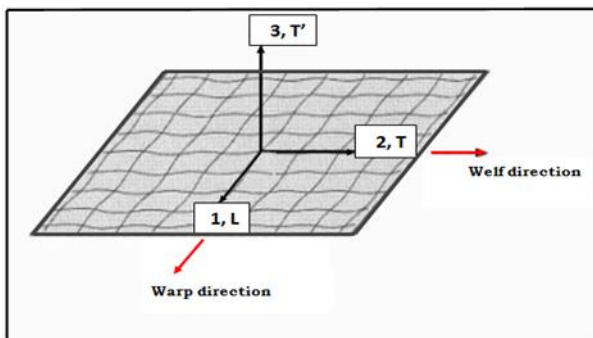
Orthotropic composite material have a high mechanical performance, which can be moulded at will by the designer and have unlimited potential. Composite materials are now being developed in virtually every field and are creating formidable challenges in various high-tech applications[1].The objective of this work is to know the mechanical characteristics of an orthotropic composite material (you define your material), we try to describe its elastic behavior using its stiffness constants and its flexibility constants.

In a first step of this work, we determine the stiffness constants of the orthotropic composite material considered. Based on Hooke's law, we establish its elasticity law in its direct matrix form. In the second step, we determine the flexibility constants of the composite material in question. We always rely on Hooke's law, we establish its elasticity law in its inverse matrix form. In the last step, we assume that our orthotropic composite material is subjected, successively, to mechanical tests; tensile in the directions (warp, weft and transverse) and shear in the plane of the layer and transverse. After establishing the elasticity relationship of Hooke in its direct and inverse matrix form by introducing the engineer's modules we were able to conclude that the elastic behavior of our orthotropic composite material can be described by these nine independent modules. This orthotropic composite material actually works in a linear elastic zone for which one can write:  $\sigma = E \cdot \varepsilon$  [1,2].

**Keywords:** composite material; stiffness and flexibility; relationship of Hooke.



Orthotropic composite material



Laminated composite material

Formatting of Mathematical Components:  $\sigma = c \cdot \varepsilon$  and  $\varepsilon = S \cdot \sigma$

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## **MECHANICAL AND PHYSICAL PROPERTIES OF SELF CONSOLIDATING CONCRETE WITH RECYCLED AGGREGATES**

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### **ABSTRACT**

The lack of natural deposits and the congestion of waste dumps and the considerable need for demand for the construction has led the building industry to turn to recycling of aggregate demolition waste for the manufacture of concrete.

This paper will highlight the valorization and influence of the incorporation of recycled aggregates in self-consolidating concrete "SCC". Physical and mechanical characteristics of SCC were studied.

The objective of this work is to compare the fresh and hardened properties of SCC based on natural aggregates with concretes based on recycled aggregates with substitution rates ranging from 25, 50, 75, up to 100%.

The results obtained are used to conclude that the resistance of recycled gravel is lower than that of natural gravel, and that the porosity and water absorption of recycled gravel is greater than that of natural gravel, This affects the handling and strength of recycled concrete. On the other hand, at a substitution rate of 50% we could practically have results close to those of the concrete with natural gravels.

**Keywords :** environments, upgrading, properties characteristics, recycled aggregates, self-lacing concrete.



**ISOLATION OF APPLE SCAB CAUSING FUNGUS V. INAEQUALIS AND DEVELOPMENT OF DSRNA SYNTHESIZING CONSTRUCTS FOR THE SILENCING OF TARGETED GENES OF THE FUNGUS**

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**ABSTRACT**

Venturia inaequalis is an apple scab causing fungal pathogens, highly contagious and destructive pathogen which rapidly spreads the infection in the surrounding orchards if not managed. The apple scab affects apple production by decreasing the yield by up to 70%. In this study, the major objective was to isolate the Himachal Pradesh strain of V. inaequalis from infected fruit obtained from Rohru, District Shimla, Himachal Pradesh, India and the development of dsRNA constructs for the selected genes of the fungus. Microscopic observation of V. inaequalis showed conidia with acute ovoid shape, and form mat-like septate mycelia. The confirmation of fungus was done using specific internal transcribed spacer (ITS) region of the nuclear ribosomal RNA gene showed amplicon of 586 bp. Further Sanger sequencing of the fragment was done and results were analyzed using BLAST tool of the NCBI against GenBank database, which showed 99.6% sequence identity, with the reference V. inaequalis with query coverage of 98%. For the development of the dsRNA constructs, different genes which get upregulated during infection, were selected. The siRNA targets were identified in the selected genes and targeted regions from the selected genes were further cloned in L4440 vector for the in vitro synthesis of dsRNA.

**Keywords:** Apple Scab, Venturia inaequalis, molecular characterization, dsRNA

## EFFICIENCY OF EXTRA TREES CLASSIFIER FOR GROUNDWATER QUALITY CLASSIFICATION FOR IRRIGATION PURPOSES

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### ABSTRACT

Groundwater is a vital resource for irrigation, and crop yield and human health are greatly influenced by its quality. Although there have been attempts to categorize water quality using machine learning methods, very few of these have been successful. In this investigation, we assess the Extra Trees Classifier's effectiveness in classifying groundwater quality. After feature selection, six of the dataset's 22 physiochemical characteristics were taken into consideration as inputs. According to our findings, the Extra Trees Classifier had an F1 score of 90.20% and an accuracy of 90.62%. These findings imply that the Extra Trees Classifier is a useful tool for classifying groundwater quality for irrigation, especially when few physiochemical parameters are accessible. Future research can concentrate on enhancing the performance of the classifier and enlarging the dataset to include more factors.

**Keywords:** Groundwater; Extra Trees Classifier; feature selection; Machine learning.

## NATURAL RESOURCE TO CURE DIABETES MELLITUS

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### **ABSTRACT**

Diabetes mellitus is one of metabolic disorders that distresses masses of people around the globe. The use of medicinal plants as a complementary therapy for diabetes management has gained attention in recent years. This abstract presents an overview of major herbs with ant diabetic activity. One of the most studied herbs for diabetes management is *Gymnema sylvestre*, which is widely used in traditional medicine. It has been reported to decrease glucose levels by increasing insulin secretion and regeneration of pancreatic beta-cells. Similarly, *Momordica charantia*, commonly known as bitter melon, has been reported to reduce glucose by improving insulin efficiency and increasing glucose uptake by peripheral tissues. Ginseng may have beneficial effects on blood sugar control and insulin sensitivity in people with diabetes. It increase glucose uptake and inhibit gluconeogenesis. There is some evidence to suggest that *Ginkgo biloba* may also have a positive effect on blood sugar levels, which could be beneficial for individuals with diabetes. A few small studies have suggested that *Ginkgo biloba* is also effective in diabetes as it decreases the glucose level of blood. One study found that taking Huangqi supplements for three months significantly improved blood sugar control and lipid metabolism in patients with type 2 diabetes. In conclusion, the use of herbs as a complementary therapy for diabetes management is gaining popularity due to their efficacy and safety. The herbs discussed in this abstract, including *Gymnema sylvestre*, *Momordica charantia*, Fenugreek, Cinnamon, Onion, Garlic, and Ginger, have shown significant ant diabetic activity and have the potential to be developed as effective ant diabetic agents

## EVALUATION OF THE EFFICACY OF TROPONIN AS AN INDICATOR OF HEAVY METAL-INDUCED HEART DISEASE IN WISTAR RATS

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### ABSTRACT

Trivalent chromium is an element present in our daily diet and has an important nutritional role, but CrVI has adverse health effects depending on the exposure, by different routes such as oral, dermal, inhalation or ingestion of compounds containing this metal. In this investigation we will examine the possibility of using troponin as an indicator of the cardiotoxicity caused by this metal in the Wistar rat. We conducted the study on 3-month-old male Wistar rats. The control group received NaCl, the second group was treated with potassium dichromate subcutaneously. After a few days of treatment, blood and heart samples were taken for biochemical and histological analysis. This study shows that chromium causes alterations in the histological structure of the heart followed by a very significant increase in the plasma troponin concentration. The results obtained during the exposure period lead us to conclude that the administration of potassium dichromate caused a disturbance in plasma troponin levels revealed by the appearance of cardiac lesions such as fibrosis, necrosis and therefore troponin detected myocardial damage in WISTAR rats treated with this pollutant.

**Keywords:** chromium, heart, histopathology, troponin, cardiac lesions, bioindicator

## DRINKING WATER TREATMENT USING CACTUS AS A NATURAL COAGULANT

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### ABSTRACT

Water treatment techniques are often costly and require products that can be harmful to health and the environment. In this work, we used the Cactus as a natural coagulant for the reduction of turbidity, as well as the improvement of some water parameters such as pH, organic matter, alkalinity, conductivity and salinity, the choice of this plant because of their availability in Algeria. The Cactus was used as a coagulant after cleaning, drying (Temperature < 50°C), grinding and sieving through a sieve with pores of 0.35 mm to have the powder form. The latter was mixed with distilled water to extract the coagulating agents responsible for coagulation, this extraction was carried out with a variable pH, after 30 minutes of maceration the coagulating agents were purified with the standard filter papers (Porosity < 8 µm). The experimental study was carried out at the laboratory of the National Polytechnic School of Constantine. The jar test was used as an experimental technique, to determine the optimal condition (pH and the coagulant dose). The results obtained were very important. As an example, the turbidity removal efficiency was 83.55; 93.18; 89.63 and 93.8% when using Cactus powder, Cactus extract (pH=4), Cactus extract (pH=7) and Cactus extract (pH=10), respectively. In this study, the different coagulating agents were identified using several techniques and devices such as FTIR, XRD, SEM and Zeta meter.

**Keywords:** Coagulant agent, Extraction, Characterization, Cactus, pH, Drinking water.

## USE OF ALOE VERA LEAVES FOR THE REMOVAL OF TURBIDITY BY BIO-COAGULATION: STUDY OF THE EXPERIMENTAL DESIGN

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### ABSTRACT

The present study is an attempt to investigate the applicability of natural coagulant (Aloe Vera) for wastewater treatment. The Jar Test was used to optimize the performance of coagulation-flocculation process in terms turbidity .This study was carried out in two parts; the first part consists to optimization and modeling of turbidity removal using the response surface method (RSM). Two parameters influencing the turbidity removal were considered, which are the pH and the concentration of coagulant. The value of regression coefficient ( $R^2=0.993$ ), shows that the model is excellent quality. In this case the maximum percentage of turbidity obtained was 99.554% at PH 12 and coagulant dose 2.6 mL/L. In the second part, we have applied jar test optimization results on a pilot of coagulation flocculation decantation. With the pilot, we now work on 300L of raw water. For this experiment, we set an hourly flow rate of  $Q = 150$  L/h. In order for the pilot to work in optimal conditions, we must determine the coagulant feed rate. The physic-chemical characterization of treated water by pilot shows that the Aloe vera gives a good performance of turbidity removal 98.45%. During the realization of jar test and the pilot; the pH, the TSS, and the organic matter were measured.

**Keywords:** Natural coagulant, Turbidity, wastewater, jar test, Pilot, optimization.

## EXPERIMENTAL STUDY OF THE EFFECTS OF POLYETHYLENE GLYCOL ON POLYSULFONE MEMBRANE PROPERTIES

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### ABSTRACT

The term polysulfone applies to a large number of organic materials, mainly because of their structural characteristics. These properties of the chain are likely to favour transport. And because of their physical characteristics, such as good optical and mechanical properties, excellent chemical and thermal stability, extreme pH and low flowage. In this work we have characterized polysulfone based composite membranes (PSF) developed by the phase inversion method, using chloroform as a solvent and water as a coagulant. Polyethylene glycol (PEG-6000) was used as a polymer additive in the solution. Characterization of these membranes was performed using thermogravimetric analysis (ATG), differential scanning calorimetry (DSC), and dynamic mechanical analysis (DMA). The ATG curve shows two mass losses, and the DSC thermograms of the membranes show a plasticizing effect of PEG. The DMA analysis marked the membrane rupture at 150°C. The results found confirm that to optimize the thermal and mechanical properties of membranes, we need to reduce the mass and molecular weight of our PEG additive.

**Keywords:** Polysulfone, PEG-6000, composite membrane, phase inversion.

## EVALUATION OF ANTIOXIDANT AND ANTIDIABETIC ACTIVITIES OF PLANT EXTRACTS BELONGING TO THE ASTERACEAE FAMILY

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### ABSTRACT

**Introduction & Objectives:** The present work concerns the phytochemical and biological studies of the flowers of an Algerian plant belonging to the Asteraceae family.

**Methodology ( Material and methods):**

- Polyphenols were estimated by the Folin-Ciocalteu method.
- Flavonoids were estimated by the aluminum trichloride method (AlCl<sub>3</sub>).
- The antioxidant activity of our extracts was evaluated using DPPH and ABTS test.
- The evaluation of the ant-diabetic activity using -amylase test is carried out by this enzyme according to the iodine / potassium iodine (IKI) method with few modifications.

**Results and Discussion:** Firstly, the flowers of this species were submitted to a phytochemical study, which revealed the presence of several secondary metabolites, such as alkaloids, flavonoids, tannins and others.

Then Soxhlet extraction in three solvents of increasing polarity made it possible to obtain three extracts: CHCl<sub>3</sub>, EtOAc, and n-BuOH .The results of the quantitative analysis reveal that the n-BuOH extract is the richest in total polyphenols and flavonoids, with values of 82.7±1.086 mgGAE/g of extract and 35.25±0.0784 mgQE/g of extract, respectively.

The DPPH and ABTS methods used to assess the antioxidant activity reveal that the n-BuOH extract has the highest antioxidant activity.

In addition, the  $\alpha$ -amylase test shows that all extracts possess dose-dependent antidiabetic activity, Based on the IC<sub>50</sub> values, the EtOAc extract has the best inhibitory activity with a value of 51.58±9.95  $\mu$ g/ml.

**Conclusion :** The studied plant which belongs to Asteraceae family is characterized by a fairly large reservoir of secondary metabolites such as alkaloids and flavonoids which are known by their specific therapeutic and pharmacological properties, the flower of this plant possess large antioxidant ant antidiabetic activity.

**Keywords:** medicinal plants, phytochemical screening, polyphenols, flavonoids, antioxidant activity,  $\alpha$ -amylase.



**STUDIES ON ASPERGILLUS FLAVUS ON TIGER NUT (CYPERUS ESCULENTUS)  
INCUBATED AT DIFFERENT REGIMES OF LIGHT**

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**ABSTRACT**

An experiment was carried out to ascertain the effect of light regimes (continuous day light, continuous darkness and alternative day light and darkness) on the growth of *A. flavus* on tiger nut at temperature of 28oC and 30oC. The experiment was a 2 x 3 factorial laid out in a completely randomized design (CRD) replicated 10 times. *A. flavus* was isolated from naturally infected tiger nuts obtained from different sellers at Delta park, Abuja park and Choba campus, University of Port Harcourt, Rivers State, Nigeria. The isolation and sub-culturing were done using Malt Extract Agar (MEA). A tiger nut-based-medium (15ml/Plate) was centrally inoculated with 6-day-old inoculums of *A. flavus* and incubated appropriately. Assessment of fungal growth was done daily for 10 days and mycelia diameter and mycelia growth rate obtained from the data. Result from the statistical analysis showed that the effect of light regime and temperature on the mycelia diameter of *A. flavus* was highly significant ( $P<0.001$ ) and the interaction between light regime and temperature was also significant ( $P<0.01$ ). Growth rate also showed significant ( $P<0.001$ ) main effect of temperature and light regime and the light regimes x temperature was also significant ( $P=0.03$ ). The highest mycelia growth rate and mycelia diameter occurred in continuous day light, followed by continuous darkness and finally alternative day light and darkness, with the maximum at 30oC. Thus, storage of tiger nut should not be under continuous day light or at temperature  $>28oC$ .

**Keywords:** *Aspergillus flavus*, *Cyperus esculentus*, Malt Extact Agar, Mycelia diameter, growth rate.

## A MINIATURISED SIERPINSKI HEXAGONAL-SHAPED FRACTAL ANTENNA FOR RADARS MONITORING

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### ABSTRACT

In this study, a new tri-wideband fractal antenna for radar monitoring is introduced. A Sierpinski hexagonal radiating element and a partial ground plane loaded with three rectangular stubs and three rectangular slits are features of the created fractal produced antenna. The researched antenna features an enhanced bandwidth and gain.

The intended antenna resonates between 2.19 and 4.43 GHz, 4.8 and 7.76 GHz, and 8.04 and 11.32 GHz. These bands correspond to the C, S, X bands which are often used for weather surveillance radars according to the ITU. Simulations made with two well-known softwares based on numerical methods; FEM and FIT including HFSS and CST respectively.

**Keywords:** fractal antenna, radars, Sierpinski hexagonal fractal, wideband

## NUCLEAR FUSION AT A TURNING POINT

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### ABSTRACT

Nuclear fusion is at a turning point: which are the requirements to free it from any possible relationship with nuclear fission, making it a credible proposal for energy in developed countries in the second half of this century? At the present time, deuterium-tritium (DT) fusion is the most investigated solution to achieve breakeven. Despite the easier working conditions required for a DT mixture, tritium presence complicates the engineering design of the reactor. The large neutron flux poses serious challenges to the vacuum vessel (VV) materials, and considerable shielding is required for the superconducting magnets. The breeding blanket adds complexity to the reactor; a tritium extraction system must be present and the excess tritium must be stored for future use. Finally, the VV materials must be handled as radioactive wastes due to neutron activation. The tritium inventory of future DT reactors is expected to be on the order of kilos, which translates into a considerable radiological hazard. Even though most of the tritium is not readily available as a source term, being trapped in solid materials, the most effective way to ensure safety is to remove the source of the hazard itself. The use of D-3 He fuel not only provides advantages for safety, materials, power production, and waste management, but it may improve resource security and economics, too: doubts arise about the availability of tritium for future reactors.

As a first step to exploring the possibilities of D-3 He plasmas, a deuterium-tritium burning plasma experiment at high field and plasma densities is particularly attractive, since it can be much closer to the required parameters than present-day experiments. Compact high-field experiments were the first to be proposed in order to achieve fusion ignition conditions based on existing technology and the known properties of high-density plasmas. In previous studies, a feasibility study of a high-field D-He3 experiment of larger dimensions and higher fusion power than Ignitor, but based on Ignitor technologies, was brought to the proposed Candor fusion experiment. Unlike Ignitor, Candor would operate with values of poloidal beta around unity and the central part of the plasma column in the second stability region. The toroidal field coils are divided into two sets of coils, and the central solenoid (air core transformer) is placed between them in the inboard part. In this paper, a bottom-up approach is followed: we start from the requirements, in terms of safety, for a fusion reactor to be closer to a charged particle accelerator than to a nuclear reactor. From those statements, a design for a next-step experimental device is proposed, based on the new technologies. This tokamak must be capable of reaching D-3 He ignition on the basis of existing technologies and knowledge of plasma, without any optimistic extrapolation.

**Keywords:** Advanced nuclear fusion, Deuterium-Helium-3, Tokamaks.

## STUDY AND ANALYSIS OF HARMONICS PROPAGATION IN ELECTRICAL GRID CONNECTED PHOTOVOLTAIC SYSTEM

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### ABSTRACT

Renewable energy sources specially the solar energy is currently connected to an electrical system through the use of power electronic devices. The use of these devices generates harmonic currents and degrades the power quality. This article presents the study of the integration of photovoltaic system into an electrical grid network (low voltage) with and without the presence of a non-linear load (three phase rectifier PD3). In this work, we use the MPPT controller for the Boost converter and the PWM control for the three-phase inverter that provides the connection. The simulation results obtained without the non-linear load show that the waveforms of the currents propagated in the PV system or in the electrical grid are very close to the sinusoid, and the values of the total harmonic distortion (THD) rates are in the standard used. On the other hand, the presence of the non-linear charge degrades the waveforms of the currents and gives us THD values higher than the used norm.

**Keywords:** Electrical Grid, Boost converter, Harmonic, Photovoltaic System, Power Quality, MPPT, THD.

## DESIGN OF A MID-INFRARED CHALCOGENIDE SLOT WAVEGUIDES SENSORS

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### ABSTRACT

In this work, an analytical design of an evanescent optical field sensor working in the Mid-IR spectral domain is provided for detection of CO<sub>2</sub>, and CH<sub>4</sub>. The objective is to optimize the detection ratio with three different integrated optical devices based on ChG and Porous Germanium (PGe) materials with the same refractive indices as the ChG layers as a direct comparison for the large transparency windows in the Mid-IR. ChG and PGe ridge waveguides and ChG slot waveguides are explored in order to optimize sensor performance notably the limits of detection (LOD). The waveguide dimensions are therefore optimized to enhance the interaction between guided light and gas power factor while maintaining single-mode propagation in the Mid-IR. The LOD for each structure is calculated and compared to previously reported results.

**Keywords:** Integrated optical sensors; Power factor; Ridge and slot waveguides; Chalcogenide materials.

## MODELING OF DIELECTRIC ABLATION INDUCED BY ULTRASHORT LASER PULSES

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### ABSTRACT

A new theoretical model is developed to study the process of ultra-short pulse laser induced damage in fused silica of different pulse durations ( $<10$  ps). A computer simulation investigation based on the coupled rate equation is applied to describe the transient behaviors of electron densities and to predict the damage threshold fluences for various laser pulse widths ranging from 05 fs to 10 ps, including the effects of electron avalanche and multiphoton ionization (MPI) on the generation of electrons. We investigate theoretically in our model the role of recombination mechanisms; two processes of recombination are included: a three body recombination and self-trapped excitons. The relative importance of each recombination process is examined. Our results are in reasonable quantitative agreement with the examined experimental measurements. In addition, we studied the damage threshold fluence dependence on the initial density.

**Keywords:** ultra-short pulse laser, damage threshold, self-trapped excitons, multiphoton ionization, electron avalanche, Dielectric.

## ELABORATION ET CARACTÉRISATION DES MATÉRIAUX MESOPOREUX DE TYPE AG/SBA15

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### ABSTRACT

Volatile organic compounds are recognized as major contributors to air pollution, either directly, through their toxic or malodorous nature, or indirectly, as precursors to ozone. Many

VOCs themselves are hazardous to health and can cause cancer or other serious illnesses, even at low concentrations. Industrial processes and transport activities are mainly responsible for VOC emissions (1)

Catalytic oxidation of VOCs is a chemical process

Which hydrocarbons are combined with hydrogen at specific temperatures to produce alkene. Silver was until recently considered one of the least catalytically useful metals due to its chemical inertness.

The mesoporous materials containing silver support on SBA15 were synthesized by the method of post-synthesis and direct synthesis

We tested our synthesized materials as catalysts in esterification reactions of fatty acids which is a natural molecule.

Biodiesel is one of the examples of biofuels intended to combine or replace conventional fuels and reduce the pollution produced by those of petroleum origin.

**Key words** : Ag/SBA15 ; COV ; matériaux mésoporeux

Référence :

[1] : P. Le Cloirec, «Les Composés Organiques Volatils COV dans l'Environnement», lavoisier Tec&Doc, Paris, 1998.

## A NOVEL APPROACH TO CLEANING PHOTOVOLTAIC PANELS UTILIZING AN ELECTRIC WIND

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### ABSTRACT

A new method of cleaning solar panels has been introduced worldwide. The process uses the production of ionic wind through a system composed of a high voltage wire electrode and a rectangular electrode connected to ground. The mechanism is driven by an electric vehicle, moving on the photovoltaic panel, which expels the dust thanks to the ionic wind. The wind leaves the panel through a small opening at the bottom of the walls of the device. To assess the effectiveness of the technique, the wind velocity and the current generated were measured against the high voltage applied. The results demonstrate that an ion wind velocity of approximately 1.9 m/s can be achieved with a cleaning efficiency of up to 95%.

**Keywords:** Corona Discharge, Ionic Wind, Photovoltaic.



## AN ANALYSIS OF THE HEAT EXCHANGE PERFORMANCE AND SECOND LAW VIEWPOINT FOR MHD FORCED CONVECTION IN A U-BEND HEAT EXCHANGER

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### ABSTRACT

A finite-volume solver was used in this study to simulate MHD forced convection in a U-shaped heat exchanger. The simulation was validated with experimental data to ensure accuracy. The effectiveness of the system was evaluated from a Second Law perspective. The simulation results indicated that the Dean number, Reynolds number, Hartman number, and radii of curvature significantly influenced heat exchange performance. Dean's number was found to have the greatest impact on heat transfer, while Reynolds number had the greatest impact on fluid flow. The Hartman number negatively affected heat transfer due to fluid motion suppression from the magnetic field. Bend radii also influenced heat transfer performance, with smaller bend radii resulting in higher heat transfer rates. Additionally, the study evaluated the system's effectiveness from a Second Law perspective. It was found that the irreversibility of the system decreased with increasing Hartman number, suggesting that magnetic fields can improve system efficiency. However, increasing the Dean's number resulted in increased irreversibility due to the pressure drop caused by fluid flow.

**Keywords:** MHD, Forced convection, U-bend heat exchanger, Second law viewpoint, Finite volume method.

## THE FLOW RATE AND THE TURBINE INLET TEMPERATURE EFFECT ON SUPERCRITICAL ORGANIC RANKINE CYCLE PERFORMANCE

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### ABSTRACT

Organic Rankine cycle systems recover heat from low temperature heat sources. The optimal thermodynamic parameters are those which allow high thermal efficiency and high heat transfer from the heat source to the thermodynamic cycle. This study interests in the effect of the flow rate and the turbine inlet temperature (TIT) of the working fluid (ethane) on the organic Rankine cycle performance. A preliminary design of the supercritical organic Rankine cycle is proposed. An evaluation of the turbine inlet temperature and the working fluid flow rate is conducted to assess their effect on overall cycle performance. The results show that the mass flow rate has a negligible effect, whereas the inlet turbine temperature has a significant effect on the cycle performance. The increase of the temperature improves the overall system performance from 20.61% (for TIT = 60 °C) to 28.05% (for TIT = 120 °C). Thus, the increase with 60 °C enables an improvement rate of 36%.

**Keywords:** Flow Rate, Organic Rankine Cycle, Performance, Temperature.

## SIMULATIONS OF MICROFLUIDIC FLOW FOCUSING-JUNCTION FOAM GENERATION USING THE TWO-PHASE LEVEL SET METHOD

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### ABSTRACT

Foam is a dispersion system consisting of two phases, a continuous liquid phase, and a dispersed gas phase. Foam is a concentrated bubble jointed by a thin liquid film called lamellae, these bubbles are stabilized by surfactants, polymers, or some particles such as silica. Foams are used in a variety of industrial processes, including food and textile manufacturing, cosmetics and pharmaceuticals, oil recovery, and wastewater treatment. Foams can be generated by several methods, mainly the aeration methods, plugging jet, beating or stirring, mixing, and the simultaneous injection of gas and surfactant solution. Bubbles can also be produced by microfluidic devices, which have attracted attention in recent years due to the excellent control they provide over monodispersity and bubble size. The microfluidic device has numerous applications, including biotech and medical technology, material science, chemicals, and many more. The generation of bubbles in a flow-focusing microfluidic junction was simulated using the level-set method with two-phase laminar flow, which is suitable for tracing the interfaces between two fluids. The effect of several parameters on bubble formation has been tested, such as flow rate, contact angle, and radius of the orifice. Simulation results revealed that the contact angle influenced the direction of lamella, or, in other words, the dynamic structure of the bubble. In addition, the change in fluids flowrate will affect the bubble's size and number. Moreover, it is critical to consider gas inlet pressure, fluid velocity, and surface tension. In the interest of obtaining a durable and stable foam over time, a thorough understanding of the microbubble production mechanism will provide theoretical guidance for bubble applications that will fulfill the needs of industrial production.

**Keywords:** Contact angle, Multiphase Flow, Foam, Level set method, Microfluidic, Flowing focusing-junction.

## NEW AUTOMATIC SELF-WATERING SYSTEM FOR AGRICULTURAL LAND

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### ABSTRACT

This paper presents a new automatic self-watering system for agricultural land that provides autonomous irrigation water management. The system uses sensors to measure soil moisture and actuators to distribute water in real time. The system also features an alternator that uses water pressure to generate electrical power, significantly improving the overall energy efficiency of the system.

The new automatic self-watering system has been field tested and results have shown that it is more efficient than traditional irrigation methods in terms of water and electricity consumption and crop yield. The irrigation efficiency is due to the system's ability to distribute water in real time according to the needs of the crop, which optimizes the use of water and electricity and allows for healthy and regular crop growth.

The automatic and autonomous watering system is easy to install and use, with sensors and actuators connected to a central computer that allows precise irrigation management. The use of the alternator to generate electrical power reduces the system's dependence on external power sources, making it more environmentally friendly and economical in the long run

In summary, the automatic self-watering system for agricultural land is an innovative solution for a more sustainable and efficient use of water and electricity in agriculture. This system uses sensors and actuators to distribute water in real time according to the needs of the crop, which significantly improves irrigation efficiency. Using the alternator to generate electrical power reduces the system's dependence on external power sources, making it more environmentally friendly and economical in the long run. Ultimately, the new automatic self-watering system is a sustainable, efficient and economical solution for farmland irrigation.

**Keywords:** automatic irrigation, energy efficiency, self-watering, irrigation.

**EFFECT OF SALT STRESS ON THE GERMINATION CAPACITY OF DURUM WHEAT  
(*Triticum durum* Desf.)**

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**ABSTRACT**

his work consists in studying the physiological, biochemical and morphological behavior of durum wheat (*Triticum Durum* Desf.) subjected to the combined action of salt stress by the application of two concentrations of 150meq and 250meq prepared on the basis of sodium chloride (NaCl), and *Lavandula stoechas* L. hydrolate, aqueous extract of *Pistacia lentiscus* L.

The results showed that salinity significantly decreases root length, precocity and final germination rate. Moreover, the increase in salinity level results in an increase in the final accumulation of soluble sugars. The physiological and biochemical role of sugars has been the objective of many scientific researches where they proved their importance as much as osmoticums. According to our study, the addition of *Lavandula stoechas* L. hydrolate and the aqueous extract of *Pistacia lentiscus* L. important.

**Keywords:** durum wheat; salinity; aqueous extract; germination.

## EFFECT OF SALINITY ON SOILLESS EGGPLANT (*Solanum melongena* L.)

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### ABSTRACT

This study concerned the evaluation of the effectiveness of the aqueous extract of the leaves of *Pistacia lentiscus* L. to improve the physiological, biochemical and morphological response of eggplant at the adult stage subjected to salt stress by applying two concentrations of NaCl, 150 and 250meq/l.

The results showed that salinity significantly decreased the relative leaf water content, root volume. On the other hand, the soluble sugars content of the stressed eggplant leaves significantly increased. However, the addition of the aqueous extract of Pistachio leaves in the growing medium caused an increase in the relative water content of the plants and an improvement in the accumulation of soluble sugars in the leaves. It also contributed significantly to the reduction of the adverse effects of salinity on root volume.

**Keywords:** Eggplant; salinity; aqueous extract; soluble sugar.

## ELABORATION AND CHARACTERIZATION OF A BIOMATERIAL MODIFIED FROM SNAIL SHELL TO ELIMINATE METHYL VIOLET 2B

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### **ABSTRACT**

The discharges of many industries are loaded with dyes that pose an aesthetic problem but also have dangerous toxicological impacts on the environment. In the present work, we are interested in studying the adsorption of methyl violet 2B on the snail shell. This biomaterial, known for its abundance, was used in a thermally-treated state. The experimental studies were followed taking into account the influence of certain operating parameters such as the contact time, the stirring speed, the pH of the solution, the temperature, the ionic strength, and the initial concentration of the solution of the MV2B. We have obtained very encouraging removal efficiencies for this dye and an equilibrium that is quickly established after a time of 30 minutes for a concentration of the MV2B solution of 10 ppm.

**Keywords:** methyl violet 2B, Adsorption, Snail Shell.

## **BEHAVIOUR OF MORTAR BASED ON BLAST FURNACE SLAG TO CHEMICAL ATTACKS**

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### **ABSTRACT**

Concrete is a sustainable material that offers a notable resistance to attacks when it is correctly dosed and properly executed. However, its constituents, whether is cement, sand or aggregates, can be subject to attacks in the more or less short term.

External Chemical attacks are mainly due to acids, bases and saline solutions which dissolve the lime in the cement and form new compounds. leading to erosion, swelling and spalling of concrete structures, which can jeopardize their stability.

The objective of this study is to make a comparative analysis of the behavior of some slag-based binders activated by some products, under the attack of sodium sulphate solution and sea water.

This analysis must lead to prescriptions concerning slag cement and slag activated by products, allowing to obtain sustainable materials.

**Key words** : Concrete, blast furnace slag, Chemical Products, Mechanical Resistance.



**EVALUATION OF THE RELATIONSHIP BETWEEN CERTAIN POMOLOGICAL CHARACTERISTICS OF FOUR VARIETIES OF OLIVE TREE OLEA EUROPEA IMPLANTED IN ARID ZONES (BISKRA ,ALGERIA) AND THEIR INDUSTRIAL YIELD OF THE METHOD OF COLD EXTRACTION OF OLIVE OIL.**

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**ABSTRACT**

In Algeria ;Saharan olive growing remains a key word that brings together two main meanings; the search for quality and quantity production in all branches and useful systems in these arid areas and the sustainability of its orchards

In the last decades this branch has known a significant development because at the time everyone thought that this branch had a place only in the north of Algeria but after the program of the reforestation of the state, the farmers used the same varieties olive trees grown in the north.

The purpose of our study we sought the relationship between the industrial yield of the method of cold extraction of olive oil and some pomological characteristics of four varieties grown in the station of scientific trials of the institute of the 'ITDAS in the area of Biskra in the end to develop the varieties which give a good adaptation to the conditions of Saharan climate.

**Keywords:** Saharan olive growing, arid areas,pomological characteristic ,olive oil,varieties ,adaptation.

**THE EFFECT OF THE METHOD OF FERTILIZATION WITH HUMIC ACIDS IN LIQUIDS IN THE YIELD OF THE CULTIVATION OF MELON UNDER GREENHOUSE IN THE ARID ZONES CASE OF BISKRA**

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**ABSTRACT**

The intrinsic fragility of crop ecosystems is accentuated by inappropriate cropping techniques, based on a cropping system without organic or mineral restitution. This quickly leads to a decline in soil fertility. Simple and easily accessible technologies for producers should be developed to restore soil fertility to ensure the sustainability of their use. The agronomic recovery of household waste by composting is the most promising sector. Compost is a good source of nutrients that improves the physicochemical properties of the soil and increases yield.

Our study is made to compare between two techniques of traditional and modern fertilization, in order to determine the response of melon plants to liquid humic acids used during the year 2021 in Sidi Okba in the south-east of Biskra.

A production in very high quantity has been observed, which can group several characters such as: The total yield of the traditional mode is 6.98 qtx while in the use of humic acids in liquid is 19.45 qtx. The average production per plant is 2.3 kg in traditional mode and 4.1 kg in reasoned mode. The average weight of fruit is 1.2 kg in the traditional method and 1.97 kg in the reasoned method.

**Keywords:** thechnique, fertilization ; melon ; production , humic acids en liquid.

## EVALUATION OF AGRONOMICAL AND PHYSIO-BIOCHEMICAL TRAITS IN INDIAN POTATO VARIETIES UNDER DIFFERENT NITROGEN REGIMES UNDER AEROPONICS.

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### ABSTRACT

Nitrogen (N) is an essential nutrient for plant growth and tuber yield in potato. Its excess application is harmful for environment, and therefore dissecting traits involved in improving nitrogen use efficiency (NUE) and yield is essential to address them. This study was conducted to analyze variation in 56 Indian potato varieties at high and low N concentration ((5 mM and 0.2 mM, respectively) under aeroponics for two years based on 17 different traits for root system architecture (length, surface area, diameter and volume), plant height, leaf area, root and shoot dry weight, tuber traits (number, yield and dry matter), and NUE parameters viz., NUE, agronomic NUE (AgNUE), nitrogen uptake efficiency (NUpE), nitrogen utilization efficiency (NUtE), harvest index (HI) and N harvest index (NHI). Significant differences ( $p < 0.05$ ) were observed in the varieties for most traits under the investigation. On the basis of the above data of tuberization behavior, it can be concluded that the best-performing varieties under both treatments were K. Badshah, K. Chipsona-1, K. Jawahar and K. Red. K. Alankar, K. Fryom, K. Kundan and K. Lalima performed best under high N treatment. K. Ashoka, K. Pushkar and K. Surya performed best under low N treatment. On the other hand, top 10 promising varieties under aeroponics for above traits were Kufri Badshah, Kufri Frysona, Kufri Chipsona-3, Kufri Pushkar, Kufri Lalit, Kufri Ashoka, Kufri Sutlej, Kufri Jyoti, Kufri Mohan and Kufri Khyati. Furthermore, RNA-sequence-based transcriptome analysis can also be used to find genes/regulatory elements related to N shortage (low N) against sufficient N (high N, control) in Indian potato varieties cultivated in aeroponic culture under controlled conditions, which can be exploited in breeding for increasing resource capture to improve NUE in potato.

**Keywords:** Aeroponics, nitrogen use efficiency, potato, yield, plant.

**INFLUENCE OF THE USE OF TREATED WASTEWATER ON THE PHYSICOCHEMICAL AND BIOCHEMICAL QUALITIES OF CITRUS FRUITS CITRUS FRUITS IN THE WILAYA OF MOSTAGANEM (STEP OF BOUGUIRAT)**

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**ABSTRACT**

Climate change, water scarcity, imbalance of rainfall and high demand for water for irrigation have been the cause of the use of treated wastewater, this work was carried out in order to study the effects of irrigation by treated wastewater on the physicochemical and nutritional quality of oranges "Thomson" *Citrus sinensis* L., to deduce the performance of this plant and to study whether the quality of these waters and its compliance with local and international standards of irrigation.

The results showed that the pH is 7.17 for the treated water against 6.19 for the WHO standards) the irrigation standards set by the WHO and the national newspaper show that all values are higher. Cadmium level is 0.07 mg/l against 0.05 mg/l for the official journal standards.

The juices of oranges treated by treated wastewater shows higher contents of polyphenols compared to oranges of well water (275.64 mg EAG/100ml vs 81.2 mg EAG/100ml) respectively.and a vitamin C content of orange juice is 53.23mg /ml and 25.15mg /ml orange juice irrigated by treated wastewater.

**Keywords** Treated wastewater, physico-chemical parameters, microbiological, irrigation, Agriculture, Bouguirat WWTP.

## BIODIVERSITY OF CEREAL WEEDS IN THE NORTHERN ZONE OF THE SETIF REGION

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### ABSTRACT

The study of weeds in cereals aims to explain the effects of plant richness on the technical management of cereals. Through this study, the weed flora turns out to be very diversified in the northern region of Setif. The floristic survey covers the northern area of the region of Setif during the agricultural season 2021/2022, The survey was conducted in 18 points on plots under fallow conditions. The surveys are geographically distributed throughout the study area in order to take into account the variability of agro-ecological factors. The weed flora includes 62 species of weeds. Their classification highlights a dominance of dicotyledons with 57 species (91.93%), monocotyledons include 5 species (8.071%). The recorded species are divided into 62 genera and 19 botanical families. The biological type shows that annuals dominate and form 67.74% (42 species), perennials 14.51% (9 species) and biennials 17.74% (11 species).

**Keywords:** Weeds, biological type, biodiversity, cereal crops, North of Setif.

**EFFECT OF SINTERING ATMOSPHERE ON CRYSTALLIZATIONS, POROSITY AND THERMAL EXPANSION COEFFICIENT OF CORDIERITE CERAMIC**

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**ABSTRACT**

High-porosity cordierite ceramics were sintered in two different atmospheres, that is, in air (oxidizing) or in double-enclosed crucibles (mildly reducing). Paste slurries of cordierite compositions mixed with organic binders and pore formers were extruded into honeycomb-type substrates to produce diesel particulate filters (DPFs). The present study was conducted to explore the effects of sintering atmosphere on pore size, crystallization, amorphous phase, and thermal expansion coefficient (CTE) of sintered DPF honeycombs. Crystal phases were quantitatively analyzed using the Rietveld refinement method using powder X-ray diffraction (XRD) data. Amorphous phases were quantified using the Rietveld-internal standard method, and their presence was qualitatively confirmed by high-resolution transmission electron microscopy (HRTEM) and selected area electron diffraction (SAED) analysis. The most notable features observed were a dramatic decrease in the pore-size distribution and an enhanced rate of cordierite/indialite phase crystallization when sintering was performed in a double-enclosed crucible. A relatively high concentration of carbon monoxide (CO) in the double-enclosed crucible reduced the liquid-phase viscosity. This low-viscosity liquid phase spread relatively easily on the surfaces of crystal phases and enhanced the crystallization rate owing to a relatively large liquid–solid contact area in the mildly reducing atmosphere. The higher CTEs of DPFs produced in air compared with those produced in enclosed crucibles are discussed in relation to the amounts of amorphous and crystal impurity phases and crystal texture.

**Keywords:** Sintering X-ray methods, Thermal expansion, Cordierite, Amorphous phase, Textur

**INVESTIGATION OF THE STRUCTURAL, ELECTRONIC AND MAGNETIC PROPERTIES OF THE COMPOUND SMX (X: P, SB) RARE-EARTH BY THE FP-LAPW METHOD.**

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**ABSTRACT**

This work was designed to study the structural, electronic and magnetic properties of rare-earth SmX (X: P, Sb) phase cubic using the PBE-GGA approximation presented by FP-LAPW. Our results show that our materials SmP and SmSb are stable in ferromagnetic phase with lattice parameter, bulk modulus and its derivative are in agreement with the theoretical works, For electronic band structure the SmP and SmSb indicate the presence of a direct gap in spin down and a metal for spin up so the compounds are half metal and the magnetic properties show that the Sm is responsible for ferromagnetism at the fermi level.

**Keywords:** Rare-earth, electronic applications, energy renewable, FP-LAPW.

## MINIATURIZED SIW TRAVELING WAVE ANTENNA ARRAY DESIGN FOR SUB-TERAHERTZ APPLICATIONS

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### ABSTRACT

In this contribution, we proposed a substrate integrated waveguide (SIW) based miniaturized single-element travelling wave antenna, which is then used to build a 1x2-antenna array for sub-terahertz applications. The antipodal radiating arms have the constant step tapered slot profile. In addition, an optimized 1x2 SIW power divider is designed, which has the Y junction for feeding the network and dividing the power by the same amount, it operates in the band ranging from 0.130 THz to 0.200 THz. For the design of the proposed structures, we used the SIW equations and conditions. 50 Ohm characterizes the input impedance. The optimized parameters value of the proposed antenna array are determined by using the parametric study technic. The analysis of the proposed antenna array includes the radiation pattern, gain, electric field distribution and return loss. The substrate used is Arlon Cu Clad 2017 with a thickness of 0.508 mm, and a relative permittivity characteristic of 2.2 and a loss tangent ( $\text{tg}\delta$ ) of 0.0009. For smooth structure transition, we used microstrip to SIW transition. The simulation results obtained by CST simulator based on finite integral method indicate that the proposed antenna array operates in the band ranging from 0.130 THz to 0.200 THz with an return loss varies between -10 dB and -40 dB, and a gain varies between 6 dBi and 9.5 dBi. The proposed antenna array radiates in the longitudinal direction, and the maximum directivity is around the 9 dB with an aperture angle of 3 dB of 18 °. The electric distribution in the radiating arms is analyzed for demonstrate that the antenna array radiates perfectly with equiamplitude excitation. The proposed antenna array has a size of 10.35 mm  $\times$  4.4 mm. With its wideband, high gain and compact size features, the proposed SIW antenna array is an excellent component for biomedical and radars imaging applications.

**Keywords:** Traveling Wave Antenna Array, Substrate Integrated Waveguide, Power Divider.



## NUMERICAL SIMULATION OF p-GaN/ i-InGaN/n-GaN PHOTO-DIODES

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### ABSTRACT

III-N semiconductor materials have recently attracted much interest in optoelectronic devices include telecommunication laser, optical fiber, LEDs and photodiodes. Various types of GaN-based photodetectors have been realized, including PIN and Schottky barrier photodetectors, solar-blind ultraviolet photodetector focal plane arrays, and UV avalanche photodiodes.

This work based on the two-dimensional numerical simulation of the p-GaN/ i-InGaN/n-GaN PIN photodiodes based heterojunction to obtain the electrical and optical characteristics namely the current-voltage (I-V) characteristic. We have simulated the effect of the intrinsic region thickness, the doping of the intrinsic region, the effect of temperature and the effects of polarization charge density on the dark current and the spectral responsivity.

**Keywords:** Gallium nitride, Heterojunction, PIN, Photodiode, Dark current.

## SYNTHESIS AND DESIGN OF [ACETANILIDECADMIUM-2 MALIC ACID] COMPLEX FOR WATER DEPOLUTION

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### ABSTRACT

In order to purge contaminants from water, new hybrid [cadmium-Ammonium oxalat] complex was created using the co-precipitation technique. Structure resolution was performed using analyzers XRD, FTIR, MEB/EDX and High Score Plus, Mercury software were used to characterize the final product and as certain its type. A white powder was produced. As part of the use of inexpensive sources, the decomposition of methyl orange will be carried out utilizing a phenton detector and natural radiation (the sun).

**Keywords:** hybrid complexes, methyl orange, phenton detector, water pollution.

**BOUND STATE SOLUTIONS OF THE SCHRÖDINGER EQUATION WITH KRATZER PLUS GENERALIZED MORSE POTENTIAL FOR SELECTED DIATOMIC MOLECULES.**

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**ABSTRACT**

Within the framework of the supersymmetric quantum mechanics, the energy spectrum of the Kratzer plus generalized Morse Potential model was obtained. The partition function for this energy has been calculated in a closed and compact form and was used to obtain an expression for the ro-vibrational mean free energy  $F(T)$ , mean free energy  $U(T)$ , entropy  $S(T)$ , and the specific heat capacity  $C(T)$ . The thermodynamic functions obtained were then applied to study the behaviour of the zinc-blende BN crystal structure.

**Keywords:** Kratzer plus generalized Morse Potential, free energy, energy spectrum.

## MONITORING OF THE OPERATING PERFORMANCE OF A WASTEWATER TREATMENT STATION

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### ABSTRACT

The commune of Arris is located in the south of Batna; it is at an altitude of 1100 m in the high valley of Oued El Abiod and occupies an area of 152 km<sup>2</sup>. The number of population being 32597 in habitants according to the statistics of 2011.

The objective of our work was to evaluate the treatment of urban wastewater by the process activated sludge in the ONA station in the city of Arris - wilaya of Batna. On the other hand, to follow the operation and efficiency of the processing steps, the variation of several parameters of pollution over time was examined. This study showed an average abatement of 98.09% for BOD<sub>5</sub>, 94.75% for COD. For nitrates and orthophosphates, these dangerous substances there is a good treatment. pH is one of the most important parameters always been conform to national standards. Finally, the temperature which is also suitable for degrees set by the WHO and the national newspaper (30°C). The satisfactory percentages of the elimination of pollutants is due to the quality of wastewater which has an urban origin with good biodegradability (K= 2.23) and the absence of undesirable elements that can interfere with the biological treatment. As well as satisfaction of the conditions favorable to the biological reactions of the decomposition of pollutants such as the pH which is close to neutrality and the average temperature which is almost equal to the design temperature of the biological pond.

The quality of the treated water (for the majority of parameters) meets the wastewater standards required by required by (ONA) in 2013. It can be concluded that this system can be used as an ecological and economical solution for wastewater treatment in the Arris region.

**Keywords:** Wastewater treatment, operation, reuse, activated sludge, Arris.

**ON THE STRUCTURAL AND MAGNETOTRANSPORT PROPERTIES OF THE DOUBLE-LAYERED MANGANITE LA1.4SR1.6MN1.8ZN0.2O7**

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**ABSTRACT**

In the present work, we have investigated the structural and electrical properties in the high temperature range of a double-layered manganite with the stoichiometric formula  $\text{La}_{1.4}\text{Sr}_{1.6}\text{Mn}_{1.8}\text{Zn}_{0.2}\text{O}_7$ . It is synthesized by the solid state reaction route. The analysis of X-ray data through refinement using Jana2006 software has confirmed that the sample crystallizes in a tetragonal structure with  $I4/mmm$  space group symmetry. The electrical properties are investigated by measuring the electrical resistivity using the four probe technique in the range of [180-300K]. The resistivity curves were fitted by two conduction models: adiabatic small polaron hopping (ASPH) above  $\theta_D/2$  and 3D-Mott's variable range hopping (VRH) below it, where  $\theta_D/2$  is the Debye temperature. which we have estimated and found to be 245.09 K. In the frame of the VRH, we have estimated the density of state near Fermi level  $N(E_F)$  and found to be  $6.07 \cdot 10^{26} \text{ eV}^{-1}\text{cm}^{-3}$ . The mean hopping distance  $R_h(T)$  ranges between 1.0956 and 1.0419nm, while the mean hopping energy  $E_h(T)$  ranges between 0.126 and 0.0419 eV. The obtained values of  $R_h$  values are in accordance with the used model. It is found to several times greater than the Mn-O-Mn distance (0.387 nm) below  $\theta_D/2$

**Keywords:** double-layered manganite; perovskite; transport; 3D variable range hopping model; ASPH model.

## OPTIMIZATION OF HEAT TRANSFER IN SHELL AND TUBE HEAT EXCHANGERS FOR SALINE WATER DESALINATION

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### ABSTRACT

Nowadays, the combined effect of population growth and the rapid development of the industrial fabric in the world has created a paucity problem of drinkable water, which worsens by the day. There are several technologies for treating saline water, but solar desalination is the most practical and cost-effective due to its simplicity and non-polluting characteristics. Solar desalination is a technique for transforming saline water into drinkable water by the application of solar energy. Generally, the volume of distillate water obtained is meager, and the process takes a long time. Hence, it cannot be considered a technique to produce potable water in significant quantity. However, we can improve this process with several options. Using a heat exchanger can enhance the distillation of saline water by transferring the heat energy from one fluid at a higher temperature to another fluid at a lower temperature. Through this research, we mainly focused on optimizing heat transfer to increase the saline water temperature in a tube and shell heat exchanger. The simulation was carried out using COMSOL Multiphysics in a 2D heat transfer coupled with laminar flow. We tested several parameters to determine how they impact the final saline water temperature, including the flow rate of the two fluids, the material of the tube, and concurrent and countercurrent modes, in addition to the economic aspect. According to simulation results, countercurrent mode with aluminum tubes provides better heat transfer. A thorough understanding of heat transfer phenomena will provide numerous options for industrial applications to reduce the issue of water scarcity and to obtain a considerable amount of potable water through the desalination process.

**Keywords:** Optimization, Heat Exchangers, Desalination, Water Treatment, Simulation.

## ENHANCED EXTRACTION OF ACTIVE COAGULANT AGENTS FROM PINE CONE POWDER FOR WASTEWATER TREATMENT

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### **ABSTRACT**

A new method for the extraction of active coagulant agents from pine cone powder (PCP) was developed. In this improved method, PCP was extracted using distilled water and sodium hydroxide as solvents, leading to the extraction of more coagulant agents from the pine cone and an increase in coagulation activity. The extracted samples were then analysed for proteins, total phenols and carbohydrate content using colorimetric assays, including Bradford method for protein estimation, Folin-Ciocalteu test for total phenol content, and Dubois method for total soluble sugar analysis. The results showed that sodium hydroxide was the most effective solvent, giving 11.10mg BSA/g, 6.24 mg AG/g, and 29.31 mg Glu/g of proteins, phenols and carbohydrates respectively, compared to 0.33 mg BSA/g of proteins, 1.49 mg AG/g of phenols and 10.78 mg Glu /g of carbohydrates obtained using distilled water. In conclusion, sodium hydroxide was found to be the best solvent for extracting the coagulant agents from PCP

**Keywords:** Pine cone, Extraction, Active coagulant agent, proteins, total sugars, total phenols.

## NEW BUFFER LAYER FOR CISE THIN FILM SOLAR CELLS

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### ABSTRACT

Thin film solar cells have attracted much attention to photovoltaic community because of their high efficiency via easy fabrication methods and availability of precursor material abundant in nature. ZnO:F □FZO□ is an excellent candidate for the substitution of the CdS buffer layer in CISE Thin film based solar cells, is nontoxic and is relatively less costly. shown that a surface composition adaptation is favorable for the replacement of the buffer layer CdS by FZO so as to obtain an interface quality with the CISE layer that makes it possible to control the diffusion phenomenon of faults to this interface. SCAPS-1D software is used to simulate FTO/CISE /ZnO:F thin-film solar cell where the key parts are p-CISE absorber layer and n-FZO buffer layer.

**Keywords:** buffer layer, CISE , SCAPS-1D, ZnO:F.



## PYSICO-MECHANICAL MODIFICATIONS MADE BY RECYCLED CONCRETE SAND TO PLASTIC MORTAR

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### ABSTRACT

Concrete is the most used material in the field of construction, which generates a large consumption of natural aggregates and a saturation of demolition debris in public landfills. The use of recycled concrete aggregates seems a promising solution from an economic and ecological point of view, except that it is not possible to produce concrete or mortars based on recycled aggregates of similar qualities to those produced with natural aggregates.

This study aims to determine the influence of recycled concrete sand (RCS) on the mechanical and physical properties of a plastic mortar. For the manufacture of these mortars, we prepared four mixtures by using cement CEM II A-L 42.5 N and with ratios: sand/cement=3, water/cement = 0.5.

Natural sand (NS) was partially substituted by 20,40 and 60% recycled concrete sand (RCS), and in order to keep the same plasticity we used a superplasticizer. The proprieties of mortars containing different ratios of recycled concrete sand were compared to the reference mortars made with 100% naturel sand.

At the fresh state slump and fresh density were measured at the exit of mixer while mechanical proprieties such as compressive and flexural strength measurement were done at the age of 1, 3 ,7 and 28 days.

The obtained results indicate that mortars made with RCS has a lower physical propriety such as fresh density and their workability depend on the rate of substitution by RCS due to the heterogeneity and the high-water absorption of this type of aggregate. In the other hand, the results of mechanical behavior showed a positive impact on the development of the resistance which leaded to a gain in strength, this can be explained by the presence of anhydrous cement particles in the attached old mortar. However, based on the results found, it can be concluded that fine recycled sand from demolition concrete can be used for the production of plastic mortar.

**Keywords:** Mortar, Recycled concrete aggregate, Resistance, Recycling, Environment.

## BUFFER LAYER IMPROVEMENT FOR HIGH-EFFICIENCY CZTS/CTZSE/CTZSSE SOLAR CELLS

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### ABSTRACT

In this study, the active layer of thin-film Cu<sub>2</sub>ZnSnS<sub>4</sub> (CZTS), Cu<sub>2</sub>ZnSnSe (CZTSe) and Cu<sub>2</sub>ZnSn(SySe<sub>1-y</sub>)<sub>4</sub> (CZTSSe) solar cells underwent numerical simulation optimization. The performance of the Mo/CZTS/CdS/i-ZnO/ZnO:Al, Mo/CZTSe/CdS/i-ZnO/ZnO:Al and Mo/CZTSSe/CdS/i-ZnO/ZnO:Al structure was examined in relation to all electrical and geometrical absorber characteristics. We concentrated on the investigation of the various absorber factors, such as thickness, energy gap, and doping density (10<sup>12</sup> cm<sup>-3</sup> to 10<sup>20</sup> cm<sup>-3</sup>), which increase the performance of the cell. We also investigated the impact of temperature change (between 250 K and 400 K), parasitic resistances: series resistance R<sub>s</sub> (0.5 cm<sup>2</sup> - 40 cm<sup>2</sup>), and shunt resistance R<sub>sh</sub> (100 cm<sup>2</sup>- 5000 cm<sup>2</sup>). Then, we tried to comprehend how these parameters' fluctuation impacts the external quantum efficiency. It was also possible to comprehend the various conduction and collecting processes. Using the program Solar Cell Capacitance Simulator One Dimension (SCAPS-1D), we discovered that an absorber thickness more than 2.5 μm is not required and that a doping density of 10<sup>16</sup> cm<sup>-3</sup> is the most effective. We were able to attain a conversion efficiency of 13.03% CZTS, 14.56% CZTSe and 16.67% CZTSSe after this optimization effort. The acquired results and those that have been published are in excellent agreement.

**Keywords:** Buffer layer, Cds, CZTSSe, SCAPS-1D, Solar cell, Thin film.

## GREEN SYNTHESIS OF POLYAMIN BY USING OF MAGHNITE-H<sup>+</sup> AND MAGHNITE-NA<sup>+</sup>, AS A SOLID CATALYST MONTMORILLONITE TYPE "ALGERIAN CLAY"

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### ABSTRACT

In the present work we have developed a novel procedure to synthesis and polymerized a new monomers: Methacrylamide (MAM), 1,4-Pipérazine dimethacrylamide (NPDM), N-Methacryloyl morpholine (NMM) and N-Phenylmethacrylamide (NPM) using a heterogeneous catalyst that can effectively catalyzed amide synthesis and anionic polymerization, without production of toxic by-products and with the advantage of being readily available, low cost, environmentally benign and reusable. The anionic polymerization of the monomers are carried out using an environmentally friendly catalyst "Maghnite Na<sup>+</sup>", a proton exchanged montmorillonite clay, in an ice bath. The monomers are synthesized by the condensation of primary amine ammonia, aniline and heterocyclic secondary amines such as piperazine and morpholine with methacrylic anhydride catalyzed by "Maghnite H<sup>+</sup>" a green catalyst in bulk at 0°C for 2 hours. These monomers and polymers are characterized and confirmed by Infrared Spectroscopy (FTIR), 1H and 13C nuclear magnetic resonance (NMR) spectroscopy and Thermal properties of the polymers were determined using Differential scanning calorimetry (DSC) and thermogravimetric analysis (TGA).

**Key words:** Green catalyst; Montmorillonite clay; N-Alkylmethacrylamide; anionic polymerization; Methacrylic anhydride.

## TRANSVERSE PHOTONS SELF ENERGY AT NEXT TO-LEADING ORDER IN HOT SCALAR QED

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### ABSTRACT

In a series of works, we have used the imaginary time formalism to study the infrared behavior of the gluon and quark damping rates [1, 2, 3, 4, 5, 6, 7]. The results have indicated that there are difficulties in the infrared sector. A similar observation has been done in the context of scalar electrodynamics [8]. To look further into the infrared behavior, we propose to calculate the next-to-leading order dispersion relations for slow-moving Transverse Photons at high temperature scalar quantum electrodynamics (Scalar QED), using the real time formalism (RTF) in physical representation. We derive the analytic expressions of hard thermal loop (HTL) contributions to propagators and vertices to determine the expressions of the effective propagators and vertices in RTF that contribute to the complete next-to leading order contribution of retarded transverse photons self-energy. The real part and the opposite of the imaginary part of the retarded transverse photons self-energy are related to the next-to-leading order contributions of energy and damping rate respectively.

**Keywords:** Hard thermal loop, Hot Scalar QED, NLO Computations, Soft Transverse photons energy and damping rate.

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## ESTIMATION OF PHOTOVOLTAIC CELLS/MODULES PARAMETERS HARRIS HAWKS OPTIMIZATION TECHNIQUE

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### ABSTRACT

The identification of actual photovoltaic (PV) model parameters under real operating condition is a crucial step for PV engineering. An accurate and trusted model depends mainly on the accuracy of the model parameters. In this paper, an accurate and enhanced methodology is intended for PV module parameters extraction in outdoor conditions. The proposed methodology combines numerical methods and analytical formulations of the one diode model to derive the five unknown parameters in any operating condition of irradiance and temperature. First, the measured I-V curves at a random weather condition are translated to standard test conditions (i.e.,  $G = 1000 \text{ W/m}^2$ ,  $T = 33 \text{ }^\circ\text{C}$ ), using translation equations. The second step consists of using an optimization algorithm namely the Harris Hawks Optimization (HHO) to find out the five parameters at standard test conditions. Analytical formulations, at a random irradiance and temperature, are then used to express the unknown parameters at any irradiance and temperature. The proposed approach is validated under outdoor conditions against measured I-V curves at different irradiances and temperatures. The obtained results from the adopted has compared with another technique artificial intelligent methodology confirm the accuracy of the parameter extraction procedure.

**Keywords:** PV panel; parameters extraction; Harris Hawks Optimization; validation

## GROWTH KINETICS OF IRON BORIDES BY SLURRY COATING TECHNIQUE ON XC38 STEEL

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### ABSTRACT

To say that the boriding of steels by the slurry coating technique is effective and makes it possible to produce layers of boride on carbon steels and that the layers of iron boride produced are practically equivalent to those produced by other techniques. (Powder technique and molten salt process), we considered it useful to make a study on the growth kinetics of iron boride layers produced by slurry coatings on XC38 steel.

This method based on the principle of coatings, where a light layer of slurry (leg slurry boriding agents), is applied to the surface of the substrate to be treated, and then introduced into the furnace, to form in the surface the boride layers.

In this study, we will follow the evolution of boron diffusion in Fe<sub>2</sub>B boride by considering the experimental layer growth data obtained during the application of this boriding technique.

**Key word:** boriding, Kinetics, hardness, XC38.

## THE STUDY OF THE HISTORIC INDOOR MICROCLIMATE TO CONTRIBUTE TO THE PRESERVATION OF THE RESIDENTIAL HERITAGE

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### ABSTRACT

The knowledge of construction techniques, materials and their degradation is nowadays quite vast, as well as on the solutions and methodologies of a restoration project, which depends on the objective of the restoration itself. Even choices about the new use of historic buildings are often well considered. Over the past few years, we have conducted monitoring campaigns to obtain data related to two traditional Ottoman houses in the old city of Algiers, different in typology, position, current condition and historical uses. What has been discovered is that these buildings seem to be able to guarantee historical microclimates surprisingly overlapping with the parameters currently considered appropriate for their preservation. In this study, we show some explanatory results of these two case studies from our research.

The in situ investigation, on the other hand, allowed us to deepen the analysis, from the survey, passing through the measurements to the thermodynamic simulation. In this way it was possible to verify the effects of minimal variations of the architectural characteristics, such as the obstruction or opening of a window, covering an open courtyard, or removing the cover, reducing the source of light etc. All these managerial and architectural interventions have a significant effect on the interior environment of the building and can improve the state of conservation of the architecture, sometimes to the point that more costly and invasive restorations become unnecessary.

**Keywords:** residential heritage; Historic indoor microclimate; Preservation; Thermodynamic simulation; Environment; Restoration.

**FROM THE MEDINA TO THE METROPOLIS AND FROM TH HORSE-DAWN CARRIAGE TO THE METRO: THE IMPACT OF URBAN EVOLUTION ON THE HISTORY OF TRANSPORT IN ALGIERS.**

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**ABSTRACT**

Urban evolution has always played a critical role in shaping the history and development of cities around the world. Algiers, the capital city of Algeria, is no exception. Over the centuries, Algiers has transformed from a modest Medina to a bustling metropolis, and its transportation system has undergone significant changes during this evolution. The objective of this study is to examine the impact of urban evolution on the history of transport in Algiers, from the era of horse-drawn carriages to the modern metro system. This study will analyze the factors that have influenced the growth of the city, the changes that have occurred in the transportation system over time, and the challenges and opportunities that have arisen as a result of these transformations. By examining the historical evolution of transportation in Algiers, we aim to better understand the complex interplay between urban development and transportation systems, and to gain insights into how cities can continue to evolve sustainably in the future.

The use of GIS (Geographic Information System) for modeling the development of the city and its transport system has provided us with a powerful tool to understand the complex relationship between the historical evolution of Algiers and its transportation network. GIS has enabled us to analyze and visualize large volumes of spatial and temporal data, including historical maps, transportation networks, population growth, and urbanization patterns. By using GIS to model the development of the city and its transportation system, we have been able to identify key factors that have influenced the evolution of the city, such as urban sprawl, population growth, changes in land use, and shifts in transportation modes. We have also been able to identify the challenges and opportunities that arise when urban development and transportation systems are intertwined. Overall, the use of GIS has allowed us to gain a deeper understanding of the historical evolution of transportation in Algiers and to develop insights into how urban development and transportation systems can be managed in a sustainable manner in the future.

In conclusion, this study has provided insights into the historical evolution of transportation in Algiers and its relationship with urban development. The analysis has revealed how the city's transportation network has evolved over time, from horse-drawn carriages to the modern metro system, and how this evolution has been shaped by changes in the city's physical, social, and economic landscape. Through the use of GIS modeling, we have gained a deeper understanding of the complex interplay between urban development and



transportation systems and the challenges and opportunities that arise when these systems are intertwined. Ultimately, this study highlights the importance of taking a holistic and sustainable approach to urban development and transportation planning, one that takes into account the historical context, as well as the social, economic, and environmental impacts of these systems. By doing so, cities like Algiers can continue to evolve in a way that benefits both its residents and the broader community for generations to come.

**Keywords:** Algiers, Urban development, Transportation systems, Historical evolution, GIS modeling, Sustainable development.

**IDENTIFICATION OF SYMMETRICAL CRACK DIMENSIONS BY EDDY CURRENT  
TECHNIQUE FOR A STEEL PLATE**

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**ABSTRACT**

In this work, we aim to determine the dimensions of an axisymmetric crack contained in a non-linear magnetic material. First, we begin to characterize the magnetic material from a modeling of the direct magnetodynamic problem by 2D finite element of the system (magnetic material + sensor) and solved by the Newton Rapheson method. FEMM(Finite Element Method Magnetics, an open source software, was used to validate the model).This direct model is then inverted by a simplex algorithm to determine the dimensions of the crack.

**KEYWORDS:** Characterization, crack, finite element method, open source FEMM software, inverse problem.

## REAL TIME ULTRASOFT LONGITUDINAL PHOTONS SELF ENERGY AT NEXT TO-LEADING ORDER IN HOT SCALAR QED

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### Abstract

We determine a compact analytic expression for the complete next-to-leading contribution to the retarded longitudinal photons self-energy in the context of hard-thermal-loop summed perturbation of massless quantum electrodynamics (QED) at high temperature to calculate the next-to-leading order dispersion relations for slow-moving longitudinal photons at high temperature scalar quantum electrodynamics (Scalar QED), using the real time formalism (RTF) in physical representation. We derive the analytic expressions of hard thermal loop (HTL) contributions to propagators and vertices to determine the expressions of the effective propagators and vertices in RTF that contribute to the complete next-to leading order contribution of retarded longitudinal photons self-energy.

**Keywords:** Hard thermal loop, Hot Scalar QED, NLO Computations, Soft longitudinal photons energy and damping rate.

## STUDY AND SIMULATION OF SELF-SUPPLY OF A BUILDING BY PHOTOVOLTAIC ENERGY: CASE OF AN LDDI LABORATORY UNIV\_ADRAR ALGERIA

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### **Abstract**

Official statistics show that two billion people in the world do not have direct access to the electricity grid. For this purpose, an autonomous photovoltaic system (SPVA) is one of the solutions that can fix this problem. The optimizing of an SPVA is a very complex issue. Therefore, a compromise solution must be made between having acceptable energy and economic cost for the consumer, and a relatively good quality of energy supply. The management of load profiles, in order to get closer to the ideal solar consumer, allows for reducing the size of the system. the objective of this work is dimensioning of a photovoltaic installation using PV system program applied An area in southern Algeria that has a very hot climate exactly a building case of laboratory University of Adrar Algeria (LDDI ) given with all the different steps to follow.

**Keywords:** PV system, load profile, demand management, sizing, cost, approximate studies of loads, PV sys.

## THE EFFECT OF QUENCHING AFTER BORIDING TREATMENTS TO OBTAIN A HARDNESS GRADIENT ON X70 STEEL

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### ABSTRACT

In this work, we study the effects of boriding treatment and heat treatment on the microstructure and microhardness of X70 steel.

In this study, the layers of iron boride was developed by solid voice for a temperature of 950 ° C for 4 hours.

It was observed that the hardness of the boride layers at the interface of the substrates, was increased by about four times (2400 HV), more than the hardness of the inside of the quenched sample (750 HV) for substrates which underwent direct quenching after boriding, and a hardness of (360 HV) for substrates which underwent only a boring treatment. The latter was lower than the hardness of the base metal, in the initial (420 HV). The morphology and microstructure were determined by means of the scanning electron microscope (SEM), an optical microscope, by X-ray diffraction (XRD) and microhardness by a microhardness tester.

**Key word:** boriding, Tramped, hardness, X70

**NUMERICAL INVESTIGATION OF SUCTION SIDE MODIFICATION VIA UNDULATIONS  
AND SAW TOOTH WAVE SHAPE INFLUENCE ON FLOW SEPARATION OVER HAWT S809  
PHASE VI BLADE**

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**ABSTRACT**

This study investigates the flow separation control on the S809 phase VI horizontal axis wind turbine blade profile under stall conditions at a  $1 \times 10^6$  Reynolds number using passive method. The trailing edge region of the 2D S809 blade profile is changed by introducing saw tooth and undulated shapes to assess the roughness surface ability in eliminating or reducing flow separation region size. Delaying the flow detachment onset and improving aerodynamic performances are among the main targets. Studied parameters of influence based on Reynolds averaged Navier-Stokes (RANS) are: modified region extent, wave's frequency, height and chord wise length. The studied range of angles of attack is from  $16^\circ$  to  $24^\circ$ . Pressure contours and velocity streamlines are used to pave the way for the understanding of trailing edge recirculation bubbles sensitivity to such surface perturbation and analyze their effect on promoting/ reducing transition and turbulence mechanisms. The optimal configuration is concluded between the various parametric cases of study.

**Keywords:** Horizontal axis wind turbine, undulation, saw tooth, Flow separation control, Aerodynamic performances.

## AB-INITIO STUDY OF SKUTTERUDITE COMPOUNDS: ELECTRONIC AND OPTICAL PROPERTIES

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### ABSTRACT

Because to the abundance of waste heat sources, thermoelectricity is currently drawing a lot of attention as a potential clean energy source. Nevertheless, large-scale applications won't be practical until materials and module optimization is achieved. Two thermoelectric effects, electrical and thermal effects, must be reconciled independently in this hunt for novel materials (good electrical conductivity and low thermal conductivity).

Skutterudites, substances having the general formula  $MX_3$  (with M a transition metal and X a pnictogen), are one of the most well-known "cage compound" structures. Skutterudites are formed when a heavy atom A is added to form the ternary skutterudite  $RM_4X_{12}$  (with R is a rare-earth). In order to boost the ZT power factor, this filling encourages the alteration of thermal and electrical conductivity.

The skutterudites materials for thermoelectric applications and the study of their physical properties, using a first principle ab-initio method based on density functional theory (DFT).

**Keywords:** skutterudite ; métal de transition ; pnictogène ; terre-rare ; ab-initio ; DFT.

## CONFECTION AND CHARACTERIZATION OF ADOBE MATERIAL

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### **Abstract**

Earth-based building materials have been used since ancient times, but in recent times they have mostly been seen as restoration materials for traditional architecture rather than green building materials for new buildings. However, the promotion of more sustainable architecture has recently led to a turn to adobe or rammed earth, among others. Due to the high impact of concrete and the fired clay brick industry, mainly due to the use of clinker and the firing process, respectively, adobe can greatly reduce the environmental footprint of construction and conventional building materials. Furthermore, the use of fibers for the reinforcement of rammed earth has also been highlighted as a key factor in improving the performance of rammed earth.

**Keywords:** adobe, granulometry, wetting, drying.



## TIME AGING AND MOISTURE ABSORPTION OF WATER-SALTWATER EFFECTS ON TENSILE PROPERTIES OF COMPOSITE POLYESTER/GLASS A REVIEW

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### **Abstract**

Glass fiber reinforced polymer (GFRP) material can be used in marine structures due to their nature, cheaper price and high tensile performance.

However, This paper investigates the effects of environmental ageing water and saltwater on the tensile properties of polyester / glass composite, we will study the different researches and results achieved in previous researches on Polyester and Fiberglass of corrosion in long-term and short-term marine environment, and the effect of absorption of these latter (saltwater and distille water), as well as the effect of temperature on mechanical properties.

The objective of this study is to compare the tensile properties such as tensile stress and tensile module of glass fiber reinforced polyester composite immersed in different solutions, which are water (distilled - deionized water), seawater (saltwater), and difrent temperature; This paper is focus on the immersion study and its effects on glass/polyester composites.

Therefore, this study investigates the static and dynamic tensile behaviors of GFRP composite after exposure to the seawater (saltwater) and water under marine environment. Accelerated corrosion tests were conducted under various exposure periods (30, 60, and 90,120 ..... days) and temperatures (20, 23, 25, 40, 60, 80 .... °C) ; The tensile strength and failure strain reduce with increasing exposure temperature and duration ; Long-term performance and life predictions of polyester/glass materials are provided for design codes and promote the application of GFRP composite in marine structures.

**Keywords:** polyester composite, Glass fibre, Marine environment, water absorption, saltwater absorption, Tensile properties

## TOWARDS SMART FORMAL VERIFICATION OF SOC COMPONENTS

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### ABSTRACT

Nowadays, formal verification\* is essential because embedded systems\* are involved in processes decisions that affect the everyday lives of Humain around the world. Embedded systems are used in several sectors of activity, such as the telecommunication sector, the aeronautics sector, the automotive sector, the medical sector, the financial sector, the domestic sector, and the entertainment sector.

The major challenge to cope with the increasing complexity of embedded systems is to constantly raise the level of modeling and verify the properties of each component of the internal part called System on Chip\* which is subject to several material constraints (performance and consumption) and software constraints (reliability and flexibility). Therefore, formal verification can reveal common errors of system design such as starvation, deadlocks, system invariants, and all complex properties expressed by LTL formulas.

In our research work, we are concerned with the components of the SoC and how to make them like expert systems\* using Artificial Intelligence\* techniques, we will try to join both model checking and Artificial Intelligence techniques in the SysVerPml Platform.

Primarily, we give a brief overview of our SysVerPml framework\*, making it easy to ensure the proper functioning of embedded systems and reducing the degree of failure of an internal part and the time to market. To verify the component, a process that represents the behavior of the component environment has been modeled using SystemC language, and semantically traduced to Promela language. We take the properties from the component behavior specification and specify them by the LTL integrated into the Promela model, which is the input file of Spin Tool.

Secondarily, we go over different research works dedicated to the verification of smart embedded systems co-design. Next, we move to present the main objective of our research work, which aims to propose an Analytical Approach to improve SysVerPml through Artificial Intelligence.

Finally, we invite researchers to explore perspectives in this field of research.

**Keywords:** formal verification, Embedded System, System on Chip, expert systems, Artificial Intelligence, SysVerPml framework.

**STRUCTURAL, ELECTRONIC AND ELASTIC PROPERTIES OF THE FERROMAGNETIC PEROVSKITE RbTaO<sub>3</sub>**

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**Abstract**

The full-potential linearized augmented plane wave (FP-LAPW) method has been used to analyze the structural, electronic, and optical characteristics of the compound RbTaO<sub>3</sub> using density functional theory (DFT). Using the generalized gradient approximation (GGA), the exchange correlation effect is studied. According to GGA data, the present chemical crystallizes as an ABO<sub>3</sub>-type cubic perovskite. The electronic structure presents a wide gap indirect semiconductor. This compound's estimated equilibrium lattice constant matches well with theoretical and experimental data given in the literature. Moreover, the density of state is used to demonstrate the various contributions of element orbitals to the valence and conduction bands. Moreover, the elastic constants show that the RbTaO<sub>3</sub> alloy is mechanically stable, and the Poisson's ratio confirms that the alloy under consideration is brittle.

**Keywords:** perovskites; DFT; semiconductors; Wien2k; elastic properties

## THE NON-ISOTHERMAL KINETICS OF $\alpha$ -ALUMINA FORMATION IN MECHANICALLY ACTIVATED KAOLIN-ALUMINUM CERAMIC SYSTEM

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### Abstract

Thermal analysis techniques remain important tools amongst the large variety of methods used for analysis of the oxidation of aluminum. In this work, we studied the kinetics of  $\alpha$ -alumina formation in different composites under non-isothermal conditions using TGA at different heating rates (from 5 to 20°C.m<sup>-1</sup>) and from an ambient temperature up to 1400 °C. Several mixtures were used while varying the ball-milling time of kaolin-aluminum powders. It was found that the oxidation of aluminum powders took place over several stages (solid-state oxidation from 550 to 680 °C, liquid-state oxidation from 700 to 1100 °C) and the complete oxidation process did not occur even up to 1200 °C. The mechanism and pertinent kinetic parameters, i.e. overall activation energy ( $E_a$ ) and pre-exponential (frequency) factor ( $A$ ), were evaluated from the series of thermogravimetric experiments. The activation energy and frequency parameter evaluated through non-isothermal treatment were calculated using Kissinger equation.

**Keywords;** mullite, oxidation of aluminium,  $\alpha$ -alumina, activation energy

## APPLICATION OF ECO-FRIENDLY INHIBITORS TO PREVENT CORROSION INDUCED BY CHLORIDES IN REINFORCED CONCRETE

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### ABSTRACT

The combination of reinforced concrete's high compression strength and steel's high tensile properties creates an ideal composite material that, in contrast to other materials, has a wide range of applications in structural engineering. Reinforced concrete is a flexible, affordable, and effective building material. Chloride ion-induced corrosion is a major degradation mechanism affecting the durability of reinforced concrete structures and infrastructures subjected to saline media, causing huge economic losses around the world. According to the World Corrosion Organization (WCO), the annual cost of corrosion is estimated at \$ 2.5 trillion. The corrosion products (iron oxides and hydroxides) are often deposited in the constrained area of the concrete around the steel once the corrosion process has begun. The expansion stresses created by their creation inside this limited area cause the concrete cover to fracture and spall. The concrete then gradually deteriorates as a result of this. The application of green corrosion inhibitors is one of the most effective and cost-efficient practices to monitor corrosion. Natural products are mainly composed of tannins, alkaloids, polyphenols and flavonoids. Different active groups contained in these organic compounds have a strong adsorption effect on the metal surface. Our work focuses on corrosion inhibitors extracted from plants recently used in concrete, as well as their extraction method and inhibitory efficacy. The work also examines the different corrosion assessment techniques, namely electrochemical studies and surface analysis. Computational studies applying quantum mechanical calculations to evaluate the adsorption mechanism of durable inhibitors on the steel surface were also discussed. The experimental and theoretical results obtained prove the ability of these green products to form a protective layer around the steel bar against chlorine ion attack. However, research on this topic is still insufficient to date. Therefore, further research is required, especially on the use of extracts from agricultural waste as corrosion inhibitors, in order to increase recycling and reduce pollution problems.

**Keywords:** Carbon steel, Chloride corrosion, DFT, Green inhibitor, Passive film, Surface analysis.

## THE IMPACT OF STATCOM AND FUZZY LOGIC ON THE PERFORMANCE OF AN HVDC LINK

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### ABSTRACT

HVDC links seem to be a beneficial solution from a technical and economic point of view, especially for interconnections between different networks. The number of HVDC connections continues to increase around the world. The interest of these connections comes from the major economic advantages of these compared to alternating current technologies over long distances, underground connections, etc.

The study of the interactions between the HVDC link and the adjacent AC networks is a very important step and must be done during the design phase of the control/command of the converter stations in order to always have a total positive damping for the whole region. of operating frequency, and therefore to eliminate any risk for the transmission systems.

Our work aims to show the behavior of the proposed model and also see its influence on the adjacent AC networks, this system is the CIGRÉ HVDC reference model controlled by the Fuzzy-PI controllers and reinforced by the STATCOM device, the terminals of the HVDC system connected to weak AC networks (SCR=2.5).

The system under study is a mono-polar HVDC interconnect.

We used Matlab/Simulink software to perform simulations of the HVDC link model, in order to obtain responses following short-circuit faults. When the short-circuit ratio SCR is higher, the levels of overvoltages or current surges caused by faults are lower, and the recovery of the system in dynamic state after the fault is faster.

We have proposed a method to improve the HVDC system connected to weak AC networks. The proposed method involves the reinforcement of the HVDC system with fuzzy logic and a STATCOM device.

The STATCOM connected to the inverter side of the classic HVDC system provides dynamic reactive power support and the fuzzy logic based controller is integrated to improve the control of the HVDC system. The dynamic performance during various single-phase and three-phase faults on the inverter side has been demonstrated by simulation and has given satisfactory answers.

## EXPLORING THE STRUCTURAL AND ELECTRONIC PROPERTIES OF CALCIUM ANTIMONY PHOSPHORUS USING DENSITY FUNCTIONAL THEORY AND WIEN2K CODE

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### Abstract

The cubic anti-perovskite structure has interesting electronic and thermoelectric properties. In this chapter we have studied the structural and electronic properties of the new calcium-based anti-perovskite materials  $\text{Ca}_3\text{SbX}$  ( $X = \text{P}$ ) based on the FP-LAPW method implemented in the Wien2k code. We have adopted as exchange and correlation functionals the Generalized Gradient Approximation (GGA) in the framework of (PBE : Perdew-Burk Ernzerhof) and (WC : Wu-Cohen), and the Local Density Approximation (LDA). Approximation). Thus we used the modified Beck-Johnson exchange potential (mBJ: Modified Beck-Johnson). To calculate the band structures and the density diagrams of electronic states. The structural optimization shows that the obtained lattice parameters are in good agreement with the available data (Theoretical). The calculations performed by TB-mBJ on the electronic structure indicate that  $\text{Ca}_3\text{SbAs}$  is a semiconductor with a gap.

**Keywords:** *Anti\_perovskite, DFT, Structural and electronic properties, WIEN2K FP\_LAPW*

## EXISTENCE OF SEVERAL 1:1 ENTRAINMENT REGIONS IN THE ARNOLD ONION DIAGRAM

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### ABSTRACT

Entrainment is a type of synchronization in which the period of an intrinsic oscillator matches the period of time-dependent forcing. Graphically, entrainment modes are represented in terms of an Arnold tongue diagram - a V-shape diagram in the two-parameter space of the given periodic forcing in which the frequency (or period) of the external forcing lies on the x-axis and the strength (amplitude) of the periodic forcing is located on the vertical axis. Regarding the recent studies on entrainment, Khan et al. investigated entrainment properties of different types of oscillators very close to a Hopf bifurcation (supercritical or subcritical) and found the existence of multiple 1:1 entrainment (termed as polyglot entrainment). Working along similar lines, we have also observed multiple 1:1 entrainment in the Arnold Onion diagram which is the

hallmark of seasonality in circadian oscillations and entrainment. We used dynamical system tools to understand this phenomenon and characterize our results for different types of oscillators.

**Keywords:** Entrainment, Synchronization, Arnold tongue, Arnold Onion.



## FINITE ELEMENT SIMULATION OF ULTRASONICALLY ASSISTED WIRE DRAWING PROCESSES

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### ABSTRACT

Aluminium wires are widely used in the electrical energy transmission industry and other applications, and wire drawing is commonly employed to decrease their diameter. In this study, simulations were conducted using simulation software to imitate the drawing process of a 2.6 mm diameter Aluminium wire and reduce it to 2.2 mm through both conventional drawing methods and simulation that includes excitation of ultrasonic stimulation. The study focused on two critical elements: the draw force and its impact on energy consumption during the drawing process, and the stress induced on the aluminium wire. The results of the simulation demonstrate that adding ultrasonic stimulation reduces both the energy consumption and stress levels on the Aluminium wire during the drawing process. The addition of ultrasonic stimulation to the metal forming process decreases the power required by reducing the drawing force. The required force for the aluminium wire metal forming process is decreased by approximately 14% as a result of incorporating ultrasonic stimulation. They study concludes that the addition of ultrasonic stimulation to the wire drawing process is an effective way to reduce energy consumption, lower the draw force, and decrease the stresses generated on the aluminium wire surface.

**Keywords:** Wire drawing, FEA, Ultrasonic excitation

## GLOBAL WETLAND LOSS SCENARIO IN LIGHT OF SOCIO-ECOLOGICAL WELL-BEING PERSPECTIVES

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### ABSTRACT

A large number of studies have shown wetland decline and related drivers around the world in several spatial dimensions. A few publications have also helped to uncover the reasons for wetland loss and the benefits they provide. This research attempted to investigate the relationship between the rate of wetland loss and processes in connection to socio-ecological well-being indicators. In this research, the rate of wetland loss and its causes from 22 sample nations worldwide were examined in 132 pieces of Scopus Index literature in total. A meta-analysis was conducted to demonstrate the publishing trend over time and the regional change in publication polarity. The yearly rate of wetland loss was seen to vary significantly, ranging from 0.06% to 4.81%. Compared to developing (DeV) and least developed (LDN) nations, this rate is very low among developed nations (DN). There are six main factors that contribute to the deterioration of wetlands: the extension of agricultural land, the growth of urban areas, the conversion of grasslands, the building of dams, climate change, and tourism. It is interesting to note that these drivers, regardless of DN, DeV, and LDN, are not always in charge. Numerous socio-ecological variables, including environmental performance, human development, economic well-being, and social advancement, were shown to be adversely (-0.48 to -0.57) correlated with the rate of wetland loss, whereas the poverty rate was favorably (0.27) correlated. Results also showed that there are considerable differences in drivers with shifting socio-ecological situations.

**Keywords:** Wetland loss, Meta-analysis, Drivers, Socio-ecological perspectives

## VISIBLE LIGHT COMMUNICATION: PROMISING OPPORTUNITIES FOR SMART CITIES' FUTURE DEVELOPMENT

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### ABSTRACT

In this Visible Light Communication (VLC) is a telecommunication technology that leverages the visible range of the electromagnetic spectrum to transmit data through the use of Light Emitting Diodes (LEDs). This technology has the capability to simultaneously provide illumination and data transmission, thus paving the way for numerous interconnectivity possibilities in smart cities. The implementation of LED lighting in cities and car lights has facilitated the adoption of VLC technology.

VLC technology has promising applications such as urban Li-Fi (Light Fidelity), VLC-IoT (Internet of Things), and V2X (Vehicle to Vehicle or Vehicle to Infrastructure). VLC-IoT, for instance, can be employed for streetlights to interact with surrounding urban infrastructure or to transmit location-based content to visitors. V2X technology, on the other hand, enables communication between vehicles and/or street infrastructure, thereby addressing the connectivity challenges faced in areas with low RF spectrum.

Despite the potential of VLC technology, its use in outdoor environments is still in the research phase, and there are ongoing standardization efforts. VLC technology poses some challenges in outdoor environments, which must be overcome for successful implementation.

VLC technology has the potential to revolutionize the concept of Smart Cities by offering a more interconnected and efficient system. This article highlights the current state of Visible Light Communication technology in outdoor environments, its challenges, and promising outdoor applications, as well as the ongoing standardization efforts in the context of Smart Cities.

**Keywords:** visible light communication, smart cities, VLC-IoT, V2V, V2I, Li-Fi.

## FROM RESEARCH TO REALITY: ADVANCEMENTS AND OPPORTUNITIES IN VISIBLE LIGHT COMMUNICATION FOR WIRELESS NETWORKS

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### ABSTRACT

Visible Light Communication (VLC) technology has emerged as a promising solution to meet the growing demand for high-speed wireless data communication. VLC offers several advantages over traditional radio frequency (RF) based communication systems, including high bandwidth, low interference, and energy efficiency. In recent years, various modulation techniques and receiver architectures have been developed to enhance the performance of VLC systems. Despite the significant benefits, VLC technology also faces several challenges, such as line-of-sight limitations, interference from other light sources, and limited range. However, potential solutions to these challenges have been proposed, including the development of hybrid VLC-RF systems and the use of advanced signal processing techniques. Furthermore, VLC technology has potential applications in various fields, such as smart cities, healthcare, and indoor positioning systems. This article provides a comprehensive overview of the current state of VLC technology, its challenges, potential solutions, and applications. It also highlights the need for further research to address the existing challenges and to fully exploit the potential of VLC technology in the future

**Keywords:** visible light communication, smart cities, VLC-IoT, RF, Led , Li-Fi.

## DROUGHT INDEX FORECASTING USING ARIMA MODELS IN THE HODNA RIVER BASIN.

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### ABSTRACT

Regarded as a near real time drought monitoring method, the standardized precipitation index based on climatic data is applied to the drought forecasting in the Hodna river basin for the periode between 1981 to 2020. The SPI calculated is based on the precipitation data in the regions of Ain Elhadjel and Elkantara. SPI3, SPI6, SPI9 and SPI12 was calculated to forecast the drought in the studied area. ARIMA models are used in SPI series and forecast its changes in the future. The time series are studied firstly for their seasonality. Then the ARIMA model fitting is determined. The performance criteria of the ARIMA models used for Ain Elhadjel shows that the best model is ARIMA (0,1,1) (2,1,0) for SPI12 with RMSE= 0.44 and AIC= 172.72. For Elkantara the best model is ARIMA (1,1,0) (2,1,0) for SPI12 with RMSE=0.4 and AIC=145.01. All results demonstrate that ARIMA model developed for SPI series can be used for the drought forecasting in Hodna basin.

**Key words:** drought forecasting, SPI, ARIMA model, Hodna basin.

**PROPERTIES OF LINEAR DIFFERENTIAL EQUATION SOLUTIONS CLOSE TO A PUNCTURED DISK**

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**ABSTRACT**

In this paper, we investigate the local growth and oscillation, near the singular point  $z = 0$ , of solutions to the differential equation

$$f'' + \left( A(z) \exp \left\{ \frac{a}{z^n} \right\} + A_0(z) \right) f' + \left( B(z) \exp \left\{ \frac{b}{z^n} \right\} + B_0(z) \right) f = H(z),$$

where  $A(z), A_0(z), B(z), B_0(z), H(z)$  are analytic functions in

$$D(0, R) = \{z \in \mathbb{C}: 0 < |z| < R\}$$

and  $a, b$  are non-zero complex constants.

**Keywords** – Linear differential equations, growth and oscillation of solutions, finite singular point, Nevanlinna theory.

## VARIABILITE DES PRECIPITATIONS ET DE L'ECOULEMENT DANS LE BASSIN DU FLEUVE SENEGAL

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### ABSTRACT

The hydrological regime of a river is a driving force of its ecosystem. The operation of dams and locks has significant impacts on the hydrological situation of rivers. Taking the example of the Senegal River, the hydrological section of the upper basin was chosen to study the influence of the Manantali dam built on the Bafing on the hydrological regime. The objective of this study was to study the change and variability of precipitation and hydrological data in the Senegal River basin and to assess the change in the flow regime of the Senegal River caused by the operation of the Manantali hydroelectric dam. To do this, the daily flows measured at the Bakel hydrological station over the period 1958-2018 were used and divided into two series: a pre-impact series of the dam (1958-1987); a series on the post-impact period (1988-2018). Based on the IHA (Indicators of Hydrologic Alteration), a range of variability of thirty-three hydrological parameters was calculated and the hydrological alteration associated with the functioning of the dam was quantified. Using the RVA (Range of Variability Approach) method, the hydrological alteration at the Bakel site was evaluated and showed the influence of the dam on the hydrological state. The results showed a strong influence of the dam on the hydrological regime. The fluvial eco-hydrological objectives calculated in this study can constitute a certain support for the management of water resources and ecosystems of the Senegal River basin.

**Keywords:** water regime, *Indicators of Hydrologic Alteration*, *Range of Variability Approach*, Manantali dam, Senegal River basin

## SPATIO-TEMPORAL DYNAMICS OF LAND USE CHANGES UNDER ANTHROPOGENIC IMPACT IN THE CITY OF MEKNES (MORROCOY) FROM 2000 TO 2021

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### **ABSTRACT**

Almost all of today's large cities are under strong anthropological pressure due to high population growth, which has resulted in adverse demographic expulsion.

This research assesses the impact of anthropogenic activities on the dynamics of landscape units, including changes in ecosystem services in the prefecture of Meknes (central Morocco).

Therefore, the main objective of this study is to highlight the spatio-temporal changes of the different ecosystem types present in the study site, while the second objective was to identify its strengths and relate them to the results obtained from remote sensing data. These changes are triggered by a series of factors that are interdependent.

The causal relationship between the different drivers of change was analyzed using the Driving Forces-Pressures-States-Impacts-Responses (DPSIR) framework.

This diachronic research was conducted over a 22-year period, from 2000 to 2021, using remote sensing based on three satellite images: Landsat 7 TM + for the years 2000, 2010, and 2021; and Landsat 8 OLI/TIRS for the same years.

These satellite images were studied using the supervised classification method, which applies the algorithm of change detection known as "maximum likelihood." The accuracy of this classification was qualitatively validated using the index of Kappa, and the overall precisions for the classified images are 82.91% (2000), 84.17% (2010), and 86.53%. (2021). The indices for the Kappa are 0.75 (2000), 0.77 (2010), and 0.8. (2021).

According to the study, the chosen classes have seen the most significant changes. We see a regression for FD of (-0.24%), SP/SR of (-0.74%), PL of (-0.53), B/R of (-1.59%%), and B of (-1.60%), along with a rise for AG of (0.36%), MDF of (0.39%), and BU of (0.91%).

The diverse causes that put pressure on the various types of ecosystems, such as climate change, population growth, and economic expansion, are to blame for the changes in LULCC. This study's findings show that the Meknes watershed has seen significant environmental deterioration as a result of significant anthropogenic activities (urbanization, agriculture, overgrazing, climate change, etc.).

**Keywords:** Land use Land cover; diachronic analysis; remote sensing; supervised classification; global accuracy; kappa coefficient; DPSIR.



## **COUPLED BOUNDARY AND FINITE ELEMENT METHOD FOR STABILITY ANALYSIS OF LAUNCH VEHICLE**

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### **ABSTRACT**

For several decades, the problem of launch vehicle flight stability has been at the centre of attention of scientists, designers, and engineers [1,2]. New designs require additional research. This is due to an increase in the size of launch vehicles, new forms of fuel and oxidizer tanks, and an improvement in their internal structure [3]. To dampen unwanted vibrations, various kinds of dampers are used, such as internal vertical and horizontal partitions, floating covers, etc. [4,5]. Improved materials are also used to ensure strength and reliability [6].

This paper proposes a method for calculating filler oscillations in fuel tanks based on the application of boundary and finite element methods. Although modern computers of a new generation are capable of solving problems of large dimensions, it is still necessary to create refined modifications of known methods with increased speed for continuous monitoring of the state of tanks during the mission.

The methods of potential theory were applied in the research, which made it possible to reduce three-dimensional problems to the solution of surface singular integral equations [7]. We started with a thorough analysis of the resulting singular integrals and establishing the type of their singularities [8,9]. After developing an effective method for solving the resolving system of singular integral equations, the natural frequencies of fuel tanks were determined. Further, forced oscillations of partially filled tanks were considered. The cases of stability loss are studied, when the amplitude of oscillations of the liquid free surface sharply increases. This phenomenon occurs when the driving force frequencies coincide with the frequencies of natural oscillations. Also very topical is the case of parametric resonance, which is typical for tank oscillations under the action of a vertical force with a frequency that is a multiple of the lowest natural one.

**Keywords:** fuel tanks, sloshing, stability, boundary and finite element methods, singular integrals

## DETECTION OF RADON AND LEAD ION IN BLOOD FROM NAJAF USING DIFFERENT DEVICES

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### Abstract

The detection of radon and lead in blood from Najaf, Iraq is an important health concern. Radon is a radioactive gas that can seep into homes and buildings and increase the risk of lung cancer, while lead is a toxic heavy metal that can cause serious health problems, particularly in children. To detect the presence of these substances in blood samples, specialized laboratory equipment and techniques, such as gas chromatography and mass spectrometry, are required. It is important to ensure that proper safety protocols are followed during the collection and analysis of blood samples to minimize any potential exposure to these hazardous substances. Authoritative organizations like the Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) can provide guidance on best practices for conducting these types of analyses using different devices and methods.

**Keywords:** Radioactive gas, safety protocols, health problems, WHO

**DYRRACHIUM (DURRES, ALBANIA) URBANIZATION IN THE 1<sup>ST</sup>-4<sup>TH</sup> CENTURIES AD: NEW  
ARCHAEOLOGICAL DISCOVERIES**

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**ABSTRACT**

The focus of this study is the urbanization of *Dyrrachium* (Durres) in the 1<sup>st</sup>-4<sup>th</sup> centuries AD. This study is based on archaeological excavations of recent years, ancient historical sources, and literary sources. *Dyrrachium* was the name that the Romans used more in the 1<sup>st</sup>-4<sup>th</sup> centuries AD. Today, it is the second-largest city in Albania, and the modern name is Durres. The city was founded by Hellenic colonists from Corinth and Corcyra, at the end of the 7<sup>th</sup> century BC (around 627 BC). During the 2700 years, *Dyrrachium* (Durres) reached its golden urban age during the 1<sup>st</sup>-4<sup>th</sup> centuries AD, when it was under Roman Imperial control. Nowadays, its underground is an archaeological treasure for Albania, and all of humanity. The Roman Amphitheater, Roman Aqueduct, Roman Public Baths, etc. are discovered from past archaeological excavations. In recent years, archaeological evidence has discovered data for its urbanization in the 1<sup>st</sup>-4<sup>th</sup> centuries AD. So, *insulae*, roads, sidewalks, sewers, etc. have been discovered in the recent archaeological excavation. The results of this article are to summarize the archaeological discoveries in the recent excavations in Durres. In conclusion, the archaeological traces we will show will testify to the level of urbanization of *Dyrrachium* in the Roman Imperial Period.

**Keywords:** The Hippodamian Plan, sewers, *insulae*, roads, sidewalks

## ENHANCE THE GAS-SENSING PERFORMANCES OF METAL OXIDE (NiO) THIN FILMS FOR DETECTING NITROGEN DIOXIDE GAS

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### ABSTRACT

The structural and morphological characteristics of NiO synthesized via gas sensor was assessed by spray pyrolysis technique on glass substrate using various component of nickel nitrate hexahydrate [Ni(NO<sub>3</sub>)<sub>2</sub>.6H<sub>2</sub>O] solved on 100 ml distilled water to prepare various solution concentration (0.01, 0.03, 0.05, 0.07 and 0.1 M).

The results obtained with several characterization techniques such as XRD, AFM, are well consistent and suggest that the prepared films were uniform and well adherent to the substrates. All the films are polycrystalline in nature with a cubic which is known as rock salt structure having a preferential orientation along the (111) plane.

The morphology for NiO samples analyses using AFM show that the average diameter varies from 42.04 to 110.058 nm with increasing precursor concentration from 0.01 M to 0.1 M.

From the study, it was found that the gas sensitivity of NiO semiconductor, against NO<sub>2</sub> gas, directly correlated to the particles size, and its increases with increasing operating temperature.

**Keywords:** AFM, Gas Sensor, Metal Oxide Semiconductor, operating temperature, sensitivity .

## THE PRESENCE OF TOXOCARA CANIS AND ANCYLOSTOMIDAE SP. AT PET DOGS IN THE BELGRADE AREA

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### ABSTRACT

Dogs belong to the group of animals that were the first to be domesticated. They live in cohabitation with humans and share their environment much more intimately than any other animal specie. Dogs are carriers and the true hosts to large numbers of species of zoonotic parasites like *Toxocara canis*, *Ancylostomidae*, *Echinococcus* sp. and etc. whose eggs they eliminate through feces and polluted public places. For these reasons, since 1993, in Belgrade parks and public areas have been continuously inspected for parasitic contamination with dog excrement. At the same time, the feces of owned and non-owned dogs from those areas are control for the presence of parasites. In our paper we presented result of examination of pet dogs in Belgradea area to presence of parasites infection with a special focus on *Toxocara canis* and *Ancylostoma* sp. During 2022 we examined feces of 137 pets dogs. All animals had clinical symptoms that indicated parasitic infections (weight loss, stunted growth, swelling of the stomach in puppies, foul-smelling diarrhea; feces with blood, with findings of swallowing, etc.). Fecal samples we examined with flotation methods and determination of parasite eggs was made on the basis of their morphological characteristics During our examination presence of parasites we found at 37.46% animals. *Ancylostomidae* sp. were found in 40.15% and *Toxocara canis* in 30.29%. In addition to the parasites themselves important to the health of dogs, they have a great epidemiological significance. The high prevalence of zoonotic parasites indicates a potential risk to human health.

**Keywords:** dogs, *Toxocara canis*, *Ancylostomidae* sp., epidemiology, Belgrade

**TRANSITION METAL COMPLEXES OF DRUG BASED SCHIFF LIGAND: SYNTHESIS, CHARACTERIZATION AND IN VITRO BIOLOGICAL EVALUATION**

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**ABSTRACT**

Synthesis of novel Schiff base ligand was done by the condensation of drug and aldehyde. This Schiff base was further used to prepare a series of copper (II), cobalt (II), zinc (II), nickel (II), manganese (II), iron (II) complexes. The ligand and metal complexes were characterized by using different instruments like FT-IR, <sup>1</sup>H NMR, <sup>13</sup>C NMR, Mass, Atomic absorption spectroscopy, Elemental analyzer, UV-visible Spectrophotometer, Evans balance and Conductivity meter. The synthesized ligand and transition metal complexes were tested against various bacteria and fungi. These studies demonstrated the enhanced activity of metal complexes against reported microbes when compared with free Schiff base ligand.

**Keywords:** Schiff base, metal complex, drug, aldehyde, Biological study

**SHORT DENTAL IMPLANTS WITH A PLATFORM SWITCH AND A LASER MICRO-GROOVED CORONAL DESIGN SUPPORTING SINGLE CROWNS IN PROSTHETIC REHABILITATION OF ATROPHIC POSTERIOR JAWS: A MULTICENTER RETROSPECTIVE STUDY**

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**ABSTRACT**

The implant-prosthetic rehabilitation of the atrophic posterior maxilla represents an important and current challenge in dentistry due to both the bone density and the anatomical limitations. This multicenter retrospective study aimed to evaluate implant success, marginal bone loss, peri-implant complications, and implant/patient-related risk factors around 132 short laser micro grooved platform switched dental implants used for prosthetic rehabilitation of atrophic posterior jaws. A chart review was used for this retrospective multicenter study which involved five private dental clinics. Variables, such as age, sex, smoking habits, history of periodontitis, systemic diseases, medications, anatomical location, diameter and length of implants, crown-to-implant ratios and type of placement were collected. A total of 132 short implants placed in 84 patients followed for 3/5 years (mean time  $4.2 \pm 0.8$  years) were reviewed. Eight short implants failed. Peri-implantitis was reported as the primary cause of failure (5/8, 62.5%). Cumulative success rates were 93,9% and 95% for implant- and patient-based analyses, respectively. The mean marginal bone loss was  $0.38 \pm 0.7$  mm at mesial and  $0.39 \pm 0.6$  mm at distal aspects. Univariate regression models revealed that the following characteristics, female, smoking and history of periodontitis, have a significant negative influence on short implant success at the implant and patient levels. Platform switch, laser-microgrooved short implants in atrophic alveolar ridge of posterior jaw showed high success rates after 3/5 years of function with stable marginal bone levels.

**Keywords:** Short dental implant, platform switch and a laser micro-grooved collar.

## 2D QSAR STUDIES ON A SERIES OF COUMARIN DERIVATIVES AS INHIBITORS OF CK2

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### ABSTRACT

Drug discovery and design are inextricably linked to various branches of chemistry, particularly organic chemistry. Many aspects of chemistry must be involved in order to translate knowledge of the molecular, genetic, and cellular bases of cancer into effective therapies. Thus, the goal of this research is to identify promising active compounds for coumarin as CK2 protein kinase inhibitors using a QSAR model and drug similarity analysis. CK2 is a ubiquitous Ser/Thr-specific protein kinase that is required for cell cycle viability and progression. CK2 levels are particularly high in proliferating, normal, or transformed tissues, and transgenic mice expressing its catalytic subunit are responsible for lymphomas. The work began with the optimization of the equilibrium structures of the basic coumarin in order to select the most reliable forecasting approach compared to experimentation and at the lowest computational cost. Following our research, we conduct a multiple linear regression (MLR) analysis to generate QSAR models. An external validation research was done because the results show that the QSAR model of CK2 inhibitory activity is robust and has extremely strong prediction capacity, as indicated by R<sup>2</sup> values of 0.951 and 0.927, respectively, following linear regression analysis. The investigation using QSAR models is successful in screening 34 candidate chemicals. Following that, the compounds under consideration were evaluated for drug-likeness and reactivity (ADME, golden triangle, lipophilicity indices). The results reveal that when supplied orally, the majority of the substances have no bioavailability issues.

The data also aid in determining which chemicals do not have clearance issues, as well as which are the most stable and reactive among those examined. The anticipated findings of this study may aid in the development of novel coumarins with significant CK2 inhibitor activity.

**Keywords:** coumarine, CK2, QSAR, MLR.



## SYNTHESIS, ANTIMALARIAL PROPERTIES AND 2D-QSAR STUDIES OF FARNESYLTRANSFERASE INHIBITORS

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### ABSTRACT

The development of *farnesyltransferase* inhibitors based on the benzophenone scaffold directed against *Plasmodium falciparum* is considered a strategy in malaria treatment. In this work, quantitative structure–activity relationship (**QSAR**) was performed to predict the protein *farnesyltransferase* (**PFT**) inhibitory activities for a series of 36 benzophenone derivatives. The data set was divided into two subsets of training and test sets, and the best model using **multiple linear regression (MLR)**, with the values of internal and external validity ( $R^2 = 0.884$ ,  $R^2_{adj} = 0.865$ ,  $R^2_{pred} = 0.821$ ,  $Q^2_{cv} = 0.822$  and  $R^2_p = 0.811$ ) was found in agreement with the Tropsha and Golbraikh criteria. The applicability domain (AD) was determined using the Williams plot to describe the chemical space for the model used in this study. The model shows that antimalarial activities of benzophenone depend on  $\log P$ ,  $bpol$ ,  $MAXD_n$ , and  $FMF$  descriptors. These indications prompted us to design new benzophenones PFT inhibitors and predict the value of their antimalarial activities based on the MLR equation. Docking results reveal that the newly designed benzophenones bind to the hydrophobic pocket and polar contact with high affinity. The predicted results from this study can help to design novel benzophenone as inhibitors of human **PFT** with high antimalarial activities.

**Key Word** : QSAR, docking, benzophenone, PFT inhibitory, antimalarial.

## DOCKING AND SCORING IN VIRTUAL SCREENING FOR DRUG DISCOVERY

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### Abstract

Breast cancer is the most common type of female cancer. One class of hormonal therapy for breast cancer drugs -non steroidal aromatase inhibitors- are triazole analogues. In this work a fundamental and original research was made on the molecule of triazole heterocyclic, whose the aim is to predict the reactivity and biological activity studied of the compound. It is based on different computational and approaches used in computer aided -drug-design. (SPR, QSAR, molecular docking, ADMET). A study of structure – property relationships (SPR) for 1,2,3 triazole derivatives has been carried. A linear quantitative structure activity relationship model is obtained using Multiple Linear Regression (MLR) analysis as applied to a series of triazole derivatives with inhibitory activity of the aromatase. The accuracy of the proposed MLR model is illustrated using the following evaluation techniques: cross validation, and external test. Docking process, the interaction and binding of ligands – protein were done and visualized using software Molegro Virtual Docking. Molinspiration and ADMETSAR web servers used to calculate ADMET and physicochemical properties of the target compounds respectively. The results are reported and discussed in the present investigation. A close agreement with experimental results was found which improves the affinity of the present work.

**Key Word :** 1,2,3-triazole, aromatase inhibitory, density functional theory, QSAR, MLR, ADMET, docking molecular

## THE EVOLUTION OF VISUAL ART IN CULTURAL MEDIA

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### ABSTRACT

The study of cultural media is the main focus of this work, with a focus on the visual arts in particular. Visual art is a potent medium that has been used for millennia to communicate difficult concepts and feelings. We can better understand both the works of art themselves and the cultural environment in which they were produced by dissecting and interpreting works of visual art. Over time, artists have encountered a variety of difficulties, including societal expectations and limitations on their artistic expression. However, they have persisted and developed, producing works that are a reflection of their deepest feelings and thoughts. Even art historians are attempting to close the gap between culture and the visual arts by providing a subtly effective means of aiding people in understanding and appreciating art. Visual art has gained prominence over time and now plays a crucial role in everyday life. People are exposed to many different types of visual communication and images from an early age, which can have a profound effect on their development. Digital learning is being prioritized in primary and secondary schools to reflect this, enabling pupils to interact with and learn from visual art in novel ways. In general, the investigation of visual art and its influence on culture is an exciting area of study. We can better understand the ability of visual art to communicate complicated concepts and emotions by examining the development of visual art and its place in human life.

## PERSONIFICATION OF WOMEN IN AMELIORATION OF SCIENCE AND TECHNOLOGIES

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### **ABSTRACT**

It is to be ensured that a people centric sustainable development ensues women's equal access to science and technology, education, training, economic resources, information, communication and marketing. Women constitute half of humanity, yet the number in mathematics, physical science, engineering etc is low. Also, these professional women seldom reach the pinnacle of the hierarchy in academic and research institutions. Science, Technology, Innovations and discoveries in all nations can be strengthened through greater participation of women.

Full inclusion of women in science and technology endeavors and ensuring many leadership position for them. Utilization of the talents of women should not be viewed only from the perspective of gender equity. It must be understood that full involvement of women in scientific and technological efforts in today essential for rapid economic development and sustainable happiness.

Distinct consideration needs to be paid to get more women scientists in leadership positions which is a foremost hindrance in collective global S &T capacity. There can be no worldwide S & T capacity building without women. There is a broad array of trials which necessitate all-round application of science and technology; financial growth has to be based on S & T programs. There are several industrial walks which are extensively open such as entrepreneurship bases on S & T, Bio-business, Incubators.

Limited fundamental needed for technological empowerment of women at the grass root level such as setting up knowledge centers, institutional framework generating a cadre of women scientists and engineers. Skill empowerment to ensure livelihood at the grass root level, identification and development of appropriate technologies. The basic philosophy must be to advocate S & T application which would foster job oriented economic growth and social happiness.

The paper will discuss the state of art followed by the impacts, scopes, challenges, limitations and future extensions related to the role of women in science and technology and skill development related to it. Exclusive attention will be given working women.

## SMART CITY SIMULATION

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### **ABSTRACT**

IoT research will focus on current and new issues, including creating lightweight, energy-efficient protocols and the vital requirement for solid security and privacy methods. Using simulators to develop and test the initial proofs-of-concept and subsequent prototypes, IoT research can be a complex process that spans both virtual and physical domains. Here is a comparison of the available simulation tools, which have been grouped according to the depth of coverage of the IoT architecture layers to aid researchers in planning IoT research activities. To undertake extensive, reliable, and efficient IoT simulations and prototype evaluations, the IoT research community must address several open difficulties of current IoT simulators.

**Keywords:** IoT, Smart City, Simulators, Arduino Uno, Sensors, Libraries

## DECEPTIVE ADVERTISING IN THE ONLINE ENVIRONMENT

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### SUMMARY

The Internet world is becoming a place that no longer offers users only communication and entertainment, but has also become a place where there is an increasing number of malicious scams, which can cause great financial and emotional damage to users. There is a lot of pressure on people to live up to the imposed social norms and expectations, which primarily concerns beauty, clothing, that is, products that simply must be had, so that the individual does not feel excluded from the group. Aware of such conformist tendencies of a large number of people, companies often resort to deceptive (misleading) advertising messages in order to reach naive consumers. These messages often make untrue claims about the quality or usefulness of products and services. Online applications, which are widely available today, are also used to enhance the images and videos of supermodels promoting brands in such advertisements. Increasingly, social media influencers are being hired to launch this kind of misleading content. They recommend products to their followers that companies have paid them to promote, which they probably wouldn't use themselves. Influencers on social media are perceived by consumers as creators of public opinion and credible sources of information that can be trusted. However, when they come into possession of a product advertised with such deceptive advertising, consumers realize that they have been deceived, which results in their disappointment, anger and financial loss. Recently, in many countries, this kind of deceptive advertising has become increasingly common, both in the real world and in the online environment, which is why companies are increasingly being sanctioned for such misleading activities. In the race for higher profits and better sales, companies are not aware that by such action can cause great damage to themselves, which is primarily reflected in the loss of good reputation and trust of consumers.

**Keywords:** Deceptive Advertising, Consumers, Online Environment.

**‘DAVID FOUND ZIKLAG BURNED WITH FIRE’: ECOTERRORISM IN NIGERIA AND PLACE OF FAITH-BASED COMMUNITIES**

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**ABSTRACT**

This article examines the phenomenon of ecoterrorism in Nigeria and its implications for faith-based communities. In Nigeria, there have been numerous cases of ecoterrorism, committed by Fulani herdsmen against the indigenous populations. Literature has laid emphasis on ecoterrorism, with its implications for FBO's sidelined. The phenomenon of ecoterrorism started in the Old Testament, when David and his men burned Ziklag with fire, destroying the houses, farmlands, and other properties there. From the documentary analysis, findings reveal that there are divergent reasons given for the prevalence of ecoterrorism in Nigeria. First, it is believed that the Fulani herdsmen have the ambition of taking over the lands of non-Fulani people. Second, it is alleged, especially by Christians, that the ecoterrorism that is being carried out by Fulani herdsmen is an attempt to enforce Islam on the entire populace. Third, lack of education on pastoralism has sustained ecoterrorism in Nigeria. Also, the results indicate that ecoterrorism affects women, children, and property more than any terrorist attack. Recommendations are discussed.

**Keywords:** Ecoterrorism, Ziklag, David, FBO, Jihad, Fulani Herdsmen, Christians, Terrorism

**DIGITIZED THE NATIONAL ART GALLERY IN CAPITAL OF PAKISTAN – A REVIEW BY  
DIRECTOR (HRIMS)**

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**ABSTRACT**

The focal point and focal point in the organization of this program is exploring the hidden competencies of students and young people. Dr. Faisal digitizes and paves the way for young talents, even in relation to children. The latest examples and advancements require computerized reasoning and his Machine Learning wok of Pakistan that can be exhibited and implemented in all development and progress administrations. The essential reason and characteristic of public puppetry is to enhance the shrinking professionalism of puppetry, making young people and norms, including puppets, appear delicate and simple as props. It is necessary for the further development and protection of the intangible social heritage. Involved in the development of various shows/programs focused on neighborhood normalcy, social order and heritage. The Visual Articulation Department was founded by him in 1974 and was originally named "Plastic Articulation Department". The department consists of his two useful parts: a public exhibition of craft and a setup area. The Chamber of Commerce believes that imaginative articulation is accessible to all and that specialists and craft packs are obliged to receive financial assistance and resources to assert themselves on the home and world stage. We desire to create an environment conducive to the flourishing of human articulation. To achieve its priorities, the Council relies on four fundamental key impulses: Supports and nurtures imaginative articulation. Activate a greater present interest through the flock. Create breaking points and resources. Work on and update regional and general reachability. We, the Pakistan Public Imaginative Arts Commission, recognize that all kinds of means should sustain public goals and contribute to the advancement of insignificant social heritage and the creation of a delicate picture of the Pakistani way of life. doing.

**Keywords:** competencies, exhibited, characteristic, normalcy, resources.



## VERSES AND HADITS ABOUT WORK ETHICS

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### ABSTRACT

The purpose of this research is to find out the meaning and principles of work ethic, verses, hadiths, and recommendations for work. This research method uses a library approach that originates from books and journals according to the topic and research focus. The results of the literature review in this study concluded that Islamic teachings clearly provide inspiration and motivation for Muslims to work as well as possible to achieve the best results, and of course this does not ignore the ethical foundation or basic and general principles contained in Islamic teachings. Work not only glorifies oneself as a human being, but also as a manifestation of good deeds, and has a high value of worship before God so that one can express oneself as a human being, God's most perfect creature in the world. The Qur'an encourages each individual to actively work and produce all aspects that are useful for the needs of society. Islam gives a very high appreciation to those who try their best to make a living. The Prophet forbade his people to beg and sit, but encouraged him to work, seek God's grace, carry out business that is permitted by the Shari'a, exercise rights which are natural, take ways that facilitate employment and services for all human beings for the welfare of the people.

**Keywords:** Work, Islamic Teachings and Muslims

## THE INFLUENCE OF SOCIAL MEDIA ON YOUNG MOROCCAN VOTERS

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### **Abstract**

This study examines how social media impacted Moroccan youth's political participation in the 2021 election, using data from 100 university students. Results show that social media significantly influenced political stance, with most respondents deciding to vote based on social media information. This highlights social media's importance in shaping political participation and voting decisions in the context of the 2021 Moroccan election.

**Keywords:** Media, Social Media, Politics, Voting Decision, Morocco 2021 election, Political Participation.

## ROBOTİK KODLAMA UYGULAMALARININ LİSE ÖĞRENCİLERİNİN PROBLEM ÇÖZMEYE YÖNELİK YANSITICI DÜŞÜNME BECERİSİ VE ROBOTİK TUTUMUNA ETKİSİ

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### ÖZET

Bu çalışmanın amacı, robotik ve kodlama uygulamalarının lise öğrencilerinin problem çözmeye yönelik yansıtıcı düşünme becerisi ve robotik tutumu üzerindeki etkisini incelemektir. Çalışmada, tek gruplu öntest-sontest kontrol grupsuz yarı deneysel modeli ile yürütülmüştür. Katılımcıları, Trakya bölgesinde Edirne il sınırları içerisinde bulunan Milli Eğitim Bakanlığı'na bağlı bir Anadolu lisesinde öğrenim gören ve çalışmaya gönüllü katılım sağlayan 20 lise öğrencisi oluşturmaktadır. Robotik ve kodlama uygulamalarının eğitim süreci, robotik ve kodlama eğitimi sertifikası olan bir eğitmen tarafından yürütülmüştür. Ayrıca çalışmada, öğrencilere ve eğitime destek amaçlı Trakya Üniversitesi Eğitim Fakültesi Bilgisayar ve Öğretim Teknolojileri Eğitimi bölümünde son sınıfta öğrenim gören dört üniversite öğrencisi görev almıştır. Çalışmada deney süreci, 6 haftalık toplam 12 saatlik bir eğitim ile gerçekleştirilmiştir. Çalışma verilerini toplamak için "Problem Çözmeye Yönelik Yansıtıcı Düşünme Beceri Ölçeği" ve "Robotik Tutum Ölçeği" kullanılmıştır. Analiz sürecinde ise deney öncesi ve deney sonrası uygulanan ölçekler SPSS 17 programı kullanarak analiz edilmiştir. Ayrıca bu analiz sürecinde verilerinin normal dağılım gösterdiği belirlendiğinden analizler parametrik test teknikleri gerçekleştirilmiştir. Çalışmada, robotik ve kodlama uygulamalarının lise öğrencilerinin problem çözmeye yönelik yansıtıcı düşünme becerisi ve robotik tutumuna istatistiksel anlamda anlamlı derece katkı sağlamadığı görülmüştür. Fakat ölçeklerden elde edilen ortalama puanlara göre problem çözmeye yönelik yansıtıcı düşünme becerisi ve robotik tutumu son test puanlarının, lise öğrencilerinin ön test puanlarına göre yüksek olduğu ortaya çıkmıştır. Son olarak, yürütülen çalışmada elde edilen sonuçlar doğrultusunda tartışmalar yürütülmüş ve bazı öneriler sunulmuştur.

**Anahtar kelimeler:** Problem çözme, robotik, kodlama, lise öğrencileri.

### THE EFFECT OF ROBOTIC CODING PRACTICES ON HIGH SCHOOL STUDENTS' REFLECTIVE THINKING SKILLS TO PROBLEM SOLVING AND ROBOTIC ATTITUDE

### ABSTRACT

The aim of this study is to examine the effects of robotics and coding applications on reflective thinking skills and robotic attitudes towards problem solving of high school students. The study was conducted with a single-group pretest-posttest quasi-experimental model without a control group. The participants consist of 20 volunteer high school students studying in an Anatolian high school affiliated to the Ministry of National Education, located within the borders of Edirne province in the Thrace region. The training process of robotics and coding applications was carried out by an instructor with a robotics and coding training certificate. In addition, four senior university students studying at the Department of Computer Education and Instructional Technologies at Trakya University Education Faculty took part in the study to support students and trainers. In the study, the experimental process was carried out with a total of 12 hours of training for 6 weeks. "Reflective Thinking Skills Scale for Problem Solving" and "Robotic Attitude Scale" were used to collect study data. In the analysis process, the scales applied before and after the experiment were analyzed using the SPSS 17 program. In addition, since it was determined that the data showed normal distribution during this analysis process, the analyzes were carried out with parametric test techniques. In the study, it was seen that robotics and coding applications did not statistically significantly contribute to the reflective thinking skills and robotic attitudes of high school students towards problem solving. However,

according to the average scores obtained from the scales, it was revealed that the post-test scores of reflective thinking skills and robotic attitude towards problem solving were higher than the pre-test scores of high school students. Finally, discussions were carried out in line with the results obtained in the study and some suggestions were presented.

**Keywords:** Problem solving, robotic, coding, high school students.

## YARDIMCI TEKNOLOJİLER: ÖZEL EĞİTİMDE GÜNCEL GELİŞMELER

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### ÖZET

Çağımızda yaşanan teknoloji devrimi ile endüstri, sağlık ve bankacılık gibi birçok sektörde olduğu gibi eğitim-öğretimde de önemli gelişmeler yaşanmaktadır. Hali hazırda kullanılan projeksiyon, bilgisayar, tablet ve akıllı tahta gibi teknolojik materyallere ek olarak yapay zekâ, arttırılmış gerçeklik ve sanal gerçeklik gibi yeni teknolojilerin eğitim-öğretimde kullanılması her bireyin olduğu gibi araştırmacıların ve eğitimcilerin de dikkatini çekmektedir. Günümüzde özel gereksinimli bireylerin bağımsız şekilde yaşamlarını sürdürebilmeleri için eğitim ortamlarını düzenleyerek bu ortamlarda teknolojik materyallerin de kullanımının önemi vurgulanmaktadır. Özel gereksinimli bireylerin toplum içinde bağımsız şekilde işlevde bulunabilmesi için bu bireylerin özelliklerine göre eğitim programlarının oluşturulması gerekmektedir. Bu gereksinimler sadece akademik becerilerle sınırlı değildir. İş ve meslek hayatında yer almak, topluma uyum sağlamak ve toplum içinde bağımsız bir birey olarak hareket edebilmek için gereken birçok beceri özel gereksinimli bireylerin eğitim programlarında yer almalıdır. Özel gereksinimli bireylerin eğitim programlarında kullanılan bilimsel dayanaklı birçok uygulama bulunmaktadır. Bu uygulamaların etkililiğini belirlemeye çalışan kuruluşlar ise teknoloji temelli öğretimin önemine vurgu yapmaktadır. Bu bağlamda eğitimde teknoloji kullanımı "Eğitim Teknolojisi", "Öğretim Teknolojisi" ve "Yardımcı Teknoloji" kavramlarıyla ele alınmaktadır. Bu bilgiler ışığında bu çalışmada son 10 yılda özel eğitimde kullanılan yardımcı teknolojiler özellikle yeni nesil yardımcı teknolojiler ve bu materyallerin hangi becerilerin öğretiminde kullanıldığı incelenecektir. Bu çalışma sistematik bir derleme ya da meta-analiz niteliği taşımasa da ortaya konulacak bulgular özel eğitimde kullanılan yardımcı teknolojilerin neler olduğu ve yeni nesil teknolojilerin kullanım şekillerine ilişkin önemli sonuçlar ortaya koyacaktır. Ayrıca çalışmada elde edilecek bulgular ileriki araştırmalar için önemli nitelikte olacaktır.

**Anahtar kelimeler:** Yardımcı teknolojiler, Özel gereksinimli bireyler, Özel eğitim, Yapay zekâ, Sanal Gerçeklik.

### ASSISTIVE TECHNOLOGIES: CURRENT DEVELOPMENTS IN SPECIAL EDUCATION

#### ABSTRACT

With the technology revolution in our age, there are important developments in education and training, as in many sectors such as industry, health and banking.

The use of new technologies such as artificial intelligence, augmented reality and virtual reality in education, in addition to technological materials such as projections, computers, tablets and smart boards currently used, attracts the attention of researchers and educators as well as every individual. Today, the importance of using technological materials in these environments is emphasized by arranging educational environments so that individuals with special needs can live their lives independently. In order for individuals with special needs to function independently in society, education programs should be created according to the characteristics of these individuals. These requirements are not limited to academic skills. Many skills required taking part in business and professional life, to adapt to society and to act as an independent individual in society should be included in the education programs of individuals with special needs. There are many scientifically based applications used in the education programs of individuals with special needs. Organizations trying to determine the effectiveness of these practices emphasize the importance of technology-based teaching. In this context, the use of technology in education is discussed with the concepts of "Educational Technology",

"Instructional Technology" and "Assistant Technology". In the light of this information, in this study, assistive technologies used in special education in the last 10 years, especially new generation assistive technologies and which skills these materials are used in teaching will be examined. Although this study is not a systematic review or meta-analysis, the findings will reveal important results about the assistive technologies used in special education and the use of new generation technologies. In addition, the findings to be obtained in the study will be important for future research.

**Keywords:** Assistive technologies, Individuals with special needs, Special education, Artificial intelligence, Virtual Reality.

## UZAKTAN EĞİTİM İLE ÇOK ALANLI SANAT EĞİTİMİ YÖNTEMİNİN İLKÖĞRETİM 3. SINIF ÖĞRENCİLERİNE UYGULANMASI

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### ÖZET

Araştırmanın amacı, ZOOM üzerinden online olarak canlı dersler aracılığıyla ilkököl 3. Sınıf öğrencilerinin sanat etkinliklerinde çok alanlı sanat eğitimi yönteminin uygulanmasının sonuçlarını araştırmaktır. 2020-2021 eğitim öğretim yılı bahar döneminde, araştırmanın evrenini Ankara ili Gölbaşı ilçesi ilkökulda öğrenim öğrencilerden oluşturmuştur. Bu araştırmanın örneklemini ise, Ankara Gölbaşı ilçesine bağlı Şahin Sevin İlkokulundaki 3. sınıf öğrencilerinden 10 öğrenciyi kapsamıştır. Çalışmada küme örnekleme yöntemi kullanılmıştır. İlkokul 1. kademe 3. sınıf öğrencileriyle işlenen sanat eğitimi dersi kapsamında öğrenci resimleri arasından uzman görüşlerine dayanarak değerlendirmeler söz konusu olmuştur. Ayrıca uygulama sırasında öğrenciler gözlenip gözlem dokümanları oluşturulmuştur. Gözlem dokümanlarından elde edilen veriler okunup organize edilmiştir. Gözlem sonunda öğrenciler, uygulama konusu olan, "renk" çalışmalarında öğrenme ve öğretim ile ilgili kazanımlardan anlama, öğrenme, sorgulama, el becerisi, zamanlama, bilgiyi duruma uyarlama açısından başarılı veya başarısız olarak değerlendirilmiştir. Başarılı öğrenciler ✓ işaretiyle başarısız öğrenciler ise ✗ işaretiyle gösterilmiş olup her dersteeki gözlem sonunda bir değerlendirme yapılmış ve tablolar oluşturulmuştur. Veriler anlamlı bir şekilde bir araya getirilip öğrencilerin başarı durumları simgelerle belirtilerek çeşitli bulgularda elde edilmiştir. Araştırmanın sonucundan, çok alanlı sanat eğitimi ile işlenen derslerde 3.sınıf öğrencilerinin temel bilgi aktarımı, bilgiyi bir duruma uyarlama, sorgulama ve yorumlama açısından ne kadar ileri oldukları ve nasıl yaratıcı çalışmaları ortaya koydukları gibi sonuçları da ortaya çıkarmıştır.

**Anahtar Kelimeler:** çok alanlı sanat eğitimi, görsel sanatlar, öğrenme öğretme kazanımları

### APPLICATION OF MULTI-FIELD ART EDUCATION METHOD WITH DISTANCE EDUCATION TO 3rd GRADE STUDENTS IN PRIMARY EDUCATION

### ABSTRACT

The aim of the research is to investigate the results of the application of the multi-field art education method in the art activities of the 3rd grade students through online live lessons via ZOOM. In the spring semester of the 2020-2021 academic year, the population of the research consisted of primary school students in Gölbaşı, Ankara. The sample of this research, on the other hand, included 10 3rd grade students at Şahin Sevin Primary School in Ankara Gölbaşı district. Cluster sampling method was used in the study. Within the scope of the art education course taught with primary school 1st grade 3rd grade students, evaluations were made based on expert opinions among student paintings. In addition, students were observed during the application and observation documents were created. The data obtained from the observation documents were read and organized. At the end of the observation, the students were evaluated as successful or unsuccessful in terms of understanding, learning, questioning, manual dexterity, timing, and adapting the information to the situation in the "color" studies, which are the subject of application. Successful students are indicated with the sign ✓ and unsuccessful students are indicated with the sign ✗, an evaluation was made at the end of the observations in each lesson and tables were created. Various findings were obtained by bringing together the data in a meaningful way and indicating the success status of the students with symbols. As a result of the research, the results such as how advanced the 3rd grade students are in terms of transferring basic

knowledge, adapting the information to a situation, questioning and interpreting in the lessons taught with multi-field art education and how they put forward their creative works were also revealed.

**Keywords:** multi-field art education, visual arts, learning-teaching outcomes



**OKULLARDA TOPLUM YARARINA PROGRAM (TYP) KAPSAMINDA TEMİZLİK VE GÜVENLİK PERSONELİ ÇALIŞTIRILMASINA İLİŞKİN OKUL YÖNETİCİLERİNİN GÖRÜŞLERİ (YENİÇAĞA VE DÖRTDİVAN ÖRNEĞİ)**

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**ÖZET**

Bu çalışmanın amacı, MEB'na bağlı okullarda görev yapan okul yöneticilerinin, okullarda temizlik, güvenlik ve diğer işlerde personel istihdam edilmesini sağlayan Toplum Yararına Programına ilişkin görüşlerinin belirlenmesidir. Çalışma 2021-2022 eğitim-öğretim yılında Bolu ili Yeniçağa ve Dörtdivan ilçelerinde görev yapan 23 okul yöneticisinin görüşlerine dayanan nitel bir çalışmadır. Veriler yarı yapılandırılmış görüşme formu kullanılarak toplanmış, içerik ve betimsel analizle çözümlenmiştir. Araştırmada okullardaki temizlik, güvenlik vb. işlerinin TYP personeli tarafından yapılmasına ilişkin okul yöneticilerinin olumlu görüşleri gösterilen performans ve yönetimlerine; olumsuz görüşleri ise TYP istihdam biçimine ve bu durumun okullarda neden olduğu sonuçlara yönelik olmuştur. Sonuç olarak, TYP personeli okullar için faydalı görülmeyle birlikte, istihdam biçiminin ücret, iş devamlılığı, yıl içerisindeki çalışma süreleri gibi özlük konularında insan kaynakları yönetimi bakış açısıyla bütüncül bir şekilde düzenlenmesi gerekmektedir. Bunun yanında personel seçiminde okul yönetimlerine söz hakkı tanınması yönünde de okul yöneticilerinin görüşleri bulunmaktadır.

**Anahtar Sözcükler:** Toplum Yararına Program (TYP), Okul Temizliği, Okul Güvenliği, Okul Yönetimi, Yardımcı Okul Personeli

**OPINIONS OF SCHOOL MANAGERS ON THE EMPLOYMENT OF CLEANING AND SECURITY PERSONNEL IN SCHOOLS WITHIN THE SCOPE OF A SOCIETY BENEFIT PROGRAM (CAMPLE OF YENİÇAĞA AND DÖRTDİVAN)**

**ABSTRACT**

The aim of this study is to determine the opinions of school administrators working in schools affiliated to the Ministry of National Education about the Community Benefit Program, which provides the employment of personnel for cleaning, security and other jobs in schools. The study was carried out in Yeniçağa and Dörtdivan districts of Bolu province in the 2021-2022 academic year. This qualitative study is based on the opinions of 23 school administrators. Data were collected using a semi-structured interview form. Then it was analyzed with content and descriptive analysis. In the research, cleaning, security, etc. in schools. The positive opinions of school administrators regarding their work being done by CIP personnel are related to their performance and management. Their negative views are related to the type of employment of CIP and the situations that this situation causes in schools. As a result, CIP staff are seen as beneficial for schools. However, the wage earned personnel issues such as business continuity and working hours during the year should be organized in a holistic way from the perspective of human resources management. In addition, there are opinions of school administrators in the direction of giving the right to speak to school administrations in the selection of personnel.

**Key Words:** Community Benefit Program (TYP), School Cleaning, School Safety, School Management, Auxiliary School Staff

## YÖNETİCİ ADAYLARININ EĞİTİM KURUMU YÖNETİCİSİ OLMAYI İSTEME NEDENLERİ

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### ÖZET

Araştırma yönetici adaylarının eğitim kurumu yöneticisi olmayı isteme nedenlerini ortaya çıkarmayı amaçlamaktadır. Araştırmada nitel araştırma desenlerinden olgu bilim (fenomenoloji) deseni benimsenmiştir. Araştırma verileri yarı yapılandırılmış görüşme formu yardımıyla, dijital ortamda, 2022 yılı içerisinde toplanmıştır. Katılımcılar Eğitim Kurumlarına Yönetici Seçme Sınavına (EKYS) hazırlık temalı sosyal medya gruplarında yer alan yönetici adaylarından arasından gönüllülük esasına göre seçilmiştir. Elde edilen verilerin betimsel ve içerik analizi yöntemleriyle çözümlenmesinde 4 kategori altında yer alan 24 koda ulaşılmıştır. Elde edilen kod ve kategoriler çalışmanın bulgular kısmında tablolar halinde sunulurken, çalışmanın güvenilirliğini artırmak amacıyla doğrudan katılımcı görüşlerine de yer verilmiştir. Araştırma sonuçlarına göre yönetici adaylarının eğitim kurumu yöneticisi olmayı istemelerinin nedenleri temel olarak ekonomik nedenler, özlük haklarına ilişkin nedenler, kariyer hedeflerine ilişkin nedenler ve son olarak mevcut görevlerine ilişkin nedenler olarak belirtilebilir. Bu başlıklar altında yer alan alt nedenlere bakıldığında ise ekonomik neden olarak hem normal dönemde yöneticilik görevi karşılığı hem de yaz aylarında çalışılması nedeniyle fazladan ek ders ücreti elde etme; özlük hakları ve çalışma koşullarına ilişkin nedenlerde yöneticilerin çalışma şartlarının daha rahat ve esnek olması; kariyer hedefi olarak şube müdürü ve daha üst kadrolara atanmak, eğitim kurumu müdürü olarak atanmak; mevcut görevlerine ilişkin nedenlerde ise eğitim kurumu yöneticisi olup kurumlarda etkililiği ve verimliliği artırıp, eğitimsel hedeflerini gerçekleştirmek, öğretmenlik motivasyon ve doyumunun azalması, geçmişte karşılaşılacak olumsuz yönetici örnekleri, branşında belirli bir yaştan sonra öğretmenliğin zor olması gibi sonuçları ile karşılaşmaktadır.

**Anahtar Kelimeler:** Okul müdürü, okul yöneticisi olmayı isteme, yönetici aday

### REASONS FOR WANTING TO BE AN EDUCATIONAL INSTITUTION

#### ABSTRACT

The research aims to reveal the reasons why administrator candidates want to be administrators of educational institutions. The phenomenology design, one of the qualitative research designs, was adopted in the study. The research data were collected digitally in 2022 with the help of a semi-structured interview form. Participants were selected on a voluntary basis from among the administrator candidates in the social media groups with the theme of preparation for the Executive Selection Exam for Educational Institutions (EKYS). In the analysis of the obtained data with descriptive and content analysis methods, 24 codes under 4 categories were reached. While the codes and categories obtained were presented in tables in the findings section of the study, direct participant opinions were also included in order to increase the reliability of the study. According to the results of the research, the reasons why administrator candidates want to be administrators of educational institutions can be mainly stated as economic reasons, reasons related to personal rights, reasons related to career goals and finally reasons related to their current duties. When we look at the sub-reasons under these headings, the economic reason includes both the wage earned in return for the managerial position in the normal period and the extra wage due to working in the summer months. Among the reasons related to personal rights and working conditions are that the working conditions of the managers are more comfortable and flexible. As a career goal, it was concluded to be appointed to higher positions and to be appointed as the director of the educational institution. Finally, the reasons related to his

current duties are to be an educational institution manager, to increase effectiveness and efficiency in institutions, to achieve educational goals, to decrease teaching motivation and satisfaction, to negative examples of managers encountered in the past, in my branch, there are consequences such as being difficult to teach after a certain age.

**Keywords:** School principal, wanting to be a school administrator, administrator candidate

## SOSYAL BİLGİLER 5. 6. ve 7. SINIF DERS KİTAPLARINDA MESLEKLERİN İNCELENMESİ

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### ÖZET

Meslek aktarımında eğitimin rolü çok önemlidir. Meslekleri öğretmede Sosyal Bilgiler dersinin rolü inkâr edilemez bir gerçektir. Bu araştırma, meslek konularının sosyal bilgiler ders kitaplarına yansımalarını ortaya koymak amacıyla gerçekleştirilmiştir.

Araştırma, 2022-2023 Eğitim-Öğretim yılında okutulan 5, 6 ve 7.sınıf sosyal bilgiler ders kitaplarıyla sınırlandırılmıştır. Nitel araştırma yöntemlerinden doküman incelemesi yönteminden, kaynak ve materyal olarak da 5, 6 ve 7. sınıf ders kitaplarından yararlanılmıştır. İncelenen öğretim programı ve ders kitaplarında meslek konusu üniteler çerçevesinde metin ve görseller temel alınarak incelenmiştir.

Bu araştırma, 5.6. ve 7. sosyal bilgiler ders kitaplarının içerisinde meslek konusuna ne kadar yer verildiğini ortaya koymayı amaçlamaktadır. Bu araştırma doğrultusunda 2022-2023 eğitim öğretim yılında kullanılmakta olan 5.6.ve 7. sınıf sosyal bilgiler ders kitaplarında bulunan metinler, kullanılan görseller ve verilen örnekler meslek konusu açısından incelenmiştir.

Sosyal bilgiler 5. 6. ve 7. sınıf ders kitaplarında ve yenilenen sosyal bilgiler dersi öğretim programında (2018) meslek konusuna yönelik ders kitapları içerisindeki ifadelerin ve görsellerin incelendiği bu çalışmada nitel araştırma yöntemlerinden biri olan doküman incelemesi kullanılmıştır.

Araştırma sonucunda sosyal bilgiler dersi öğretim programı ve ders kitaplarında meslek konusunda eksiklerin olduğu görülmüştür. Meslek konusun özellikle 6. Sınıf ders kitaplarında çok fazla yer verilmemesi önemli bir eksik olarak göze çarpmaktadır. Ders kitaplarında yer alan meslek konusuna yeterli düzeyde yer verilmediği ve önemli ölçüde eksiklerin olduğu görülmüştür. Bu eksiklikler neticesinde ders kitapları içerisinde meslek konusuna daha fazla yer verilmesi gerektiği çıkarımına varılmıştır.

**Anahtar Kelimeler:** *Sosyal Bilgiler, Ders Kitabı, Meslekler*

## EXAMINATION OF PROFESSIONS IN SOCIAL STUDIES 5th, 6th and 7th GRADE TEXTBOOKS

### ABSTRACT

The role of education in vocational transfer is very important. The role of Social Studies course in teaching professions is an undeniable fact. This research was carried out in order to reveal the reflections of professional subjects in social studies textbooks. The research was limited to the 5th, 6th and 7th grade social studies textbooks taught in the 2022-2023 academic year. Document analysis method, one of the qualitative research methods, and 5th, 6th and 7th grade textbooks were used as sources and materials. In the examined curriculum and textbooks, the subject of occupation was examined within the framework of units based on text and visuals.

This research, 5.6. and 7. aims to reveal how much space is given to the subject of profession in social studies textbooks. In line with this research, the texts, the images used and the examples given in the 5.6th and 7th grade social studies textbooks used in the 2022-2023 academic year were examined in terms of profession. Document analysis, one of the qualitative research methods, was used in this study, in which the expressions and visuals in the textbooks on the subject of profession in the social studies 5th, 6th and 7th grade textbooks and the renewed social studies curriculum (2018) were examined.

As a result of the research, it was seen that there are deficiencies in the social studies course curriculum and textbooks. The fact that the subject of profession is not included in the 6th grade textbooks is an important deficiency. It has been observed that the subject of occupation in the textbooks is not sufficiently included and there are significant deficiencies. As a result of these deficiencies, it was concluded that the subject of profession should be given more place in the textbooks.

**Keywords:** *Social Studies, Textbook, Professions*

## SPOR BİLİMLERİ FAKÜLTESİ ÖĞRENCİLERİNİN SINAV DÖNEMİNDE ALGILADIKLARI STRES İLE ÖFKEYLE İLİŞKİLİ DÜŞÜNME VE DAVRANIŞLARININ İNCELENMESİ

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### ÖZET

Bu çalışmanın amacı, spor bilimleri fakültesinde öğrenim gören lisans öğrencilerinin sınav döneminde algıladıkları stres ile öfke ile ilişkili düşünme ve öfke ile ilişkili davranışlarının incelenmesi ve arasındaki ilişkinin belirlenmesidir. Araştırmaya Süleyman Demirel Üniversitesi Spor Bilimleri Fakültesinde öğrenim gören 700 faal lisans öğrencisinden basit tesadüfî yöntemle seçilmiş 426 öğrenci gönüllü olarak katılmıştır. Çalışmada, veri toplama aracı olarak; kişisel bilgi formu, algılanan stres ölçeği (ASÖ) Cohen, Kamarck ve Mermelstein (1983) tarafından geliştirilen ve Eskin ve Ark. (2013) tarafından Türkçeye uyarlanıp geçerlilik, güvenilirliği alınmış ölçek ve Balkaya (2001) tarafından geliştirilen çok boyutlu öfke ölçeği' nin "Öfkeyle İlişkili Davranışlar ve Öfkeyle İlişkili Düşünceler" alt ölçekleri kullanılmıştır. Verilerin analizinde IBM SPSS istatistik paket programı kullanılmıştır. Katılımcıların ölçeklerden aldıkları puanların aritmetik ortalama ve standart sapma  $X \pm Sd$  olarak sunulmuştur. Ölçeklerden elde edilen puanların arasındaki ilişkiyi ortaya koyabilmek için Pearson momentler çarpımı korelasyon analizi (r) uygulanmıştır.

Sonuç olarak; öğrencilerin sınav döneminde algıladıkları stres ile öfke ile ilişkili davranışlar alt başlıklarından; sakin davranışlar arasında ilişki tespit edilmezken, saldırgan davranışlar ve kaygılı davranışlar arasında pozitif yönde ilişki tespit edilmiştir. Öfke ile ilişkili düşünceler alt başlıklarından; öfkesine yönelik düşünceler, diğerlerine yönelik öfkeli düşünceler, kendisine yönelik öfkeli düşünceler, dünyaya yönelik öfkeli düşünceler arasında pozitif ilişki tespit edilmiştir.

Tüm bu bulgular sonucunda, spor bilimleri fakültesi öğrencilerinde stresin ve öfkenin göz ardı edilmemesi gereken bir unsur olduğunu ve stresin sebep olduğu öfke ile başa çıkma stratejilerinin öğrencilere öğretilmesi gerektiğini düşünmekteyiz.

**Anahtar Kelimeler:** *Algılanan Stres, Öfke, Davranış, Düşünme*

### INVESTIGATION OF THE FACULTY OF SPORTS SCIENCES STUDENTS' THINKING AND BEHAVIORS RELATED TO STRESS AND ANGER PERCEIVED DURING THE EXAM PERIOD

### ABSTRACT

The aim of this study is to examine and determine the relationship between stress, anger-related thinking and anger-related behaviors of undergraduate students studying at the faculty of sports sciences during the exam period. 426 students selected by simple random method from 700 active undergraduate students studying at Süleyman Demirel University Faculty of Sport Sciences participated in the research voluntarily. In the study, as a data collection tool; personal information form, perceived stress scale was developed by Cohen, Kamarck, and Mermelstein (1983) and Eskin et al. (2013) and validity and reliability of the scale, and the "Anger-Related Behaviors and Anger-Related Thoughts" subscales of the multidimensional anger scale developed by Balkaya (2001) were used. IBM SPSS statistical package program was used in the analysis of the data. The arithmetic mean and standard deviation of the scores of the participants from the scales are presented as  $X \pm Sd$ . Pearson product-moment correlation analysis (r) was applied to reveal the relationship between the scores obtained from the scales.

As a result; Among the sub-headings of the stress and anger-related behaviors perceived by the students during the exam period; while no relation was found between calm behaviors, a positive correlation was

found between aggressive behaviors and anxious behaviors. From the sub-headings of thoughts related to anger; a positive relationship was found between thoughts about anger, angry thoughts towards others, angry thoughts about himself, and angry thoughts about the world.

As a result of all these findings, we think that stress and anger are an element that should not be ignored in sports sciences faculty students and that coping strategies with anger caused by stress should be taught to students.

**Keywords:** Perceived Stress, Anger, Behavior, Thinking

## SPOR BİLİMLERİMİ FAKÜLTESİNDE OKUYAN ÖĞRENCİLERİN SOSYAL PROBLEM ÇÖZME BECERİLERİNİN İNCELENMESİ

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### ÖZET

Bu çalışmanın amacı spor bilimlerimi fakültesinde okuyan öğrencilerin sosyal problem çözme becerilerinin incelenmesidir. Çalışma Isparta ilinde bulunan Süleyman Demirel Üniversitesi Spor Bilimleri Fakültesinde okuyan 18-23 yaş arası öğrencilere uygulanmıştır. Araştırmaya katılan 163'ü erkek 85'i kadın öğrencilerden oluşmaktadır. Çalışma kapsamında kişisel bilgi formu ve sosyal problem çözme envanteri ölçeği kısa formu uygulanmıştır. Elde edilen veriler SPSS paket programı kullanılarak istatistiksel olarak analiz edilmiştir. Analiz sonuçlarına bakıldığında sosyal problem çözme becerisinin cinsiyetler, yaşlar ve bölümler arasında istatistiksel olarak anlamlı bir fark olmadığı bulunmuştur. Fakat sosyal problem çözme becerilerini sınıfların ve maddi gelir düzeylerinin istatistiksel olarak anlamlı düzeyde etkilediği görülmüştür. Birinci, ikinci ve üçüncü sınıfların dördüncü ve üzeri sınıflara göre rasyonel problem çözmeye daha başarılı oldukları görülmüştür ( $p<0,05$ ). Dördüncü ve üzeri sınıfların üçüncü sınıflara göre sosyal problemleri çözmeye kaçınan tarz tercih ettikleri bulunmuştur ( $p<0,05$ ). Asgari ücretten az maddi geliri olan öğrencilerin asgari ücret, 5000-10000 ve 10001 ve üzeri maddi geliri olan öğrencilere göre rasyonel problem çözmeye daha iyi oldukları görülmüştür ( $p<0,05$ ). Sonuç olarak sosyal problem çözme becerisinin sınıflar arasında fark yarattığı, maddi gelir seviyelerinin de problem çözme becerisinde etkili olduğu görülmüştür.

**Anahtar Kelimeler:** Sosyal problem çözme, spor bilimleri, ekonomik gelir, sınıf

### INVESTIGATION OF SOCIAL PROBLEM SOLVING SKILLS OF STUDENTS IN FACULTY OF SPORTS SCIENCES

#### ABSTRACT

The purpose of this study is to examine the social problem solving skills of students studying in the Faculty of Sports Sciences. The study was conducted on students aged between 18-23 who are studying at Süleyman Demirel University Faculty of Sports Sciences in Isparta province. The study group consisted of 163 male and 85 female students. In the study, a personal information form and a short form of the social problem solving inventory scale were applied. The data obtained were analyzed statistically using the SPSS package program. When the analysis results are examined, it was found that there was no statistically significant difference in social problem-solving skills among genders, ages, and departments. However, it was observed that social problem-solving skills were statistically significantly influenced by class levels and income levels. It was observed that the first, second, and third grades were more successful in rational problem-solving compared to the fourth and higher grades ( $p < 0.05$ ). It was found that the fourth and higher grades preferred an avoiding style in solving social problems compared to the third grade ( $p < 0.05$ ). It was observed that students with income lower than the minimum wage were better at rational problem-solving compared to students with income at or above the minimum wage, 5000-10000, and above 10001 ( $p < 0.05$ ). As a result, it was observed that social problem-solving skills create differences among classes and income levels also have an impact on problem-solving skills.

**Keywords:** Social problem solving, sports sciences, economic income, class.



## ENFLASYON VE DÖVİZ KURU ARASINDAKİ FOURIER EŞBÜTÜNLEŞME İLİŞKİSİ: TÜRKİYE ÖRNEĞİ

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### ÖZET

Ekonomiler için en çok tartışılan konulardan biri de döviz kuru ile enflasyon arasındaki ilişkidir. Özellikle gelişmekte olan ülkeler için sürdürülebilir yüksek büyüme hızına sahip olabilmek için döviz kuru ile enflasyon arasında hassas bir ayarlama yapılması büyük önem taşımaktadır. Ayrıca, yüksek büyüme oranlarına ulaşılabilmesi için enflasyonun kontrol edilebilir bir seviyede olması gerekmektedir. İhracata dayalı büyümeye yönelik rekabetçi döviz kurları, gelişmekte olan ülkelerin önemli hedeflerinden biridir. Tüm bu nedenlerle döviz kurları ve enflasyon, Türkiye gibi gelişmekte olan ülkeler için çok önemli ekonomik göstergeler arasında yer almaktadır.

Tüketici fiyat endeksi ile döviz kuru değişkeni arasındaki ilişkinin ekonometrik yöntemlerle incelendiği geniş bir literatür ortaya çıkmıştır. Makroekonomik değişkenler genel olarak artma ve azalma eğilimi gösterdiğinden, değişkenlerin düzey değerlerinde durağan olmadıkları, yani birim köke sahip oldukları söylenebilir. Durağan olmayan iki değişken arasında kurulacak bir regresyon denklemi sahte bir regresyon problemine yol açacaktır. Ancak birinci farkta durağan olan değişkenler eşbütünleşme ilişkisine sahipse, değişkenlerin düzey değerleri arasında kurulacak regresyon denkleminde elde edilen artıkların durağan çıkması durumunda eşbütünleşme ilişkisinden söz edilebilir. Ekonomik kriz dönemleri gibi ekonomik konjonktürü etkileyen olaylar makroekonomik değişkenler üzerinde yapısal değişikliklere neden olacaktır. Güvenilir sonuçlara ulaşmak için yapısal değişiklikleri dikkate alan ekonometrik tekniklerin kullanılması önem kazanmıştır. Çalışmamızda yapısal değişikliklerin dikkate alındığı en güncel ekonometrik teknik olarak Fourier eşbütünleşme analizi kullanılacaktır.

2003-2022 yılları arasında aylık frekansta analiz edilen veriler, reel efektif döviz kuru ve tüketici fiyat endeksi olarak kabul edilmiştir. Her iki değişken için de baz yıl olarak 2003 alınmıştır. Analizlerde değişkenlerin logaritmik dönüşümleri kullanılmıştır. Döviz kuru ve enflasyon değişkenleri I(1) olarak bulunmuştur. Birinci farkları durağan olan değişkenler arasında eşbütünleşme ilişkisi olduğundan şüphelenilmektedir. Döviz kuru ile enflasyon değişkeni arasındaki eşbütünleşme ilişkisi Banerjee ve diğerleri(2017) Fourier ADL (FADL) eşbütünleşme testi ile incelenmiştir. Uygulanan eşbütünleşme ilişkisi sonucunda döviz kuru ile enflasyon değişkeni arasında uzun dönemli bir ilişki tespit edilememiştir. Sonuç olarak, döviz kuru ve enflasyon değişkenleri uzun dönemde birlikte hareket etmemektedir.

**Anahtar Kelimeler:** Tüketici fiyat endeksi, döviz kuru, Fourier eşbütünleşme

### FOURIER COINTEGRATION RELATIONSHIP BETWEEN INFLATION AND EXCHANGE RATE: THE CASE OF TURKEY

### ABSTRACT

One of the most discussed issues for economies is the relationship between exchange rate and inflation. It is of great importance to make a sensitive adjustment between the exchange rate and inflation in order to have a sustainable high growth rate, especially for developing countries. In addition, inflation must be at a controllable level in order to achieve high growth rates. Competitive exchange rates for export-based growth is one of the important goals of developing countries. For all these reasons, exchange rates and inflation are among very important economic indicators for developing countries such as Turkey.

A large literature has emerged in which the relationship between the consumer price index and the exchange rate variable is examined by econometric methods. Since macroeconomic variables tend to increase and decrease in general, it can be stated that the variables are not stationary in their level values, in other words, they have unit roots. A regression equation to be established between two non-stationary variables will cause a spurious regression problem. However, if the variables that are stationary in the first difference have a cointegration relationship, a cointegration relationship can be mentioned if the residuals obtained from the regression equation to be established between the level values of the variables are found to be stationary. Events that affect the economic conjuncture, such as periods of economic crisis, will cause structural changes on macroeconomic variables. In order to reach reliable results, it has become important to use econometric techniques that take into account structural changes. In our study, Fourier cointegration analysis will be used as the most up-to-date econometric technique in which structural changes are taken into account.

The data analyzed at monthly frequency between 2003 and 2022 are considered as real effective exchange rate and consumer price index. 2003 was taken as the base year for both variables. Logarithmic transformations of the variables were used in the analysis. Exchange rate and inflation variables were found to be I(1). It is suspected that there is a cointegration relationship between the variables in which the first differences are stationary. The cointegration relationship between exchange rate and inflation variable was examined by Banerjee et al.(2017) Fourier ADL (FADL) cointegration test. As a result of the applied cointegration relationship, a long-term relationship could not be determined between the exchange rate and the inflation variable. As a result, exchange rate and inflation variables do not move together in the long run.

**Keywords:** Consumer price index, exchange rate, Fourier cointegration

## SEÇİLMİŞ AVRUPA ÜLKELERİNDE KAMU SEKTÖRÜNDE CAM TAVAN SENDROMU

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### ÖZET

Cam tavan kavramı literatürde genellikle kadınların örgüt içerisinde yükselmelerine getirilen görünmez engeller olarak tanımlanmaktadır. Cam tavan engeli; bireysel, örgütsel ve toplumsal olmak üzere üç ana nedene bağlı olarak ortaya çıkmaktadır. Cam tavanla karşılaşan kadın çalışanın orta ve uzun vadede yükselme şansının olmayacağına anlaşılması hem bireyin işteki performansını düşürmekte hem de örgüte olumsuz maliyetler yüklemektedir.

Bu çalışmanın amacı seçilmiş Avrupa ülkelerinde, özellikle kamu sektöründe cam tavan hakkında durum analizi yapmaktır. Bu amaçla literatürde yer alan araştırma verileri ile resmi istatistikler incelenerek durum tespiti yapılmış ve cam tavan engellerinin aşılmasına yönelik öneriler sunulmuştur.

Kamu sektörünün ekonomi içerisindeki yerinin ne kadar olması gerekliliği her zaman bir tartışma konusu olmuştur. II Dünya Savaşı sonrası ekonomide kamunun rolü artarken 20. Yüzyılın son çeyreğinde ekonomide kamunun rolünde düşüş yaşanmıştır. Ekonomide kamunun rolünün azalması istihdamın da olumsuz etkilenmesine neden olmuştur. Ancak Avrupa ülkelerinin çoğunda kadınlar, toplam istihdam içerisinde kendilerine Türkiye'ye göre daha fazla yer bulabilmektedirler. Yine birçok ülkede kadınların kamu sektöründe istihdama katılımı, genel toplam istihdama katılımının üzerindedir.

İstihdama katılım, özellikle de kamu sektöründe istihdama katılım konusunda Avrupa ülkelerinin çoğunda görülen olumlu tablo, karar süreçlerine katılım konusunda görülmemektedir. İskandinav ülkelerinde daha olumlu olmakla birlikte Avrupa ülkelerinin çoğunda kamu sektörü içerisinde kadınlar gerek orta ve üst düzey yönetici olma gerek parlamentoda temsil edilme gerekse de başbakan olarak görev yapma konusunda erkeklere göre dezavantajlı konumdadır. Bunun ortadan kaldırılabilmesi için devlet, örgüt ve kadınların kendilerine konunun paydaşları olarak önemli görevler düşmektedir.

**Anahtar Kelimeler:** Cam Tavan Engeli, Cinsiyet Ayrımcılığı, Kamu Sektörü, Kadın İstihdamı, Kadın Yöneticiler.

### GLASS CEILING SYNDROME IN THE PUBLIC SECTOR IN SELECTED EUROPEAN COUNTRIES

#### ABSTRACT

The concept of glass ceiling is generally defined in the literature as invisible barriers to the promotion of women within the organization. The glass ceiling obstacle arises due to three main reasons: individual, organizational and social. Understanding that the female employee who encounters the glass ceiling will not have a chance to rise in the medium and long term both reduces the performance of the individual at work and imposes negative costs on the organization.

The aim of this study is to analyze the situation in selected European countries, especially in the public sector, about the glass ceiling. For this purpose, the situation has been determined by examining the research data in the literature and official statistics and suggestions for overcoming the glass ceiling obstacles are presented.

The necessity of the place of the public sector in the economy has always been a matter of debate. While the role of the public sector in the economy increased after World War II, the role of the public in the economy decreased in the last quarter of the 20th century. The decrease in the role of the public in the economy has also caused employment to be negatively affected. However, in most European countries, women can find a higher place in total employment than in Turkey. Again, in many countries, the participation of women in employment in the public sector is higher than the participation in overall employment.

The positive picture seen in most of the European countries regarding participation in employment, especially employment in the public sector, is not seen in terms of participation in decision processes. Although it is more positive in Scandinavian countries, women are at a disadvantage compared to men in most of the European countries in terms of being middle and senior managers, being represented in parliament and serving as prime minister. In order to eliminate this, the government, organizations and women have important duties as stakeholders of the issue.

**Keywords:** Glass Ceiling Barrier, Gender Discrimination, Public Sector, Women's Employment, Women Managers.

## DÜNYADA KADIN YOKSULLUĞUNUN GENEL GÖRÜNÜMÜ

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### ÖZET

Yoksulluk, bireyin ekonomik ve ekonomik olmayan diğer gereksinimlerini karşılayamaması olarak tanımlanmaktadır. Yoksulluk, başta kadınlar ve çocuklar olmak üzere toplumun bütün bireylerini farklı düzeyde de olsa etkilemektedir. Yoksulluk kavramını, sadece kadınların etkilendiği bir kavram olarak ele alıp, cinsiyetçi bir bakış açısıyla ifade edilmesi tartışma konusu olmaktadır. Ancak kadınlar bu olgunun olumsuz etkilerini daha fazla hisseden grup olarak ortaya çıkmaktadırlar.

Yapılan araştırmalardan elde edilen sonuçlar, günümüzde kadınların erkeklerden daha fazla yoksullaştığını göstermektedir. Kadınlar gelir azlığı ve toplumsal cinsiyet eşitsizliği nedeniyle bir yandan gerekli eğitim düzeyine sahip olamamakta diğer yandan kendisine dayatılan ev işleri nedeniyle çalışma hayatında ya düşük ücretli işlerde çalışmak zorunda kalmakta ya da çalışma hayatına hiç girememektedirler.

Birleşmiş Milletler Kalkınma Programı tarafından yapılan araştırmalara göre dünyada özellikle Sahra-Altı Afrika, Arap Yarımadası ve Güney Asya ülkeleri, cinsiyete dayalı eşitsizliğin en fazla olduğu ülkelerdir. Yine araştırma sonuçları Orta ve Düşük İnsani Gelişme düzeyine sahip ülkelerde de cinsiyete dayalı eşitsizlik daha yüksek oranda yaşanmaktadır. Bu verilerle doğru orantılı olarak Arap Yarımadası ve Güney Asya bölge ülkelerinde kadınların işgücüne katılım oranları çok düşük seviyededir. Aynı zamanda bu bölgelerde kadınların parlamentoda temsili de çok düşük seviyededir.

Kadın yoksulluğunun temelinde, kadınların yeterince eğitime sahip olmamaları ve kadına bakış açısının olumsuzluğu yatmaktadır. Bu nedenle öncelikle kadının eğitim seviyesinin yükseltilmesi, bu sayede işgücü içerisinde yer alabilmesi sağlanmalıdır. Devletin aktif istihdam politikalarını ve sosyal güvenlik mekanizmalarını, kadın istihdamını arttıracak şekilde yeniden yapılandırmasına ihtiyaç bulunmaktadır. Devletin sosyal yardım politikalarının da vatandaş hakkı temelli olarak yürütülmesi gerekmektedir. Kadınların gerek ev işlerinde üstlendiği yorucu görevler gerekse sadece kadın olduğu için daha düşük ücretli işlerde çalışma zorunda bırakılması ataerkil düşüncenin yansıması gibi görünmektedir. Bu düşünce yapısının değiştirilmesi, erkek egemen kültürde kadının hem toplumsal düzlemde hem de hane halkı içinde söz hakkının olduğu gerçeğinin hayata geçirilmesi, bir zorunluktur. Ayrıca kadınlara yönelik fırsat ve teşviklerin artırılması gerekmektedir. Ancak bu yapılabildiğinde kadınlar için daha eşitlikçi bir güç ilişkisi söz konusu olabilecektir.

**Anahtar Kelimeler:** Kadın Yoksulluğu, İnsani Gelişme, Çok Boyutlu Yoksulluk Endeksi

### AN OVERVIEW OF WOMEN'S POVERTY IN THE WORLD

#### ABSTRACT

Poverty is defined as the inability of the individual to meet his/her economic and other non-economic needs. Poverty affects all members of society, especially women and children, albeit at different levels. Considering the concept of poverty as a concept that only affects women and expressing it from a sexist perspective is a matter of debate. However, women appear to be the group that feels the negative effects of this phenomenon more.

The results obtained from the researches show that today women are more impoverished than men. Women cannot have the necessary education level due to low income and gender inequality, on the other hand, they

are forced to work in low-paid jobs or cannot enter working life at all due to the housework imposed on them.

According to research conducted by the United Nations Development Programme, especially Sub-Saharan Africa, Arabian Peninsula and South Asian countries are the countries with the highest gender inequality. Again, the results of the research, gender-based inequality is experienced at a higher rate in countries with Medium and Low Human Development levels. In direct proportion to these data, the labor force participation rate of women in the Arabian Peninsula and South Asian countries is very low. At the same time, the representation of women in the parliament in these regions is very low.

The basis of women's poverty lies in the fact that women do not have enough education and the negative point of view on women. For this reason, first of all, it should be ensured that the education level of women is increased so that they can be included in the workforce. There is a need for the government to restructure its active employment policies and social security mechanisms to increase women's employment. The government's social assistance policies should also be carried out on the basis of citizen's rights. Both the tiring duties they undertake in housework and the fact that women are forced to work in jobs with lower wages just because they are women seems to be a reflection of patriarchal thinking. It is a necessity to change this mentality and to realize the fact that women have the right to speak both in the social plane and in the household in the male-dominated culture. In addition, opportunities and incentives for women need to be increased. However, when this can be achieved, a more egalitarian power relationship for women will be possible.

**Keywords:** Women's Poverty, Human Development, Multidimensional Poverty Index.

## ENFLASYON VE DÖVİZ KURU ARASINDAKİ FOURIER EŞBÜTÜNLEŞME İLİŞKİSİ: TÜRKİYE ÖRNEĞİ

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### ÖZET

Ekonomiler için en çok tartışılan konulardan biri de döviz kuru ile enflasyon arasındaki ilişkidir. Özellikle gelişmekte olan ülkeler için sürdürülebilir yüksek büyüme hızına sahip olabilmek için döviz kuru ile enflasyon arasında hassas bir ayarlama yapılması büyük önem taşımaktadır. Ayrıca, yüksek büyüme oranlarına ulaşılabilmesi için enflasyonun kontrol edilebilir bir seviyede olması gerekmektedir. İhracata dayalı büyümeye yönelik rekabetçi döviz kurları, gelişmekte olan ülkelerin önemli hedeflerinden biridir. Tüm bu nedenlerle döviz kurları ve enflasyon, Türkiye gibi gelişmekte olan ülkeler için çok önemli ekonomik göstergeler arasında yer almaktadır.

Tüketici fiyat endeksi ile döviz kuru değişkeni arasındaki ilişkinin ekonometrik yöntemlerle incelendiği geniş bir literatür ortaya çıkmıştır. Makroekonomik değişkenler genel olarak artma ve azalma eğilimi gösterdiğinden, değişkenlerin düzey değerlerinde durağan olmadıkları, yani birim köke sahip oldukları söylenebilir. Durağan olmayan iki değişken arasında kurulacak bir regresyon denklemi sahte bir regresyon problemine yol açacaktır. Ancak birinci farkta durağan olan değişkenler eşbütünleşme ilişkisine sahipse, değişkenlerin düzey değerleri arasında kurulacak regresyon denkleminde elde edilen artıkların durağan çıkması durumunda eşbütünleşme ilişkisinden söz edilebilir. Ekonomik kriz dönemleri gibi ekonomik konjonktürü etkileyen olaylar makroekonomik değişkenler üzerinde yapısal değişikliklere neden olacaktır. Güvenilir sonuçlara ulaşmak için yapısal değişiklikleri dikkate alan ekonometrik tekniklerin kullanılması önem kazanmıştır. Çalışmamızda yapısal değişikliklerin dikkate alındığı en güncel ekonometrik teknik olarak Fourier eşbütünleşme analizi kullanılacaktır.

2003-2022 yılları arasında aylık frekansta analiz edilen veriler, reel efektif döviz kuru ve tüketici fiyat endeksi olarak kabul edilmiştir. Her iki değişken için de baz yıl olarak 2003 alınmıştır. Analizlerde değişkenlerin logaritmik dönüşümleri kullanılmıştır. Döviz kuru ve enflasyon değişkenleri I(1) olarak bulunmuştur. Birinci farkları durağan olan değişkenler arasında eşbütünleşme ilişkisi olduğundan şüphelenilmektedir. Döviz kuru ile enflasyon değişkeni arasındaki eşbütünleşme ilişkisi Banerjee ve diğerleri(2017) Fourier ADL (FADL) eşbütünleşme testi ile incelenmiştir. Uygulanan eşbütünleşme ilişkisi sonucunda döviz kuru ile enflasyon değişkeni arasında uzun dönemli bir ilişki tespit edilememiştir. Sonuç olarak, döviz kuru ve enflasyon değişkenleri uzun dönemde birlikte hareket etmemektedir.

**Anahtar Kelimeler:** Tüketici fiyat endeksi, döviz kuru, Fourier eşbütünleşme

### FOURIER COINTEGRATION RELATIONSHIP BETWEEN INFLATION AND EXCHANGE RATE: THE CASE OF TURKEY

### ABSTRACT

One of the most discussed issues for economies is the relationship between exchange rate and inflation. It is of great importance to make a sensitive adjustment between the exchange rate and inflation in order to have a sustainable high growth rate, especially for developing countries. In addition, inflation must be at a controllable level in order to achieve high growth rates. Competitive exchange rates for export-based growth is one of the important goals of developing countries. For all these reasons, exchange rates and inflation are among very important economic indicators for developing countries such as Turkey.

A large literature has emerged in which the relationship between the consumer price index and the exchange rate variable is examined by econometric methods. Since macroeconomic variables tend to increase and decrease in general, it can be stated that the variables are not stationary in their level values, in other words, they have unit roots. A regression equation to be established between two non-stationary variables will cause a spurious regression problem. However, if the variables that are stationary in the first difference have a cointegration relationship, a cointegration relationship can be mentioned if the residuals obtained from the regression equation to be established between the level values of the variables are found to be stationary. Events that affect the economic conjuncture, such as periods of economic crisis, will cause structural changes on macroeconomic variables. In order to reach reliable results, it has become important to use econometric techniques that take into account structural changes. In our study, Fourier cointegration analysis will be used as the most up-to-date econometric technique in which structural changes are taken into account.

The data analyzed at monthly frequency between 2003 and 2022 are considered as real effective exchange rate and consumer price index. 2003 was taken as the base year for both variables. Logarithmic transformations of the variables were used in the analysis. Exchange rate and inflation variables were found to be  $I(1)$ . It is suspected that there is a cointegration relationship between the variables in which the first differences are stationary. The cointegration relationship between exchange rate and inflation variable was examined by Banerjee et al.(2017) Fourier ADL (FADL) cointegration test. As a result of the applied cointegration relationship, a long-term relationship could not be determined between the exchange rate and the inflation variable. As a result, exchange rate and inflation variables do not move together in the long run.

**Keywords:** Consumer price index, exchange rate, Fourier cointegration



## FİNANSAL GELİŞME VE TEMİZ ENERJİ YATIRIMLARININ ÇEVRESEL SÜRDÜRÜLEBİLİR EKONOMİK BÜYÜMEYE YANSIMASI: NIC ÜLKELERİNDEN KANITLAR

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### ÖZET

Ülkelerin çevresel ve sürdürülebilir büyüme ve kalkınma hedefleri doğrultusunda temiz enerji yatırımları kaçınılmaz bir trend haline gelmiştir. Bu nedenle temiz enerji yatırımları ve bu yatırımlar için kullanılan finansman kaynakları çevresel dışsallıkları azaltmak ve sürdürülebilirliği sağlamak açısından oldukça önemlidir. Bu bağlamda çalışmada, yeni sanayileşen ülkeler (NIC) örneklemini üzerinde finansal gelişme ve temiz enerji yatırımlarının çevresel sürdürülebilir ekonomik büyüme üzerindeki etkisinin 1990-2019 dönemi için araştırılması amaçlanmıştır. Bu amaç doğrultusunda iki adet araştırma modeli kurulmuştur. Modellerde karbon emisyonu ve ekonomik büyüme göstergeleri bağımlı değişken; finansal gelişme, temiz enerji yatırımları, katma değerli imalat ve kentleşme göstergeleri bağımsız değişken olarak ele alınmıştır. Araştırma modellerinin analizinde, Johansen eşbütünleşme analiz yöntemi kullanılmıştır. Ayrıca değişkenlerin uzun vadeli etki ölçüsünün tahmin edilmesinde Tam Düzeltilmiş En Küçük Kareler (FMOLS) ve Dinamik En Küçük Kareler (DOLS) tekniğinden faydalanılmıştır. Analiz sonuçlarına göre NIC ülkelerinde karbon emisyonu ile temiz enerji yatırımları arasında negatif yönlü ilişki tespit edilirken finansal gelişme ile pozitif yönlü ilişki saptanmıştır. Öte yandan ekonomik büyüme üzerinde temiz enerji yatırımları ve finansal gelişmenin pozitif yönde etkiye sahip olduğu belirlenmiştir. Ayrıca NIC ülkelerindeki kentleşme ile ekonomik büyüme ve karbon emisyonu arasında pozitif yönlü bir ilişki ortaya konulmuştur. Elde edilen sonuçlar, finansal kaynakların temiz enerji yatırımlarına daha fazla kanalize edilerek çevresel ve sürdürülebilir büyümeye katkı sağladığına işaret etmektedir.

**Anahtar Kelimeler:** Finansal Gelişme, Temiz Enerji Yatırımları, Çevresel Ekonomik Büyüme, NIC Ülkeleri

## THE REFLECTION OF FINANCIAL DEVELOPMENT AND CLEAN ENERGY INVESTMENTS ON ENVIRONMENTAL SUSTAINABLE ECONOMIC GROWTH: EVIDENCE FROM NIC COUNTRIES

### ABSTRACT

Clean energy investments have become an inevitable trend in line with the environmental and sustainable growth and development goals of countries. For this reason, clean energy investments and the financing resources used for these investments are very important in terms of reducing environmental externalities and ensuring sustainability. In this context, it is aimed to investigate the effect of financial development and clean energy investments on environmental sustainable economic growth for the period 1990-2019 in a sample of newly industrialized countries (NIC). For this purpose, two research models were established. In the models, carbon emission and economic growth indicators are dependent variables; financial development, clean energy investments, value-added manufacturing and urbanization indicators are considered as independent variables. Johansen cointegration analysis method was used in the analysis of the research models. In addition, Fully Modified Ordinary Least Square (FMOLS) and Dynamic Ordinary Least Squares (DOLS) techniques were used to estimate the long-term effects of the variables. According to the results of the analysis, a negative relationship was found between carbon emission with clean energy investments in NIC countries, while a positive relationship was found with financial development. On the other hand, it has been determined that clean energy investments and financial development have a positive

effect on economic growth. In addition, a positive relationship has been revealed between urbanization and economic growth and carbon emission in NIC countries. The results indicate that financial resources are channeled more to clean energy investments, contributing to environmental and sustainable growth.

**Keywords:** Financial Development, Clean Energy Investments, Environmental Economic Growth, NIC Countries

## YENİLENEBİLİR ENERJİ TÜKETİMİ VE EKONOMİK BÜYÜME İLİŞKİSİ: TÜRKİYE'DEN KANITLAR

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### ÖZET

Enerji ekonomik büyümede ve kalkınmada önemli bir faktör olarak kabul edilmektedir. Diğer ülkelerde olduğu gibi Türkiye'de de enerji; ekonomik ve sosyal kalkınma ve yaşam kalitesinin yükseltilmesi için hayati öneme sahiptir. Türkiye'nin artan nüfusu ve büyüyen ekonomisine paralel olarak enerji kaynakları tüketimi de hızla artmaktadır. Enerji alanında dışa bağımlı olan Türkiye, bu oranı azaltabilmek için bir yandan ülke sınırları içinde fosil enerji kaynakları hammaddesi aramakta, diğer yandan yenilenebilir enerji kaynaklarının potansiyelini belirlemeye çalışmaktadır. Yenilenebilir enerji kaynakları, temiz bir enerji kaynağı olmasının yanı sıra çevre üzerinde daha az olumsuz etkiye sahiptir. Bu kaynakları kullanan ülkeler ithal fosil yakıtlara daha az bağımlı olacaktır. Dolayısıyla günümüz dünyasında oldukça önemli bir konudur.

Yenilenebilir enerjinin önemi ve büyümesi göz önüne alındığında, yenilenebilir enerji tüketimi ile ekonomik büyüme arasındaki ilişkiyi araştırmak ve literatüre katkıda bulunmak önem arz etmektedir. Bu bağlamda çalışmada 1990-2019 döneminde Türkiye'de yenilenebilir enerji (YE) ile ekonomik büyüme (GSYH) arasındaki ilişkinin incelenmesi amaçlanmıştır. Bu ilişkiyi incelemek için zamanla değişen simetrik ve asimetrik nedensellik testleri uygulanmıştır. Zamanla değişen simetrik nedensellik testi sonuçlarına göre, 2007-2016 döneminde yenilenebilir enerji tüketimi ile büyüme arasında nedensellik ilişkisi bulunmuştur. Zamanla değişen asimetrik nedensellik testi sonuçlarına göre ise simetrik nedensellik testi sonucunda olduğu gibi 2007-2016 tarihleri arasında ilişki görülürken; bu ilişkinin negatif yenilenebilir enerji tüketimindeki şoklardan negatif büyüme şoklarına doğru bir nedensellik ilişkisi olduğu tespit edilmiştir.

**Anahtar Kelimeler:** Yenilenebilir Enerji, Büyüme, Nedensellik Testi

### RELATIONSHIP OF RENEWABLE ENERGY CONSUMPTION AND ECONOMIC GROWTH: EVIDENCE FROM TURKEY

#### ABSTRACT

Energy is acknowledged as being crucial to the expansion and advancement of the economy. Energy is crucial for Turkey's economic and social development as well as improving quality of life, just like it is in other nations. Turkey's population and economy are both expanding, and this is happening at a time when energy consumption is also rising quickly. In order to decrease its reliance on foreign energy sources, Turkey seeks out fossil energy resources as raw materials within its borders on the one hand and looks into the potential of renewable energy sources on the other. In addition to being clean energy sources, renewable energy sources are less harmful to the environment. Using these resources will reduce a nation's reliance on foreign imports of fossil fuels. Hence, it is a very important issue in today's world.

Considering the importance and growth of renewable energy, it is important to research the relationship between renewable energy consumption and economic growth and to contribute to the literature. In this context, it is aimed to examine the relationship between renewable energy (RE) and economic growth (GDP) in Turkey in the period of 1990–2019. To examine this relationship, time-varying symmetric and asymmetric causality tests were applied. According to the results of the time-varying symmetric causality test, a causal relationship was found between renewable energy consumption and growth in the 2007–2016 period. According to the results of the time-varying asymmetric causality test, as in the result of the symmetric causality test, a relationship was observed between 2007 and 2016; it has been determined that this relationship has a causal relationship from negative renewable energy consumption shocks to negative growth shocks.

**Keywords:** Renewable Energy, Growth, Causality Test

## TÜRKİYE’NİN 1923-1938 DÖNEMİNDEKİ DIŞ TİCARETİNİN ÜRÜN YAPISI

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### ÖZET

Bu çalışmanın amacı, Türkiye’nin 1923-1938 dönemindeki ihraç ettiği ve ithal ettiği başlıca ürünlerin listesini ve söz konusu ürünlerin kıymetini tespit etmektir. Bu ve benzeri kapsamdaki çalışmalar sonucunda 1923-1938 döneminin tarihsel açıdan incelenmesi sürecine katkıda bulunulacaktır. Mevcut çalışma ile bu katkılardan birinin yapılması hedeflenmektedir. Türkiye iktisat tarihinin dönemlerinin verilere dayalı bir şekilde incelenmesi için dönemsel verilerin tespiti ve yorumlanması gereklidir. Böylece, mevcut çalışma ve benzeri çalışmalar bir bütün olarak ortaya çıktığında ilgili dönemlerin bir bütün olarak değerlendirilmesi de mümkün olacaktır. Çalışmada önce altı grup halinde Türkiye’nin 1923-1938 dönemindeki başlıca ihracat maddelerinin kıymeti gözlenmiştir. Söz konusu gruplar; kuru ve yaş meyvalar, tütün ve kuru sebzeler, tiftik, yün, kıl, pamuk, koza ve ipek, hububat ve hayvan mahsulleri, halı, kilim, maden ve maden kömürü ve sair bazı mahsulât ve son olarak canlı hayvanlardır. Bu altı grup içinde ihracata konu olan birçok madde yer almaktadır. Ardından, bunların toplam ihracat içindeki payı hesaplanmıştır. Daha sonra, Türkiye’nin 1923-1938 dönemindeki yirmi altı madde olarak başlıca ithalat maddelerinin kıymetine yer verilmiştir. İhraç mallarında olduğu gibi ithalatı yapılan başlıca ürünlerin toplam ithalat içindeki payı da hesaplanmıştır.

**Anahtar Kelimeler:** Türkiye iktisat tarihi, İthalat, İhracat.

### PRODUCT STRUCTURE OF IMPORT AND EXPORT IN TURKEY IN THE PERIOD 1923-1938

### ABSTRACT

The aim of this study is to determine the list of the main products exported and imported by Turkey in the period 1923-1938 and to determine the value of these products. As a result of the present study and similar studies, it will be contributed to the historical analysis of the 1923-1938 period. The present study aims to make one of these contributions. In order to analyze the periods of the economic history of Turkey based on data, it is necessary to determine and interpret the periodical data. Thus, when the similar studies emerge, it will be possible to evaluate the relevant periods as a whole. In the study, firstly, the value of Turkey's main export goods in the 1923-1938 period was observed in six groups. The groups are; dry and fresh fruits, tobacco and dried vegetables, mohair, wool, cotton, cocoon and silk, cereals and animal products, carpets, rugs, metal and coal, and finally live animals. Within these six groups, there are many items that are subject to export. Then, their share in total exports was calculated. Besides, values of the twenty-six main import goods of Turkey in the 1923-1938 period are shown. As with exported goods, the share of major imported products in total imports was also calculated.

**Keywords:** Economic history of Turkey, Imports, Exports.

## TÜRKİYE'NİN 1923-1938 DÖNEMİNDE BAŞLICA MEMLEKETLERLE DIŞ TİCARETİNİN ÜRÜN YAPISI

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### ÖZET

Ülkelerin birbirleriyle yaptığı ticaretin deseni, söz konusu ülkelerin kalkınma sürecine ilişkin bir fikir verecektir. Örneğin, bir ülke, ticaret ortakları açısından ele alındığında, bir ortağından hammaddeleri ithal eden ve o ortağına katma değeri yüksek ürünleri ihraç eden bir ülke ise, o ülkenin yüksek gelirli ve gelişmiş ülkeler arasında yer aldığını ifade etmek mümkündür. Tersine, bir ülkenin ortağına ihraç ettiği ürünlerin katma değeri düşük ise ve ortağından ithal ettiği ürünlerin katma değeri yüksek ise o ülkenin görece geri kalmış olduğunu savunulabilir. Dolayısıyla, belirli bir tarihsel kesit için ticaret ortakları itibarıyla ihraç ve ithal edilen ürünlerin deseninin veya yapısının saptanması o dönemin iktisadi koşullarının kavranması açısından gereklidir. Bu çalışmada da Türkiye'nin 1923-1938 dönemindeki başlıca memleketlerle yaptığı dış ticaretin hangi ürünleri içerdiği incelenmiş ve söz konusu ülkelerin ilgili ürün ihracındaki ve ithalindeki payı hesaplanmıştır. Çalışmada elde edilen bulgular, 1923-1938 dönemine ilişkin dış ticaret yapısını anlama yönelik çalışmaları tamamlayıcı niteliktedir.

**Anahtar Kelimeler:** Türkiye iktisat tarihi, İthalat, İhracat.

### PRODUCT STRUCTURE OF TURKEY'S FOREIGN TRADE WITH MAJOR COUNTRIES IN THE PERIOD 1923-1938

### ABSTRACT

The pattern of trade between countries will give an idea about the development process of them. For example, when a country is considered in terms of its trading partners, if it is a country that imports raw materials from one of its partners and exports high value-added products to that partner it is possible to state that the relevant country is among the high-income and developed countries. On the contrary, it can be argued that if the value-added of the products exported to a country's partner is low and the value-added of the products imported from its partner is high, that country is relatively backward. Therefore, determining the pattern or structure of the products exported and imported by trading partners for a particular historical cross-section is necessary in order to understand the economic conditions of that period. In this study, Turkey's foreign trade with the main countries in the 1923-1938 period was examined. The findings of the study are complementary to the studies aimed at understanding the foreign trade structure of the 1923-1938 period.

**Keywords:** Economic history of Turkey, Imports, Exports.

## THE BASIS OF A GOOD TRANSLATION AND THE CHARACTERISTICS OF QUALIFIED TRANSLATORS

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### ABSTRACT

The translation, commonly defined as the process of transferring a meaning from one language into another, should not be regarded as an easy process as it includes many variables such as the transfer of ideology and culture of the society in which the source text exists. Therefore, it is a big mistake to think that people who know more than one language can translate. Because knowing a foreign language is not adequate for an efficient translation and translation process necessitates the possession of specific qualifications from translators apart from just knowing two languages. Based on these, it can be said that there are various factors that affect the quality of translation.

In this context, the goal of this study is to enlighten readers about the effects that influences the translation quality and the characteristics that a qualified translator should possess. Besides, this study aims to guide translators to make better translations by revealing various factors that affect the quality of translation.

**Keywords:** *translation, translator, quality of translation*

### İYİ BİR ÇEVİRİNİN ESASLARI VE NİTELİKLİ ÇEVİRMENLERİN ÖZELLİKLERİ

#### ÖZET

Genel olarak bir dilden başka bir dile anlamın aktarım süreci olarak tanımlanan çeviri, kaynak metnin içinde var olduğu toplumun ideolojisi ve kültürünün de aktarımı gibi pek çok değişkeni içermesinden dolayı kolay bir süreç olarak değerlendirilmemelidir. Dolayısıyla, birden fazla dil bilen kişilerin çeviri yapabileceğini düşünmek büyük bir yanılgıdır. Çünkü etkili bir çeviri için yabancı dil bilmek tek başına yeterli değildir ve çeviri süreci, çevirmenlerin en az iki dil bilmesinin yanı sıra, onların belirli niteliklere sahip olmasını da gerektirmektedir. Bunlara dayanarak, bir çevirinin kalitesini etkileyen çeşitli faktörlerin olduğu söylenebilir.

Bu bağlamda bu çalışmanın amacı; çeviri kalitesini etkileyen faktörler ve nitelikli bir çevirmenin sahip olması gereken özellikler konusunda okuyucuları aydınlatmaktır. Ayrıca bu çalışma, çeviri kalitesini etkileyen çeşitli faktörleri ortaya koyarak çevirmenlere daha iyi çeviriler yapma konusunda yol göstermeyi amaçlamaktadır.

**Anahtar Kelimeler:** *çeviri, çevirmen, çeviri kalitesi*

## FARUK NAFİZ ÇAMLİBEL'İN ŞİİRLERİNDE KADINLAR

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### ÖZET

Bu çalışmada, Faruk Nafiz Çamlıbel'in şiirlerinde kadına bakış açısının belirlenmesi amaçlanmıştır. Araştırmada şairin şiirleri, nitel araştırma yöntemlerinden doküman analizi yöntemi ile incelenmiştir. Doküman incelemesi, araştırılması hedeflenen olgu veya olgular hakkında bilgi içeren yazılı materyallerin analizini kapsar.

Araştırmada şu sonuçlara ulaşılmıştır: 1898'de İstanbul'da doğan Faruk Nafiz Çamlıbel, bir süre tıp fakültesinde okuduktan sonra ilk şiirlerini yayımlamıştır. Adı, devrin birçok dergi ve gazetelerinde yer alan Faruk Nafiz, 1922 yılında edebiyat öğretmeni olarak Kayseri Lisesine tayin edilmiştir. İstanbullu bir aydın genç olan şair, Anadolu ile ilk defa bu tayin vesilesi ile karşılaşmıştır. Faruk Nafiz, bu izlenimler sonucunda İstanbullu aydın ve Anadolu halkının kaynaşmasını Han Duvarları adlı şiir kitabında ortaya koymuştur. Hemen hemen bütün edebiyat tarihleri Faruk Nafiz'in devrinin en kudretli şahsiyeti olduğu hakkında ortak bir hüküm verir. Ancak Faruk Nafiz Çamlıbel de diğer birçok şairimiz ve yazarımız gibi günlük istek ve ihtiyaçlarla bol miktarda yazmış, sürekli olarak değişik kültür eserleriyle yazdıklarını beslemiştir.

Faruk Nafiz Çamlıbel'in ilk şiirleri de dönemin diğer şairlerin eserleri gibi aşktan söz etmekteydi. İlk şiirlerinden itibaren aşk temasını sıkça işleyen şair, Anadolu'yu ve Anadolu insanını kaleme alan şiirlerinde de aşka yer vermekten kendisini alamamıştır. Konu ister aşk ister Anadolu olsun Faruk Nafiz'in şiirlerinde kadınlara bolca yer verilmiştir. Onun Han Duvarları adlı şiir kitabında yer alan şiirlerinde kadın, Anadolu'ya ait kültürü, değerleri ve yaşam tarzını da yansıtabilecek şekilde resmedilir. Bu şiirlerde eğer aşk konu edilmişse Faruk Nafiz, geleneğimizde aşkın sembolü olan Leyla'yı, Aslı'yı, Şirin'i anmadan geçmez. Bu sembol kadınlar, şair için Anadolu kadınlarının da aşkın sembolü ve duygularının anlatıcısıdır.

**Anahtar Kelimeler:** Faruk Nafiz Çamlıbel, şiir, kadın

### WOMEN IN FARUK NAFİZ ÇAMLİBEL'S POEMS

#### Abstract

In this study, it is aimed to determine the perspective of women in Faruk Nafiz Çamlıbel's poems. In the research, the poems of the poet were examined with the document analysis method, one of the qualitative research methods. Document analysis includes the analysis of written materials containing information about the case or cases that are aimed to be investigated.

The following results were obtained in the research: Born in İstanbul in 1898, Faruk Nafiz Çamlıbel published his first poems after studying at the medical school for a while. Faruk Nafiz, whose name appeared in many magazines and newspapers of the period, was appointed to Kayseri High School in 1922 as a literature teacher. The poet, an intellectual young man from İstanbul, encountered Anatolia for the first time on the occasion of his appointment. As a result of these impressions, Faruk Nafiz revealed the fusion of the intellectuals of İstanbul and the Anatolian people in his poetry book called Han Duvarları. Almost all literary histories agree that Faruk Nafiz was the most powerful figure of his time. However, Faruk Nafiz Çamlıbel, like many of our other poets and writers, wrote copiously with daily demands and needs, constantly nurturing what he wrote with different cultural works. Faruk Nafiz Çamlıbel heard the issues of the country in his soul and was able to transfer this excitement to generations with the works he wrote.

During this period, Faruk Nafiz Çamlıbel's poems also talked about love like the works of other poets of the period. The poet, who has frequently dealt with the theme of love since his first poems, could not help himself to include love in his poems about Anatolia and Anatolian people. Whether the subject is love or

Anatolia, Faruk Nafiz's poems include plenty of women. In his poems, which are included in his poetry book called Han Duvarları, women are depicted in a way that reflects the culture, values and lifestyle of Anatolia. If love is the subject of these poems, Faruk Nafiz does not pass without mentioning Leyla, Aslı and Şirin, who are the symbols of love in our tradition.

**Keywords:** Faruk Nafiz Çamlıbel, poem, woman



## GELENEKSEL ENTELEKTÜEL OLARAK KÜRŞAT BUMİN PORTRESİ: HAKİKÂT ANLATICISI YA DA SERBEST DOLANIMLI?

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### ÖZET

Bu çalışma, bir düşünce insanı olarak Kürşat Bumin'in siyasal ve düşünsel rotası izinde Türkiye'de entelektüel alanın özel bir boyutuna odaklanmaktadır. Marksizmle ilişkilenebilmiş, ona hayli mesafeli, yer yer kıyıcı bir eleştirelilikle yaklaşan bir geleneğin derinlikli bir temsilcisi olarak Kürşat Bumin, döneminin Marksizm ile mesafeli entelektüelleri arasında müstesna bir konum teşkil eder. Bumin, Küçükömer'in Marksizm içi özgün yorumundan yola çıkarak Marksizm dışı bir kavramsal çerçeve inşa ederek sol-liberal siyaset zemininin temellerini atan kilit şahsiyetlerden biridir. Sol dışı çevrelerin anti-komünizm söylemiyle inşa ettikleri çerçeveden sol içi bir eleştirelilik ile farklılaşırken sol içi bir anti-Marksizmin yerleşikliği ve duyurulmasına katkıda bulunur. Devlet ve sivil toplumun kategorik biçimde birbirinden ayrıldığı varsayımının entelektüel sol çevrelerde yankı bulmasında Bumin'in yazıları ve değerlendirmeleri hayli etkili olmuştur. Totalitarizm kavramını, eleştirel çerçevesinin asli unsuru kılarak Soğuk Savaş dönemi entelektüellerine özgü bir yaklaşımla "hür dünya" kavramsallaştırmasını dolaşıma sokar. Bumin, doksanlı yıllarda, bu kavramsal zemin üzerinden anti-Marksist bir sol içi liberalizmin aşılmasında kilit bir rol üstlenirken Yeni Şafak'ta ve Medyakronik'te yayımladığı yazılarla yalın kat bir devlet ve müesses nizam eleştirisi geliştirir. Bumin'i seslendiği kitle nezdinde bir hakikat anlatıcısı konumuna yükselten bu eleştireliliğin tıkanma noktaları, yöntemsel zaafları ve derinliği ve sınırlılıkları üzerinden ele alan bu çalışma, doksanlı yıllar sonrası düşünsel ve siyasal iklimde onun yüklendiği rolü tartışma çabasıdır. Çalışmada Bumin'in düşünsel çerçevesinin temel öğeleri bir medya eleştirmeni kimliğiyle kaleme aldığı yazılar ve kitaplarındaki değerlendirmeler kadar, Bumin hayattayken kendisiyle bizzat gerçekleştirilmiş görüşmeler temel alınarak irdelenmiştir.

**Anahtar Kelimeler:** entelektüel, sol liberalizm, anti-komünizm, Kürşat Bumin

### THE PORTRAIT OF KÜRŞAT BUMİN AS A TRADITIONAL INTELLECTUAL: TRUTH TELLER OR FREE-FLOATING?<sup>1</sup>

#### ABSTRACT

By tracing the conceptual and political route of Kürşat Bumin, this study focuses on a unique dimension of Turkey's intellectual field. Kürşat Bumin, as a profound representative of a tradition that was not associated with Marxism, which was quite distant from it and sometimes approached it with scathing criticism, occupies an exceptional position among the intellectuals of his time who were distant from Marxism. Bumin was a key figure in laying the groundwork for left-liberal politics by developing a non-Marxist conceptual framework based on Küçükömer's original interpretation of Marxism. While he differs from the framework of the anti-communism discourse of political Right, he somehow contributes to the establishment and announcement of an anti-Marxism within the left *per se*. Bumin's writings and analyses had a significant impact on left leaning intellectuals' acknowledgement of the assumption that the state and civil society were categorically separated from each other. While making totalitarianism an essential component of his critical framework, he circulates the "free world" conceptualization in a way that is unique to Cold War intellectuals. Bumin developed a straightforward critique of the state and establishment in his articles published in Yeni afak and Medyakronik while playing a key role in instilling an anti-Marxist leftist liberalism on this conceptual ground in the 1990s. This study attempts to discuss the role Bumin assumed in the intellectual

<sup>1</sup> Significant part of the data in this study rely upon the third and fourth chapters of PhD dissertation titled The Democrat as a Social Type: The Case of Turkey in the 1990s, submitted to Graduate School of Economics and Social Sciences, Bilkent University in 2011.

and political climate after the 1990s by trying to address the impasses, methodological weaknesses, depth, and limitations of the criticism, which elevated Bumin to the position of a truth teller in the eyes of his readership. The paper analyses the basic tenets of Bumin's intellectual framework through interviews conducted with him while he was still alive, as well as articles he wrote as a media critic and books he wrote.

**Keywords:** intellectual, lef-liberalism, anti-communism, Kürşat Bumin

## İBN REŞİK EL-KAYRAVÂNÎ'NİN ŞİİRLERİNDE DENİZ VE DENİZ YOLCULUĞU

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## ÖZET

Tabiatın tüm güzelliğiyle kendini gösterdiği mekânlardan biri de denizdir. Deniz dünya güzelliğini içinde barındırmanın yanı sıra evrenin güzelliğine de ayna olmaktadır. Dolunay onun üzerindeyken daha güzel gözüktür. Güneşin doğuşu da batışı da denizde daha farklıdır. Geceleri deniz yıldızlara ev sahipliği yapar. Güneş, ay ve yıldızlar hem gökte hem onun içinde gözüktür. Deniz yolculuğu da bazı insanların hayalini süsler. Sayılamayacak kadar çok güzelliği içinde barındıran denizin şiire konu olmaması elbette düşünülemez. Deniz tabiatın güzelliğinin bir parçasıdır. Bununla birlikte o, aynı zamanda şiire güzellik katan bir unsur olagelmıştır. Bazen şiirde denizin güzelliği tasvir edilir bazen de şairler duygularını ortaya koymada denize, onun enginliğine başvurur. Kimi zaman o sevgilinin gözü olmuş, onun rengi sevgilinin gözlerinin rengini betimlemede kullanılmış kimi zaman da deniz tehlikeler barındıran korkutucu bir mekân olarak dizelerde yerini almış ve şair denizin tehlikelerine dikkat çekmiştir. Deniz bazen sevenin sevdiği uğruna içine daldığı dibi görülmeyen derin bir su kütesidir. Bazı şairler övdüğü insanları cömertlik ve benzeri bazı yönlerden denize benzetmiştir. İbn Reşik de bunlardan biridir. Şair bir mersiyesinde ağıt yaktığı kişiyle denizi karşılaştırmaktadır. O, şiirlerinde denize yer vermiş ve deniz yolculuğundan bahsetmiştir. Ancak onun şiirlerinde denizin güzelliğinden daha çok denizde yolculuk yapmanın tehlikesi ve şairin buna dair içinde beslediği korku baskın halde ortaya çıkmaktadır. Bu çalışmada nitel araştırma yöntemlerinden içerik analizi yöntemi kullanılmıştır. Şairin divanında yer alan deniz ve deniz yolculuğuyla ilgili beyitler bir araya getirilmiştir. Çalışmada denizin şair üzerindeki etkisi incelenmiştir. İbn Reşik'in deniz korkusunu dile getirdiği ve onun yerine karada yaşayan bir canlı olarak karayı tercih edişinin ağır bastığı görülmüştür.

**Anahtar Kelimeler:** *İbn Reşik el-Kayravânî, deniz, deniz yolculuğu*

## SEA AND SEA JOURNEY IN THE POEMS OF IBN RASHĪQ AL-QAYRĀWANĪ

## ABSTRACT

One of the places where nature manifests itself with all its beauty is the sea. The sea not only contains the beauty of the world, but also mirrors the beauty of the universe. The full moon looks more beautiful while on it. The sunrise and sunset are different in the sea. At night, the sea is home to the stars. The sun, moon and stars appear both in the sky and in it. The sea journey also adorns some people's dreams. Of course, it is unthinkable that the sea, which contains innumerable beauties, is not the subject of poetry. The sea is part of the beauty of nature. However, it has also been an element that adds beauty to poetry. Sometimes the beauty of the sea is depicted in the poem, and sometimes the poets refer to the sea and its vastness to reveal their feelings. Sometimes it became the lover's eye, its color was used to describe the color of the lover's eyes, and sometimes the sea took its place in the lines as a frightening place with dangers and the poet drew attention to the dangers of the sea. The sea is sometimes a deep water mass with no bottom into which the lover dives for the sake of his beloved. Some poets liken the people they praise to the sea in terms of generosity and similar aspects. Ibn Rashīq is one of them. The poet compares the sea with the person he lamented in an elegy. He included the sea in his poems and talked about sea travel. However, in his poems, more than the beauty of the sea, the danger of traveling in the sea and the poet's fear about it appear dominantly. In this study, content analysis method, one of the qualitative research methods, was used. The couplets about the sea and sea travel in the poet's divan were brought together. In this study, the effect of the sea on the poet was examined. It was seen that Ibn Rashīq expressed his fear of the sea and preferred the land as a land-dwelling creature instead.

**Keywords:** *Ibn Rashīq al-Qayrāwanī, sea, sea journey*

## ZİYA GÖKALP VE İBRAHİM ALAADDİN GÖVSA'NIN KADIN EĞİTİMİNE DAİR GÖRÜŞLERİ

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### ÖZET

Bu çalışmada, Ziya Gökalp ve İbrahim Alaaddin Gövsa'nın eserlerinde kadın eğitimine dair görüşlerinin belirlenmesi ve bu iki yazarın tecrübeleriyle günümüz kadın eğitim anlayışına katkıda bulunmak amaçlanmıştır. Araştırmada her iki yazarın eserleri, nitel araştırma yöntemlerinden doküman analizi yöntemi ile incelenmiştir. Doküman incelemesi, araştırılması hedeflenen olgu veya olgular hakkında bilgi içeren yazılı materyallerin analizini kapsar. Doküman incelemesi, tarihçilerin, antropologların, dilbilimcilerin, sosyologların ve psikologların kullandığı bir yöntem olarak bilinir.

Araştırmada şu sonuçlara ulaşılmıştır: Ziya Gökalp, eğitimin çeşitli kademelerinde görev almış, düşünceleriyle yol gösterici olmuş ve bu düşüncelerini halka yaymaya çalışmış bir fikir adamı, şair ve yazarımızdır. Yazarın sürgünden eşine ve çocuklarına gönderdiği mektuplar, onun dünya görüşünü, hayat felsefesini ve insan tarafını da yansıtmaktadır. Yazarın mektuplarında çocuğun eğitimi, kadının eğitimi ve dil eğitimi öne çıkmaktadır. Kadın ve erkeğin eşit olması yanında kadının iyi bir eğitim alması yazarın mektuplarında üzerinde durulan önemli bir konudur. Yazar, kadın ve erkeğin eşitliğinin yaşanılan yüzyılın bir gereği olduğunu düşünmektedir. Bu yüzden kadınlar için üniversiteler açılmaya başlanmıştır. Kadının erkekten daha fazla eğitim alması gerekir çünkü erkeği yetiştirecek olan da kadındır.

İsviçre'de psikoloji ve pedagoji öğrenimi gören İbrahim Alaaddin Gövsa, yurda dönüşünde psikoloji ve pedagoji öğretmenliği yapar. Eğitimin değişik kademelerinde öğretmen, müdür, müfettiş olarak senelerce görev yapmış olması, eserlerinin büyük bir kısmını da çocuklarla ilgili psikoloji ve eğitim konularında hazırlaması, Gövsa'nın eğitimci yanını göstermektedir. Gövsa, eserlerinde kadın eğitimi konusuna da değinmiştir. Gövsa, eğitilmiş kadınların barışı sağlayacağına vurgu yapar.

Bu çalışmada, Ziya Gökalp ve İbrahim Alaaddin Gövsa'nın eserlerinde kadın eğitimine dair düşünceleri incelenmiş, elde edilen bulgular doğrultusunda önerilerde bulunulmuştur.

**Anahtar Kelimeler:** Kadının eğitimi, Ziya Gökalp, İbrahim Alaaddin Gövsa

## ZİYA GÖKALP AND İBRAHİM ALAADDİN GÖVSA'S OPINIONS ON WOMEN'S EDUCATION

### ABSTRACT

In this study, it is aimed to determine the views of Ziya Gökalp and İbrahim Alaaddin Gövsa on women's education in their works and to contribute to today's understanding of women's education with the experiences of these two authors. In the research, the works of both authors were examined with the document analysis method, one of the qualitative research methods. Document analysis includes the analysis of written materials containing information about the case or cases that are aimed to be investigated. Document analysis is known as a method used by historians, anthropologists, linguists, sociologists and psychologists.

The following results were obtained in the research: Ziya Gökalp is an intellectual, poet and writer who took part in various levels of education, became a guide with his thoughts and tried to spread these thoughts to the public. The letters that the author sent to his wife and children from exile also reflect his worldview, philosophy of life and human side. In the author's letters, the education of the child, the education of the woman and language education come to the fore. Believing that men and women are equal in every field, Ziya Gökalp finds it strange that some nations see women as inferior to men. According to him, primitive nations make such a distinction. In addition to the equality of men and women, the fact that women receive a good education is an important issue emphasized in the author's letters. There is a lack of education that

comes from the past and continues today. The author thinks that the equality of men and women is a necessity of the century. Therefore, universities began to be opened for women. The woman should receive more education than the man, because it is the woman who will raise the man.

İbrahim Alaaddin Gövsa, who studied psychology and pedagogy in Switzerland, works as a psychology and pedagogy teacher when he returns home. The fact that he worked as a teacher, principal and inspector at different levels of education for years, and that he prepared most of his works on psychology and education related to children, shows the educational side of Gövsa. Gövsa also touched upon the issue of women's education in his works. It emphasizes that educated women will ensure peace.

In this study, the thoughts of Ziya Gökalp and İbrahim Alaaddin Gövsa on women's education in their works were examined and suggestions were made in line with the findings.

**Keywords:** Women's education, Ziya Gökalp, İbrahim Alaaddin Gövsa

## MISIR MERKEZLİ EYYUBİ DÖNEMİ TASAVVUF EĞİTİM KURUMLARI

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### ÖZET

Eğitimde esas olan hedeflenen insan tipini yetiştirmektir. Bu bağlamda İslami eğitimde İslam dininin gereği insana dünya ve ahiret saadetini kazandırmak üzere maddi ve manevi değerlere sahip insan modelini yetiştirmek amaç edinmektedir. Zira madde ve manadan ibaret olan insanın maddi ihtiyacı karşılanarak dünya saadetinin teminine ihtiyaç duyulduğu gibi manevi ihtiyaçlarının da karşılanarak ahiret saadetinin teminine de ihtiyaç duyulmaktadır. Yapılan İslami eğitimde ele alınan İslami ilimlerin tamamı İslam dininin temel referansları olan Kur'an ve sünnete dayanmaktadır. Diğer İslami ilimler dayandıkları dinin temel referanslarına göre maddi ve manevi değerleri birlikte kazandırırken Tasavvuf ilmi ise özellikle manevi değerleri kazandırmayı hedef edinmektedir. Zühd ve takvaya uygun bir yaşamı temin ederken Allah'ı tanıtmak suretiyle manevi bir ihtiyacı karşılamaktadır. Dışta riyazât ve mücâhede iken içte ise birtakım menzillerden ve makamlardan geçerek Allah'a yaklaşmaktır. Böylece "kâmil insan" yetiştirmek üzere insanı kötü ahlak, çirkin huylardan uzaklaştırmak ve güzel vasıflara bezenmek suretiyle insana gereken bilgiler öğretilirken zihnin manevi yollara yönelmesi ve bilgisizliğin yok edilmesi sağlanmaktadır. Bunca önem arz eden Tasavvuf eğitimini, özellikle İslam eğitiminin önemli bir dönemi olan Eyyubiler döneminin Mısır merkezli eğitim kurumlarını bilmek ve buradan alınması gereken dersleri dile getirmek büyük önem arz etmektedir. Dolayısıyla çalışmada literatür taraması sonucu doküman analiziyle kısaca din eğitimi ve tasavvuf eğitiminden bahsettikten sonra Mısır merkezli Eyyubi dönemi Tasavvuf eğitim kurumlarından bahsedilmektedir.

**Anahtar Kelimeler:** Din eğitimi, Tasavvuf eğitimi, Eğitim kurumu.

### EGYPT-CENTERED SUFI EDUCATIONAL INSTITUTIONS IN THE EYYUBI PERIOD

#### ABSTRACT

The main thing in education is to raise the targeted human type. In this context, in Islamic education, it is aimed to raise a human model with material and spiritual values in order to bring the happiness of the world and the hereafter, as a requirement of the religion of Islam. Because, meeting the material needs of man, who is composed of matter and meaning, is a need to ensure happiness in this world, and it is also a need to provide happiness in the hereafter by meeting his spiritual needs. All of the Islamic sciences discussed in the Islamic education are based on the Qur'an and the Sunnah, which are the basic references of the religion of Islam. While other Islamic sciences bring material and spiritual values together according to the basic references of the religion they are based on, the science of Sufism aims to gain spiritual values in particular. While providing a life in accordance with zuhd and taqwa, it meets a spiritual need by introducing Allah. It is to get closer to Allah by passing through certain places and positions while being in riyazat and fighting on the outside. Thus, in order to raise "perfect human beings", necessary information is taught to people by keeping people away from bad morals and ugly habits and by adopting good qualities, while it is ensured that the mind turns to spiritual paths and ignorance is destroyed. It is of great importance to know the Sufi education, which is of such importance, especially the Egyptian-based educational institutions of the Ayyubid period, which is an important period of Islamic education, and to express the lessons to be learned from it. Therefore, in the study, after briefly talking about religious education and Sufi education with document analysis as a result of literature review, Egypt-centered Ayyubid period Sufi education institutions are mentioned.

**Keywords:** Religious education, Sufi education, Educational institution.

## “DUHA KOCA OĞLU DELİ DUMRUL BOYU”NU MİZAH KURAMLARI BAĞLAMINDA OKUMAK

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### ÖZET

Gülme kavramı insana has bir olgudur. Bu kavram üzerine pek çok araştırma yapılmış olsa da spesifik boyutta hala araştırılmaya devam etmektedir. Gülme kavramı denilince akla hemen mizah gelir. Mizah; bireysel veya toplumsal durumları kendine has bir şekilde sunan, gülmeye sebep durumların ya da olayların bütünü olarak kabul edilebilir. Mizah, doğrudan ya da dolaylı olarak kullanılabilir. Bilinçli ya da bilinç dışı bir şekilde yapılan mizah belli başlı kuramlar çerçevesinde incelenmektedir. Geleneksel ve modern olarak ikiye ayrılan mizah kuramlarından özellikle geleneksel olanlar genel kabul görmüştür. Üç geleneksel mizah kuramı; Uyumsuzluk, Üstünlük ve Rahatlama'dır. Bu kuramlardan üstünlük, bireyin gülünç olan durum ya da kişiye karşı üstünlük duygusu beslemesi; uyumsuzluk, toplum kaidelerine aykırı davranan ve beklenmedik bir olay ya da durumu yansıtan bireylerin oluşturduğu mizah, rahatlama ise bireyin bastırıldığı duygulara tercüman olan durum ve olayların mizaha dönüşmesi olarak açıklanabilir. Dünya üzerinde bulunan tüm toplumların bir mizah kültürünün olduğu rahatlıkla söylenebilir. Bu durum Türk kültürü için de geçerlidir. Ancak edebiyatımızda mizah içerikli ürünün fazla olmasına karşın mizah araştırmaları oldukça azdır. Buna rağmen köklü bir mizah geleneğimizin olduğunu ve devam ettiğini söylemek güç değildir. Bu açıdan özellikle Türk halk edebiyatı ürünlerinin mizah konusunda yoğun bir içeriği sahip olduğu görülmektedir. Türkü, mâni, ninni, Halk hikâyesi gibi halk edebiyatı ürünleri bir yana Fuat Köprülünün “Terazinin Bir kesesine Türk edebiyatını diğer kesesine Dede Korkut'u bıraksak Dede Korkut'un olduğu kese ağır basar” dediği gibi Halk edebiyatımızın mihenk taşı Dede Korkut'un dahi mizahî öğeler açısından değerlendirilmesi gerekmektedir. Bu çalışmada Dede Korkut Hikâyelerinden biri olan “Duha Koca Oğlu Deli Dumrul” yaşayış ve inanış söylemleri bağlamında; üstünlük, uyumsuzluk ve rahatlama mizah teorileri ışığında irdelenecek.

**Anahtar Kelimeler:** Mizah, Deli Dumrul, Dede Korkut.

### READING “DUHA KOCA OĞLU DELİ DUMRUL BOYU” IN CONTEXT OF THEORIES OF HUMOR

### ABSTRACT

The concept of laughter is a human phenomenon. Although a lot of research has been done on this concept, it still continues to be investigated in a specific dimension. When the concept of laughter is mentioned, humor immediately comes to mind. Humor; It can be considered as the whole of situations or events that present individual or social situations in a unique way and cause laughter. Humor can be used directly or indirectly. Humor made consciously or unconsciously is examined within the framework of certain theories. Among the humor theories, which are divided into two as traditional and modern, especially the traditional ones have been generally accepted. Three traditional theories of humor; Dissonance is Superiority and Relief. Superiority from these theories means that the individual has a sense of superiority over the ridiculous situation or person; Incompatibility can be explained as humor created by individuals who act against the rules of society and reflect an unexpected event or situation, while relaxation can be explained as the transformation of situations and events that translate into the emotions suppressed by the individual into humor. It can easily be said that all societies in the world have a culture of humor. This is also true for Turkish culture. However, although there are many humorous products in our literature, there are very few humor researches. Despite this, it is not difficult to say that we have a deep-rooted tradition of humor and it continues. In this respect, it is seen that especially Turkish folk literature products have an intense content on humor. Aside from folk literature products such as folk songs, poems, lullabies, and folk tales, Fuat Köprülü

said, "If we leave Turkish literature in one pocket of the scales and Dede Korkut in the other, Dede Korkut's bag will outweigh the bag". elements should be evaluated. In this study, "Duha Kocaođlu Deli Dumrul", one of the Dede Korkut Stories, in the context of life and belief discourses; superiority, incompatibility and relaxation will be examined in the light of humor theories.

**Keywords:** Humor, Deli Dumrul, Dede Korkut



## ANADOLU SAHASI ÂŞIK ATIŞMALARINDA MİZAH

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## ÖZET

Âşıklık, kültürümüzde yer alan kadim geleneklerden biridir. Kültürel belleği yansıtan dinamik bir yapı olan âşıklığın ozan-baksı geleneğinin İslamiyet'ten sonra tasavvufi düşünce ve özellikle Osmanlı hayat biçimi ve kabullerinden doğduğuna dair tespitler vardır. "Âşıklık geleneği" etrafında oluşan edebî gelenek bunu kanıtlar niteliktedir. Anadolu sahasında hala varlığını sürdüren "Âşık geleneğini, âşık sanatını, âşık edebiyatını" çözümleyebilmek için eski Türk inanç sistemi de çözümlemek gerekir. Nitekim söz konusu inanç sistemi şamanlığa kadar uzanmakta ve şamanlık ile âşıklık geleneğinin pek çok ortak noktası bulunmaktadır. Şamanın da tıpkı âşık gibi bir rüya görme sürecinden geçtiği bilinmektedir. Ancak rüya motifi olan âşıklar gibi rüya görmeden sadece usta-çırak ilişkisi ile âşık olan sanatçılar da vardır. Âşıklık sanatı içinde pek çok edebî ürünün varlığından bahsetmek mümkündür. Âşık, mahfillerde şiirler söyleyen, hikâyeler anlatan bir sanatçıdır. Bu sanatını, bazen eğlendirmek bazen geleneği aktarmak için kullanır. Eğlendirme işlevini bazen birden fazla âşık beraber sağlar. Birden fazla âşığın birbirlerinin şairliklerini ölçtüğü, kimi zaman birbirlerini yerdığı kimi zaman aşağılamağa kadar varan şiirler ürettiği, okuduğu geleneksel icra yapısı "atışma" olarak bilinir. Âşığın atışma sırasında, eğlendirirken kullandığı yöntemlerden birinin mizah olduğu söylemek yerinde olacaktır. Kabaca, şaka, gülmece, eğlence olarak tanımlanan mizah genel olarak gülme ile paralel bir şekilde incelenir. Araştırmacılar mizahı üç kuram perspektifinde inceler. Bunlar: Uyumsuzluk, üstünlük ve rahatlamadır. Bu çalışmada Anadolu sahasında bulunan âşıkların atışma geleneği dahilinde ürettikleri şiirler söz konusu üç kuram bağlamında ele alınacaktır.

**Anahtar Kelimeler:** Âşık, Mizah, Atışma.

## HUMOR IN ANATOLIAN FIELD MINSTREL BICKERING

## ABSTRACT

Minstrel is one of the ancient traditions in our culture. There are determinations that the poet-baksı tradition of minstrelsy, which is a dynamic structure that changes cultural beliefs, stems from mystical thought after Islam, and especially from the Ottoman lifestyle and acceptances. The literary tradition formed around the "minstrel tradition" proves this. In order to analyze the "Aşık tradition, minstrel art, minstrel literature" that still exists in the Anatolian field, it is necessary to analyze the old Turkish belief system. As a matter of fact, the belief system in question extends to shamanism and there are many common points between shamanism and minstrel tradition. It is known that the shaman goes through a dreaming process just like the lover. However, there are also artists who fall in love only with the master-apprentice relationship without dreaming, like the lovers with a dream motif. It is possible to talk about the existence of many literary products in the art of minstrelsy. Minstrel is an artist who sings poems and tells stories in mahfils. He uses this art sometimes to entertain and sometimes to convey tradition. Sometimes more than one lover provides the entertainment function together. The traditional performance structure, in which more than one minstrel measures each other's poetry, sometimes criticizes each other, sometimes produces poems up to humiliation and reads, is known as "bickering". It would be appropriate to say that humor is one of the methods that the lover uses while having fun while bickering. Roughly, humor, which is defined as jokes, humor and entertainment, is generally studied in parallel with laughter. Researchers examine humor from the perspective of three theories. These are dissonance, superiority, and relaxation. In this study, the poems produced by the minstrels in the Anatolian field within the tradition of bickering will be discussed in the context of these three theories.

**Keywords:** Minstrel, Humor, Bickering.

## FÂRÂBÎ'DE MANTIK İLKELERİNİN MAHİYETİ

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## ÖZET

İslam felsefesi geleneği açısından kurucu bir role sahip olan Fârâbî, felsefe ile ilgili hemen hemen bütün alanlarda özgün eserler ortaya koymuştur. Bu eserler arasında mantık ile ilgili olanları önemli bir yer edinir. İslam dünyasında gerçek manada mantık çalışmalarının kendisiyle başlamış olduğu ifade etmek mümkündür. Fârâbî, Aristoteles'in mantık ilmi ile ilgili ortaya koyduğu ilke ve yöntemleri detaylı bir biçimde analiz etmiş, bu çalışmalarla ilgili kendine özgü çeşitli şerhler düşmüştür. *İlimlerin Sayımı* adlı eserinde, mantığa dair bir tasnifte bulunan Fârâbî, bu tasnif içerisinde yer verdiği burhân'ı mantık sanatının esası olarak takdim etmiştir. Zira Fârâbî açısından, burhanı mantık ilminin esası konumuna yükselten husus, burhan sanatının, doğruluğundan şüphe etmediği ilk öncüller konumunda bulunan mantık ilkelerinin üzerine inşa etmiş olmasıdır. Fârâbî'nin mantık ilkelerinin doğruluğuna dair kesin inancı ise onun bu ilkelerin kaynağı olarak gördüğü hususla yakından ilişkilidir. Mantık ilkelerinin kaynağının neliği, bu ilkelerin geçerliliği, kesinliği ve değerinin ne olduğu gibi mantık felsefesinin ilgi alanına giren temel soruların Fârâbî tarafından da ele alındığını ifade etmek mümkündür. Zira Fârâbî, sudur nazariyesi bağlamında bu ilkelerin kaynağını Faal Akla dayandırırken, bu ilkelere doğuştan sahip olduğumuzu, dolayısıyla da bu ilkelerin nasıl oluştuklarını anlatmanın ya da tartışmanın gereksiz bir uğraş olacağını beyan etmiştir. Mantık ilkelerinin Aristoteles'te olduğu gibi hem varlığın hem de aklın ilkeleri olduğu anlayışına sahip Fârâbî açısından bu ilkeler, evrensel ve zorunlu bir mahiyete de sahiptir. Mantık ilkelerinin ontolojik ve epistemolojik yorumunu ilgilendiren bu hususlar mantık ilmine büyük önem veren Fârâbî'nin perspektifinde bu çalışmada tekrardan bir değerlendirmeye tabi tutulacaktır.

**Anahtar Kelimeler:** Fârâbî, Mantık, Mantık İlkeleri.

## THE NATURE OF PRINCIPLES OF LOGIC IN AL-FÂRÂBÎ

## ABSTRACT

Al-Fârâbî has a founding role in the tradition of Islamic philosophy. He has produced original works in almost all fields related to philosophy. Among these works, the ones related to logic take an important place. It is possible to say that the real sense of logic studies in the Islamic world started with itself. Al-Fârâbî, Aristotle's principles and methods about the science of logic analyzed in detail, and various commentaries specific to these studies were made. Al-Fârâbî makes a classification about logic in his book, *Enumeration of the Sciences*. Al-Fârâbî presented the apodictic, which he included in this classification, as the basis of the art of logic. Because al-Fârâbî built the apodictic on the principles of logic, which are the first premises that he does not doubt. Al-Fârâbî's firm belief in the correctness of the principles of logic is closely related to what he sees as the source of these principles. Fundamental questions such as the origin of the principles of logic, the validity, precision and value of these principles were handled by al-Fârâbî. Al-Fârâbî bases the source of these principles on Agent Intellect in the context of the theory of emanation. He argues that we are born with these principles. Al-Fârâbî, declared that explaining or discussing how principles of logic are formed is an unnecessary effort. As in Aristotle, al-Fârâbî had the understanding that the principles of logic are the principles of both existence and reason. From the point of view of al-Fârâbî, these principles also have a universal and compulsory nature. These issues, which concern the ontological and epistemological interpretation of the principles of logic, will be re-evaluated in this study in the perspective of al-Fârâbî, who attaches great importance to the science of logic.

**Keywords:** Al-Fârâbî, Logic, Principles of Logic.

## ÖZEL HASTANELERİN WEB SİTELERİNDE KULLANDIKLARI HASTA GÖRSELLERİNDEKİ YÜZ İFADELERİ

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### ÖZET

Bu çalışmada; etkili bir reklam girişimi olan, sağlık kurumlarının da bilgi vermek, iletişim kurmak ve kişiyi etkilemek üzerine hazırladığı web sitelerinde kullandıkları memnun hasta görsellerinde kişiye vermek istenen mesajın ne olduğu ve kişiyi etkilemek üzere seçilmiş görsellerin farklılıklarının bulunup bulunmadığı ve literatüre katkı sağlaması amaçlanmaktadır. Yapılan alanyazın araştırmasında özellikle hastanelerin yalnızca web sitelerinde kullanılan hasta görsellerine yönelik çalışmalara rastlanmamıştır. Çalışma kapsamına Türkiye geneli sağlık turizmi yapmaya yetkili ve JCI akredite belgesine sahip olan özel hastanelerden rastgele seçilmiş 10 özel hastane dahil edilmiştir. Seçilen hastanelerin resmî web sitelerinin “anasayfa” sekmesinde yer alan, sağlık çalışanları dışındaki görsellerde bulunan muayene anı veya tedavi olmuş, tedavi sonrası düşündürülen toplam 40 görsel incelenmiştir. Görsellerde verilmek istenen mesajların ortak olduğu, muayene anında tedirginlik duyan hastalara yönelik sağlık personelinin güler yüzlü yaklaşımı, tedavi sonrası mutluluk ibareleri gösteren hasta görsellerinin web sitelerinin çoğunda kullanıldığı görülmüştür. Sağlık turizmi kapsamında da gelecek olan hastanın hastane ile ilk tanışması web siteleriyle olduğundan bu görsel üzerine yapılan çalışmaların artırılması ve bu bilinçle hareket edilmesi hastaneye başvuracak hastaların sayısını etkileyebileceği gibi, kişilerde güven ve olumlu hizmet çıktısına sahip olabileceği mesajının verilmek istendiği ve bilinçaltına etki ederek sağlık kurumundan güvenle sağlık hizmeti almaya teşvik edebileceği düşüncesini de artırarak fayda sağlayacağı düşünülmektedir.

**Anahtar Kelimeler;** Sağlık turizmi, Beden dili, Web site

### BODY LANGUAGE FOR PATIENTS WHO ARE USED BY PRIVATE HOSPITALS ON THEIR WEBSITE

### ABSTRACT

In this study, the content of the content patient images that health institutions use to inform, communicate, and influence the individual on their website, which is an effective advertising initiative, is intended to give the person what the message is and whether there are differences in the images selected to influence the individual, and to contribute literature. The research conducted in the field did not show studies for patient images, especially those used only on the websites of hospitals. The scope of the study includes 10 private hospitals, which are randomly selected from private hospitals that are authorized to do Turkish health tourism and have a JCI accredited document. A total of 40 visual inspections were examined on the “homepage” tab of the official websites of the selected hospitals, where the exam was present or treated in images other than health care workers, and considered after treatment. The friendly approach of health personnel for patients who are anxious at the moment of examination, where the messages wanted to be delivered in the images were common, and the patient images showing post-treatment happiness were used on most of the websites. Since the first time the patient will be introduced to the hospital in the scope of health tourism is with their website, increasing the work on this visual and moving with this awareness can affect the number of patients who will be admitted to the hospital, it is also thought that the person may have confidence and positive service output is wanted to be delivered and that they can influence the unconscious and encourage them to safely receive health care from the health institution.

**Keywords;** Health tourism, Body language, Web site

## SİNYAL İŞLEME YÖNTEMLERİ KULLANARAK İVMEÖLÇER VERİLERİNDEN ADIM SAYISININ TESPİTİ

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### ÖZET

Pedometre kullanılarak atılan adımın ölçülmesi, süt sığırcılığında kızgınlık belirlenmesinde tercih edilen en yaygın uygulamalardan biridir. Adım sayısının doğru olarak belirlenmesi hayvan refahı için son derece önemli bir parametredir ve hastalık durumlarının erken teşhisinde önemli bir rol oynamaktadır. Süt sığırı yetiştiriciliğinde verimlilik ve ekonomik durumu etkileyen başlıca faktör üreme performansıdır. Üreme performansına etkili en önemli faktör ise kızgınlığın doğru zamanda ve hatasız olarak belirlenmesidir. Kızgınlığın zamanında belirlenmemesi suni tohumlamanın gecikmesine, gebelik oranının düşmesine ve doğum aralığının uzamasına yol açmaktadır.

Çalışma kapsamında sahadan elde edilen ivmeölçer verileri toplanmış ve kamera kayıtları ile karşılaştırılarak adım sayısının en doğru şekilde tespit edilmesi amaçlanmıştır. Adım sayısının doğru olarak tespit edilebilmesi amacıyla ölçüm verileri üzerinde çeşitli filtreleme işlemlerinin yapıldığı ve sonrasında adım sayısının yüksek doğrulukla hesaplanabildiği bir algoritma geliştirilmiştir. Çalışmanın özgün yönlerinden birisi de adım sayısı tespitinin doğrudan donanım üzerinde yapılması ve sonrasında elde edilen verinin nesnelerin interneti teknolojisi kullanılarak internet ortamında kayıt altına alınmasının sağlanmış olmasıdır. Geliştirilen algoritma ile öncelikle ivmeölçerden alınan verilerde bulunan gürültülü işaretler medyan filtresi kullanılarak temizlenmiş ardından veri setinin varyans hesaplaması yapılarak hareket eksenini tespit edilmiştir. Hareket eksenini tespitinden sonra Savitzky-Golay filtresi uygulanarak sinyal yumuşatılmış ve ardından sinyal tepeleri sayılarak adım sayısının doğru olarak tespiti sağlanmıştır.

**Anahtar Kelimeler:** adımsayar, sinyal işleme, sayısal filtre tasarımı

### DETERMINATION OF THE NUMBER OF STEPS FROM ACCELEROMETER DATA USING SIGNAL PROCESSING METHODS

#### ABSTRACT

Measuring the number of steps taken using a pedometer is one of the most common applications for determining heat in dairy cattle. Accurate determination of the number of steps is an extremely important parameter for animal welfare and plays an important role in the early diagnosis of disease conditions. Reproductive performance is the main factor affecting productivity and economic status in dairy cattle breeding. The most important factor affecting reproductive performance is the determination of heat at the right time and without error. Failure to determine heat on time leads to delay in artificial insemination, decrease in pregnancy rate and prolonged birth interval.

Within the scope of the study, accelerometer data obtained from the field were collected and compared with camera recordings to determine the number of steps in the most accurate way. In order to accurately determine the number of steps, various filtering processes were performed on the measurement data and then an algorithm was developed to calculate the number of steps with high accuracy. One of the unique aspects of the study is that the determination of the number of steps is performed on the hardware and then the data obtained is recorded on the internet using the Internet of Things technology. With the developed algorithm, firstly, the noisy signals in the data obtained from the accelerometer were cleaned by using the median filter, and then the axis of motion was determined by calculating the variance of the data set. After the detection of the axis of motion, the signal was smoothed by applying the Savitzky-Golay filter, and then the signal peaks were counted to accurately determine the number of steps.

**Keywords:** pedometer, signal processing, digital filter design

## KAR AMACI GÜTMİYEN KURULUŞLARDA OYUNLAŞTIRMANIN BAĞIŞ ALANINDA KULLANIMINA YÖNELİK BİR ARAŞTIRMA: Q-METODU ANALİZİ İLE BAĞIŞÇI ALGILARININ İNCELENMESİ

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### ÖZET

Dijitalleşmenin bir uzantısı olarak günümüzde hızla büyüyen ve daha geniş kitleleri etkileyen oyun endüstrisi artık sadece eğlence amaçlı değil aynı zamanda çok alanda aktif kullanımı ile geniş çaplı etkileşim ve fayda yaratabilmektedir.

Oyunlaştırma, ise oyun unsurlarının oyun olmayan konulara entegrasyonu ile temelde kişilerin motivasyonunun artmasını ve istenen sonuçları kolaylaştırmayı hedefleyen stratejik bir yaklaşımdır.

Oyunlaştırma toplumsal konularda bireylerin farkındalık ve davranış değişikliği yaratmasında etkili bir yöntem olarak kullanılmaya başlanmıştır. Özellikle kar amacı gütmeyen kuruluşların sürdürülebilirliklerini sağlamak için ihtiyaç duydukları kaynak geliştirme çalışmalarında oyunlaştırma temelli uygulama ve kampanyalardan faydalanması geleceğin potansiyel bağışçıları olan yeni nesiller için önem arz etmektedir.

Her ne kadar bilimsel araştırmalar, özellikle oyunlaştırmanın satış pazarlama ve eğitim alanlarında kullanımına ilişkin büyük bir yol kat etmiş olsa da bağış konusunda yapılan çalışmalar henüz çok sınırlıdır.

Bu bildiri içeriğinde aktarılacak olan araştırmada mevcut ve potansiyel bağışçıların, oyunlaştırılmış uygulamaların bağışı teşvik etmesi konusundaki algıları incelenmiştir. Oyunlaştırmanın bileşenlerinden hangilerinin bağış davranışını teşvik ediciliği bakımından en çok etkiye sahip olduğu anlaşılacak istenmiş ve sonuçların daha derinlemesine bir anlayış yakalayabilmek için yapılacak ileriki araştırmalara bir temel oluşturması hedeflenmiştir.

Araştırma özellikle alanda kuvvetli bir teorinin yoksunluğu sebebi ile nitel bir araştırma olarak tasarlanmış ve iletişim alanında hem nicel hem nitel yöntemleri bir araya getiren nispeten yeni bir karma yöntem olan Q-metodoloji tercih edilmiştir. Q metodolojisi, bilimsel araştırma sürecinde insanların subjektif bakış açılarını, fikirlerini, inanç ve tutumlarını sistematik bir biçimde inceleyerek üzerinde uzlaşılan ya da ayrışılan örüntüleri ortaya koymayı amaçlar.

Araştırmaya gönüllü olarak katılan 42 bağışçıdan 15 tanesi ile derinlemesine görüşmeler gerçekleştirilmiş ve toplanan veriler Q-Assessor adlı veri analiz aracı kullanılarak analiz edilmiştir.

Bulgular doğrultusunda bağışçılar arasında 5 farklılaşmış görüş örüntüsü ortaya çıkmış ve genel olarak bağışçılar oyunlaştırmanın bağış motivasyonunu yükseltebileceği ortak görüşünde birleşmiştir. Ayrıca rozet, seviye statü gibi oyun bileşenlerinin değil oyunlaştırmanın fikri altyapısının, eğlence ve keyifli zaman geçirme faktörlerinin ve özellikle sosyal ağların ön plana çıktığı mücadele mekaniğinin önemsendiği bulgular arasındadır.

**Anahtar Kelimeler:** Bağış, Oyunlaştırma, Q metodoloji

## THE USE OF GAMIFICATION IN THE REALM OF DONATIONS FOR NON-PROFIT ORGANIZATIONS: A Q-METHOD ANALYSIS ON DONOR PERCEPTIONS

### ABSTRACT

As an extension of digitalization, the game industry, which is growing rapidly and among its wider masses, is now not only for entertainment purposes, but also can create wide-ranging interaction and benefit with its active use in education, advertising, health and many other fields. As a result of various negative effects, like every social phenomenon, it is doubtful that the effect of the game industry and ecosystem shaped around digital games will create even more intense economic and social consequences with a growing volume and an increasing sphere of influence.

Gamification has recently begun to be used as an effective method for individuals to create awareness and behavior change in social issues. It is especially important for the new generations, who are defined as digital natives and are potential donors of the future, that non-profit organizations make use of and benefit from gamification-based applications on their fundraising campaigns.

Although scientific research has come a long way, especially regarding the use of gamification in sales, marketing and education, studies within the domain of charitable giving are still very limited.

In the research carried out within the scope of the dissertation, the perceptions of current and potential donors about gamified applications encouraging donations were examined. It was aimed to understand which of the components of gamification had the most impact on promoting charitable giving and the results were aimed to form a basis for further research to gain a more in-depth understanding.

In particular, due to the lack of a strong theory in gamification field, a qualitative study is preferred. Q methodology, which is a relatively recent mixed method combining both quantitative and qualitative methods in the field of communication, was chosen. The Q- methodology aims to reveal the patterns that are agreed upon or diverged by revealing people's subjective perspectives, ideas, beliefs and attitudes systematically in the scientific research process.

In-depth interviews were conducted with 15 of the 42 donors who voluntarily participated in the research, and the collected data were analyzed using Q-Assessor data analysis tool.

I hope that the findings of this study will enable non-profit organizations to further integrate gamification techniques effectively into their fundraising and public relations campaigns to receive more enduring and better results.

**Keywords:** Donation, Gamification, Q Method

## WEB 2.0 ARAÇLARININ HÜCRE VE BÖLÜNMELELER ÜNİTESİNDEKİ BAŞARIYA ETKİSİ

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### ÖZET

Bilgisayar, tablet ve internet teknolojisinin yaygınlaşması yaşamın her alanında etkisini göstermektedir. 21. yüzyılla beraber bu etki eğitimde de yoğun bir şekilde hissedilmeye başlamıştır. Teknolojik gelişmelerin eğitim alanında yer alması öğretimde yeni yaklaşımlara neden olmuştur. Teknoloji ve internet eğitimde halen etkili bir şekilde kullanılmaya devam etmektedir. Aynı zamanda teknolojinin gelişmesiyle birlikte öğretim yöntemleri ve araçları ihtiyaçlar doğrultusunda yenilik kazanmıştır. Bilgi toplumunda dijitalin önem kazanması ile birlikte Fen Bilimleri dersi programını da yeniden yapılandırılmasını, yeni yöntemlere başvurulmasını ve öğretim yöntemlerinde yeni araçlar sunulmasını zorunlu kılmıştır. Eğitim teknolojisinde güncellik, ekonomiklik, verimlilik ve iş birliği sağlama gibi özellikler göz önüne alındığında Web 2.0 araçlarının bu özelliklerle örtüşmekte olduğu ve eğitimde yeni bir teknolojik araç olarak alternatif hâline geldiği görülmektedir. Dijital çağda dijital araçlarla büyüyen çocukların daha sonra okula geldiklerinde beklentilerini karşılamada Web 2.0 araçlarının dersi eğlenceli hâle getirmesinden, anlamlı öğrenmeler sağlamasından, akran öğretimine yardımcı olmasından, fırsat ve imkan eşitliği sağlamasından yararlanarak bu yararı en üst seviyelere çıkarmak gerekmektedir.

Bu araştırmanın amacı; Web 2.0 araçlarından Kahoot uygulamalarının hücre ve bölünmeler ünitesinde başarıya etkisini araştırmaktır. Bu çalışmada ön test-son test uygulayarak karma yöntem ile yürütülecektir. Araştırmanın çalışma grubunu Türkiye'nin güneydoğusunda yer alan bir devlet okulunda öğrenim gören 40 öğrenci oluşturmaktadır. Hücre ve Bölünmeler ünitesi MEB kazanımlarına göre beş haftayı (20 ders saati) kapsamaktadır. Üniteye başlamadan önce kontrol grubundaki ve deney grubundaki öğrencilere Hücre ve Bölünmeler konusuna yönelik başarı testi uygulanmıştır. Beş hafta boyunca kontrol grubundaki öğrencilere ders kitabında yer alan etkinliklerle ders işlenirken, deney grubundaki öğrencilere beş hafta boyunca Web 2.0 araçlarından Kahoot kullanılarak ders işlenmektedir. Beş haftalık sürecin sonunda iki gruba da aynı Başarı Testi uygulanmaktadır. Başarı testlerinin sonuçlarına bakıldığında deney grubundaki öğrencilerin başarılarında daha fazla artış olduğu görülmektedir. Bununla birlikte deney grubundaki öğrencilerin derse karşı ilgi ve motivasyonlarında artış olduğu görülmektedir. Bu yeni dijital ders materyallerinin eğitime yansımalarının etkilerini araştırmak tasarlanacak ders müfredatı, öğretmenler ve öğrenciler açısından son derece önemlidir.

**Anahtar Kelimeler:** Web 2.0, Kahoot, Başarı

### THE EFFECT OF WEB 2.0 TOOLS ON THE SUCCESS OF CELL AND DIVISION UNIT

#### ABSTRACT

The widespread use of computers, tablets and internet technology affects every aspect of life. With the 21st century, this effect has begun to be felt intensely in education. The inclusion of technological developments in the field of education has led to new approaches in teaching. The technology and internet are used in education at present. Also online tools which are used with internet, have increased. At the same time, with the development of technology, teaching methods and tools have gained innovation according to the needs. With the importance of digital in the information society, it has become necessary to restructure the science curriculum, to apply new methods and to offer new tools in teaching methods. Considering the features such as up-to-dateness, economy, efficiency and cooperation in educational technology, it is seen that Web 2.0 tools overlap with these features and have become an alternative as a new technological tool in education. In

order to meet the expectations of children who grew up with digital tools in the digital age, when they come to school later, it is necessary to maximize this benefit by making use of Web 2.0 tools making the lesson fun, providing meaningful learning, helping peer teaching, and providing equality of opportunity.

The purpose of this research; To investigate the effect of Kahoot applications, is one

of the Web 2.0 tools, on the success of the cell and cell divisions unit. In this study, it will be carried out with a mixed method by applying pre-test-post-test. The study group of the research consists of 40 students studying in a public school located in the southeast of Turkey. The Cell and cell divisions unit will take five weeks (20 class hours) according to the achievements of the Ministry of National Education. Before starting the unit, an achievement test on Cell and Divisions was applied to the students in the control group and the experimental group. While the students in the control group are taught with the activities in the textbook for five weeks, the students in the experimental group are taught by using Kahoot, is one of the Web 2.0 tools, for five weeks. At the end of the five-week period, the same Achievement Test is applied to both of them. When the results of the achievement tests are examined, it is seen that there is a greater increase in the success of the students who are in the experimental group. In addition, it is seen that the students in the experimental group have an increase in their interest and motivation towards the lesson. It is extremely important for the curriculum, teachers and students investigate the effects of these new digital course materials on education.

**Keywords:** Web 2.0, Kahoot, Success



## SİNYAL İŞLEME YÖNTEMLERİ KULLANARAK İVMEÖLÇER VERİLERİNDEN ADIM SAYISININ TESPİTİ

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### ÖZET

Pedometre kullanılarak atılan adımın ölçülmesi, süt sığırcılığında kızgınlık belirlenmesinde tercih edilen en yaygın uygulamalardan biridir. Adım sayısının doğru olarak belirlenmesi hayvan refahı için son derece önemli bir parametredir ve hastalık durumlarının erken teşhisinde önemli bir rol oynamaktadır. Süt sığırı yetiştiriciliğinde verimlilik ve ekonomik durumu etkileyen başlıca faktör üreme performansıdır. Üreme performansına etkili en önemli faktör ise kızgınlığın doğru zamanda ve hatasız olarak belirlenmesidir. Kızgınlığın zamanında belirlenmemesi suni tohumlamanın gecikmesine, gebelik oranının düşmesine ve doğum aralığının uzamasına yol açmaktadır.

Çalışma kapsamında sahadan elde edilen ivmeölçer verileri toplanmış ve kamera kayıtları ile karşılaştırılarak adım sayısının en doğru şekilde tespit edilmesi amaçlanmıştır. Adım sayısının doğru olarak tespit edilebilmesi amacıyla ölçüm verileri üzerinde çeşitli filtreleme işlemlerinin yapıldığı ve sonrasında adım sayısının yüksek doğrulukla hesaplanabildiği bir algoritma geliştirilmiştir. Çalışmanın özgün yönlerinden birisi de adım sayısı tespitinin doğrudan donanım üzerinde yapılması ve sonrasında elde edilen verinin nesnelerin interneti teknolojisi kullanılarak internet ortamında kayıt altına alınmasının sağlanmış olmasıdır. Geliştirilen algoritma ile öncelikle ivmeölçerden alınan verilerde bulunan gürültülü işaretler medyan filtresi kullanılarak temizlenmiş ardından veri setinin varyans hesaplaması yapılarak hareket eksenini tespit edilmiştir. Hareket eksenini tespitinden sonra Savitzky-Golay filtresi uygulanarak sinyal yumuşatılmış ve ardından sinyal tepeleri sayılarak adım sayısının doğru olarak tespiti sağlanmıştır.

**Anahtar Kelimeler:** adımsayar, sinyal işleme, sayısal filtre tasarımı

### DETERMINATION OF THE NUMBER OF STEPS FROM ACCELEROMETER DATA USING SIGNAL PROCESSING METHODS

#### ABSTRACT

Measuring the number of steps taken using a pedometer is one of the most common applications for determining heat in dairy cattle. Accurate determination of the number of steps is an extremely important parameter for animal welfare and plays an important role in the early diagnosis of disease conditions. Reproductive performance is the main factor affecting productivity and economic status in dairy cattle breeding. The most important factor affecting reproductive performance is the determination of heat at the right time and without error. Failure to determine heat on time leads to delay in artificial insemination, decrease in pregnancy rate and prolonged birth interval.

Within the scope of the study, accelerometer data obtained from the field were collected and compared with camera recordings to determine the number of steps in the most accurate way. In order to accurately determine the number of steps, various filtering processes were performed on the measurement data and then an algorithm was developed to calculate the number of steps with high accuracy. One of the unique aspects of the study is that the determination of the number of steps is performed on the hardware and then the data obtained is recorded on the internet using the Internet of Things technology. With the developed algorithm, firstly, the noisy signals in the data obtained from the accelerometer were cleaned by using the median filter, and then the axis of motion was determined by calculating the variance of the data set. After the detection of the axis of motion, the signal was smoothed by applying the Savitzky-Golay filter, and then the signal peaks were counted to accurately determine the number of steps.

**Keywords:** pedometer, signal processing, digital filter design

## UZUN KISA-SÜRELİ BELLEK (LONG SHORT-TERM MEMORY, LSTM) MODELİNE DAYALI YAPAY SİNİR AĞI İLE HİSSE SENEDİ FİYATININ TAHMİNİ

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### ÖZET

Günümüzde birikim sahipleri için en gözde yatırım alternatiflerinden biri hisse senetleridir. Bu yatırım aracı çok kazançlı olabileceği gibi beraberinde birikimlerin erimesine yol açabilecek riskleri barındırır. Bu sebeple, hisse senetlerinin geleceğe yönelik tahmini önemli bir konudur. Geleneksel yöntemlerin yanında yapay zekâ ve makine öğrenmesi gibi modern yöntemlerin bu alanda kullanılmasında ciddi artış gözlenmektedir. Bu çalışmada, Uzun-Kısa Süreli Bellek (Long Short-Term Memory, LSTM) modeline dayalı yapay sinir ağı mimarisi kullanılarak, seçilen hisse senedinin gelecekteki fiyatının tahmini incelenmiştir. Veri kaynağı olarak Apple firmasının üç yıllık hisse senedi fiyatları kullanılmıştır. LSTM, sıralama faktörünü işleyebilen bir yapay sinir ağı mimarisidir. Bu yapının temel özelliği, türetildiği yapıda görülen kısa süreli hafıza sorununu çözmektedir. LSTM, içinde kapılar bulunan hücre yapısı sayesinde, süre uzunluğu fark etmeksizin bilginin kayıpsız olarak taşınabilmesini mümkün kılmaktadır. Çalışmada öncelikle, modelin oluşturulmasında kullanılan ve tahmin başarısını etkileyen 5 farklı değişken belirlenmiştir. Bu değişkenler; modelde kullanılacak LSTM katmanlarının sayısı, katmandaki nöronların sayısını gösteren birim sayısı, geçmişe doğru kaç günlük veriye dayalı olarak tahmin yapılacağını belirleyen kayan pencere büyüklüğü, yapay sinir ağının eğitilmesi esnasında her seferde girilecek veri miktarını tanımlayan yığın (batch) büyüklüğü ve her iterasyonda elde edilen çıktıya göre model parametrelerinin nasıl güncelleneceğini, yani modelin hangi yöntemle eğitileceğini tanımlayan öğrenme algoritmasıdır. Her bir değişken için alternatif değerler tespit edilmiş, bu seçeneklerden oluşan kombinasyonlar (240 farklı yapı) test edilerek performansa etkileri araştırılmış ve elde edilen sonuçlar karşılaştırmalı olarak sunulmuştur. Bu çalışma, LSTM mimarisi ile hisse senedi fiyat tahmininde modelin optimizasyonu için ayrıntılı bir analiz niteliği taşımaktadır.

**Anahtar Kelimeler:** Uzun Kısa-Süreli Bellek, Hisse Senedi Fiyat Tahmini, Yapay Sinir Ağı

## STOCK PRICE PREDICTION WITH ARTIFICIAL NEURAL NETWORK BASED ON LONG SHORT-TERM MEMORY (LSTM) MODEL

### ABSTRACT

One of the most popular investment alternatives for savers today is stocks and shares. While this investment option can be very profitable, it also carries with it risks that can lead to the loss of savings. For this reason, forecasting the future prices of stocks is an important issue. In addition to traditional methods, there has been a significant increase in the use of modern methods such as artificial intelligence and machine learning in this field. In this study, the future price prediction of a selected stock is analyzed using an artificial neural network architecture based on the Long Short-Term Memory (LSTM) model. Three years of Apple's stock prices are used as the data source. LSTM is an artificial neural network architecture that can handle the sequencing factor. The main feature of this structure is that it solves the short-term memory problem of the structure from which it is derived. Thanks to its cell architecture with gates inside, LSTM makes it possible to transmit information without any loss, regardless of the length of the duration. In the study, firstly, 5 different variables that are used in the construction of the model and affect the prediction success are determined. These variables are the number of LSTM layers to be used in the model, the number of units indicating the number of neurons in the layer, the size of the sliding window that determines how many past days of data will be used in order to predict the future, the batch size that defines the amount of data to be fed in each time during the training of the artificial neural network, and the learning algorithm that defines how the model parameters will be updated according to the output obtained in each iteration, that is, the method

by which the model will be trained. Alternative values for each variable were identified, combinations of these options (240 different structures) were tested and their effects on performance were investigated and the results obtained were presented comparatively. This study is a detailed analysis of the model optimization for stock price forecasting with LSTM architecture.

**Keywords:** Long Short-Term Memory, Stock Price Prediction, Artificial Neural Network

## CONSTRUCTION OF THE NAND GATE IN QUANTUM COMPUTING SYSTEMS USING QUANTUM FOURIER TRANSFORM

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### ABSTRACT

The quantum counterpart of the classical logic operations are required to execute the classical computer programs on the quantum computers without making too many changes. In this presentation, we construct the quantum version of the classical NOT-AND (NAND) gate without using the Toffoli gate[1]. We use the quantum Fourier transform to work on the superposition states. So, we apply the Hadamard and the conditional phase gates to realize the NAND operation. We simulate the proposed NAND operation using the Qiskit (provided by IBM) library. The obtained results show that the NAND operation can be realized with a valuable probability rate on the quantum processors. Especially, it is shown that the NAND operation reaches high probability success rate when the number of the input channels are increased.

**Keywords:** Quantum Computation, Quantum Fourier Transform, Quantum Logic Gate

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[1] S.S. Samrin, R. Patil, S. Itagi, S.C. Chetti, A. Tasneem, Design of logic gates using reversible gates with reduced quantum cost, Global Transitions Proceedings. **3** (2022) 136–141.

## AYRIK FARE SÜRÜSÜ OPTİMİZASYON ALGORİTMASI İLE KARESEL ATAMA PROBLEMİNİN ÇÖZÜMÜNE YENİ BİR YAKLAŞIM

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### ÖZET

Karesel atama problemi iyi bilinen ayrık optimizasyon problemlerinden biridir. Problem, belirli sayıdaki tesisi yine belirli sayıdaki lokasyonlara yerleştirmek olarak tanımlanabilir. Yerleşim tamamlandığında tüm tesisler tüm lokasyonlara yerleştirilmeli ve boşta kalan tesis veya lokasyon olmamalıdır. Bu problemde tesisler arasında bir akış vardır ve bu akış ile tesislerin birbirleri arasındaki mesafelerin problemin amaç fonksiyonuna direkt olarak etkisi söz konusudur. Problemdaki amaç akış yoğunluğu fazla olan tesisler arasındaki mesafenin minimum olmasıdır. Bundan dolayı bu problem minimizasyon problemi olarak sınıflandırılır. Fare sürüsü optimizasyon (FSO) algoritması literetüre yeni girmiş optimizasyon algoritmalarından birisidir. Bu algoritma farelerin doğadaki kovalama ve saldırma davranışlarından esinlenmiştir. Orijinal FSO algoritması sürekli optimizasyon problemlerinin çözümü için geliştirilmiştir. Çalışmada ele alınan problem ise kesikli (ayrık) problemidir. Bundan dolayı FSO algoritması probleme direkt olarak uygulanamaz. Bu çalışmada orijinal FSO algoritması, temel adımlarına dokunulmadan ayrık problemleri çözebilecek şekilde değiştirilmiştir. Yapılan değişiklik FSO algoritmasındaki komşuluk üretme yöntemleridir. Komşu üretme metotları olarak literatürde sıkça kullanılan araya ekleme ve takas yöntemleri uygulanmıştır. Böylece ayrık fare sürüsü optimizasyon (AFSO) algoritması isminde yeni bir yöntem geliştirilmiştir. Bu yeni yöntemin başarısını test etmek için OR-Kütüphanesinden farklı büyüklükte test problemler seçilmiştir. AFSO algoritmasından elde edilen sonuçlar test problemlerinin bilinen en iyi sonuçları ile kıyaslanmıştır. AFSO algoritmasından elde edilen sonuçlar değerlendirildiğinde bilinen en iyi sonuçlara ulaşılmadığı ancak yakın sonuçlar ürettiği görülmüştür.

**Anahtar Kelimeler:** Ayrık Optimizasyon Problemleri, Fare Sürüsü Optimizasyon Algoritması, Karesel Atama Problemi

### A NEW APPROACH TO SOLVING QUADRATIC ASSIGNMENT PROBLEM WITH DISCRETE RAT SWARM OPTIMIZATION ALGORITHM

### ABSTRACT

The quadratic assignment problem is one of the well-known discrete optimization problems. The problem can be defined as placing a certain number of facilities in a certain number of locations. When placement is complete, all facilities should be placed at all locations and there should be no unplaced facilities or locations. In this problem, there is a flow between the facilities and the distance between this flow and the facilities has a direct effect on the objective function of the problem. The aim of the problem is to keep the distance between facilities with high flow density to be minimum. Therefore, this problem is classified as a minimization problem. The rat swarm optimization (RSO) algorithm is one of the recently introduced optimization algorithms in the literature. This algorithm is inspired by the chasing and attacking behavior of rats in nature. The original RSO algorithm was developed for solving continuous optimization problems. The problem addressed in the study is the discrete problem. Therefore, the RSO algorithm cannot be applied directly to the problem. In this study, the original RSO algorithm has been modified to solve discrete problems without touching its basic steps. The modification is the neighborhood generation methods in the RSO algorithm. As neighbor generation methods, insertion and swap methods, which are frequently used in the literature, have been applied. Thus, a new method called the discrete rat swarm optimization (DRSO) algorithm has been developed. To test the performance of this new method, different-sized test problems have been selected from the OR-Library. The results obtained from the DRSO algorithm are compared with

the best known results of the test problems. When the results obtained from the DRSO algorithm have been evaluated, it has been seen that the DRSO algorithm could not reach the best-known results, but generated close results.

**Keywords:** Discrete Optimization Problems, Rat Optimization Algorithm, Quadratic Assignment Problem

## GEZGİN SATICI PROBLEMİ İÇİN AYRIK YAPAY GORİL TOPLULUKLARI OPTİMİZASYON ALGORİTMASI

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### ÖZET

Gezgin satıcı problemi (GSP), gezgin bir satıcının ziyaret ettiği şehri tekrar ziyaret etmemek kaydı ile tüm şehirleri gezerek başlangıç noktasına en kısa yoldan nasıl gideceği ile ilgilidir. Bir minimizasyon problemi olan GSP'nin senkron ve asenkron olmak üzere iki çeşidi bulunmaktadır. Senkron problemde herhangi bir iki şehir arasındaki gidiş mesafesi ile dönüş mesafeleri birbirinden farklıdır. Senkron problemde ise bu mesafeler aynıdır. GSP, NP-Zor sınıfına giren optimizasyon problemlerinden birisidir. Bundan dolayıdır ki literatürde bu problemin çözümünde kesin yöntemlerden çok meta-sezgisel yöntemler kullanılmıştır. Literatüre yeni giren yapay goril toplulukları optimizasyon (GTO) algoritması da doğa esinli meta-sezgisel algoritmalarından birisidir. GTO algoritması goril topluluklarının doğadaki sosyal zekasından esinlenmiş ve gorillerin toplu yaşamı matematiksel olarak formülize edilmiştir. GTO temel olarak keşif ve sömürü şeklinde iki aşamadan oluşmaktadır. Keşif aşamasında global optimum bölge aranırken sömürü aşamasında ise yerel bölgenin detaylı incelenmesi gerçekleştirilmektedir. Bu aşamaların hangisinin kullanılacağı belirli parametrelere bağlanmıştır. Orijinal GTO algoritması sürekli optimizasyon problemlerinin çözümü için önerilmiştir. Bu çalışmada ele alınan problem ayrık bir optimizasyon problemi olduğu için GTO direkt olarak GSP'ye uygulanamaz. Bu çalışmada orijinal GTO algoritması temel adımlarını bozmayacak şekilde ayrık problemlerin çözümü için değiştirilmiştir. Keşif aşamasında swap sequence ve symmetry sequence komşuluk üretme yöntemleri kullanılırken sömürü aşamasında ise yerel arama operatörleri olarak da değerlendirilen swap ve insertion komşuluk üretme metotları kullanılmıştır. Algoritmanın performansı QR-Kütüphanesi'nden seçilen simetrik GSP problemleri ile test edilmiştir. Elde edilen sonuçlar incelendiğinde ayrılaştırılmış GTO algoritması GSP'nin çözümü için tatmin edici sonuçlar ürettiği görülmüştür.

**Anahtar Kelimeler:** Ayrık Goril Toplulukları Optimizasyon Algoritması, Ayrık Optimizasyon Problemleri, Gezgin Satıcı Problemi

## DISCRETE ARTIFICIAL GORILLA TROOPS OPTIMIZATION ALGORITHM FOR THE TRAVELING SALESMAN PROBLEM

### ABSTRACT

The traveling salesman problem (TSP) can be described as finding the shortest path back to the starting point by traveling through all the cities, provided that a seller does not revisit the city he visited. TSP, which is a minimization problem, has two types symmetric and asymmetric. In the asymmetric problem, the going distance and the return distance between any two cities are different from each other. In the symmetric problem, these distances are the same. GSP is one of the optimization problems in the NP-hard class. For this reason, meta-heuristic methods have been used rather than exact methods in solving this problem in the literature. The artificial gorilla troops optimization (GTO) algorithm, which has recently been proposed in the literature, is one of the nature-inspired meta-heuristic algorithms. The GTO algorithm has been inspired by the social intelligence of gorilla troops in nature and the collective life of gorillas has been formulated mathematically. The GTO algorithm basically consists of two phase, exploration and exploitation. While the global optimum solution is searching in the exploration phase, a detailed examination of the local region is carried out in the exploitation phase. Which of these phase will be used depends on the parameters. The original GTO algorithm was proposed for solving continuous optimization problems. Since the problem addressed in this study is a discrete optimization problem, GTO cannot be applied directly to the TSP. In this study, the original GTO algorithm has been modified to solve discrete problems. While swap sequence and

symmetry sequence neighborhood methods were used in the exploration phase, swap and insertion neighborhood methods, which are also considered local search operators, were used in the exploitation phase. The performance of the algorithm has been tested with symmetric GSP problems selected from the QR-Library. When the results are examined, it is seen that the discretized GTO algorithm generates satisfactory results for the solution of TSP.

**Keywords:** Discrete Artificial Gorilla Troops Optimization Algorithm, Discrete Optimization Problems, Traveling Salesman Problem



**BALON BALIĞIYLA MÜCADELE İÇİN MAKİNE ÖĞRENMESİ KULLANAN TUZAK****Öğr. Gör. Mert DEMİR***İzmir Kavram Meslek Yüksekokulu, ORCID: 0000-0002-1053-5784***ÖZET**

İklim değişiklikleri nedeniyle birçok canlı kendi yaşam alanlarını terk ederek başka yaşam alanlarına göç etmektedir. Yaşanan küresel ısınma sonucu sıcak bölgelerde yaşayan bazı canlılar daha soğuk olan kuzey enlemlerine göç etmektedir. Bu durum, var olan sabit besin zincirlerinin bozulmasına, bazı canlıların aşırı üremesine, bazı canlıların ise türlerini tehlikeye atmasına neden olmaktadır. İstilacı türler arasında balon balığı başta Akdeniz olmak üzere birçok deniz ekosistemini tehdit etmektedir. Balon balığının bazı özellikleri bu canlının girdiği ortamlarda ciddi problemlere neden olur. Balon balığı zehirli türlerden biri olduğu için doğal yöntemlerle bu canlıyla mücadele etmek mümkün değildir. Çünkü bu balıklar vücutlarında yüksek oranda zehir barındırmaktadır. Bu durum biyolojik mücadele yöntemlerini sınırlandırmaktadır. Bu çalışmada, ciddi ekolojik ve ekonomik zararlara neden olan balon balıklarıyla mücadele için makine öğreniminin kullanılması önerilmektedir. Makine öğrenmesi farklı özelliklere sahip verilerin sınıflandırılmasında kullanılan etkili bir yöntemdir. Yapay zekanın bir türü olan makine öğrenimi desteğiyle, su altına kurulacak kapan sayesinde istilacı ve zararlı balon balığı popülasyonu ile mücadele yöntemi önerilmiştir. Çalışmada son zamanlarda Akdeniz ve çevresinde görülen balon balıklarına ait görseller toplanarak makine öğrenmesi eğitiminde kullanıldı. Tespit edilen balon balıklarının yakalanması için balon balıklarının boyutları ve davranışları dikkate alınarak kamera destekli kapan sistemi tasarlandı. Kameradan tespit edilen balon balıkları için kapanın aktif olması sağlanırken diğer zararsız canlı türleri için kapan sistemi pasif durumda tutulmuştur. Önerilen ve prototipi gerçekleştirilen kapan sayesinde deniz ekosistemini tehdit eden tüm canlılarla zahmetsizce mücadele etmek mümkündür.

**Anahtar Kelimeler:** Lagocephalus sceleratus, Balon balığı, İstilacı türler, Makine öğrenmesi, Yapay zeka

**THE TRAP USING MACHINE LEARNING TO FIGHT PUFFER FISH****ABSTRACT**

Due to climate changes, many living things leave their own habitats and migrate to other habitats. As a result of global warming, some creatures living in warm regions migrate to colder northern latitudes. This situation causes the existing stable food chains to deteriorate, some living things to reproduce excessively, and some living things to endanger their species. Among the invasive species, puffer fish threatens many marine ecosystems, especially the Mediterranean. Some features of the pufferfish cause serious problems in the environments where this creature enters. Since puffer fish is one of the poisonous species, it is not possible to combat this creature with natural methods. Because these fish contain high levels of poison in their bodies. This situation limits biological control methods. In this study, it is recommended to use machine learning to combat puffer fish that cause serious ecological and economic damage. Machine learning is an effective method used to classify data with different characteristics. With the support of machine learning, a type of artificial intelligence, a method of combating the invasive and harmful puffer fish population has been proposed, thanks to the trap to be set up underwater. In the study, images of puffer fish seen recently in the Mediterranean and its surroundings were collected and used in machine learning training. In order to catch the detected puffer fish, a camera assisted trap system was designed considering the size and behavior of the puffer fish. While the trap is enabled for puffer fish detected from the camera, the trap system is kept passive for other harmless species. Thanks to the proposed and prototyped trap, it is possible to effortlessly combat all living things that threaten the marine ecosystem.

**Keywords:** Lagocephalus sceleratus, Puffer fish, Invasive species, Machine learning, Artificial intelligence

## NESNE TANIMA YÖNTEMİYLE BAL ARISI KOVANLARINDA ZARARLILARLA MÜCADELE

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### ÖZET

Arılar tarafından üretilen bal, polen, arısütü, propolis gibi ürünler binlerce yıldır bağışıklık sistemini kuvvetlendirmek, besin ve tedavi amacıyla kullanılmaktadır. Günümüzde arı ürünleri ciddi ticari boyut kazanmış durumdadır. Bununla birlikte bal arıları tarımda ve doğada bitkilerin tozlaşmasını sağladığından son derece önemli rol oynamaktadır. Arıcılık başta gıda, ilaç ve ticari sektörler olmak üzere çok sayıda alanda vazgeçilmez faydalar sunmaktadır. Bu faydaların yanında arıcılık sektörünü olumsuz etkileyen çeşitli sorunlar bulunmaktadır. Bal arıları çok sayıda zararlı canlı türünün hedefi olmaktadır. Özellikle bal arılarında görülen parazitler ve yabancı arı istilaları bu sektörün en büyük sorunlarından bazılarıdır. Arıcılıkla uğraşan kişiler bu gibi nedenlerden dolayı ciddi ekonomik zararlara uğramaktadır. Bu sorunların çözülmesi için kesin bir yöntem ve bal arısı kovanı modeli bulunmamaktadır. Arıcılıkta zararlılar için kullanılan çeşitli ilaçlar ve zehirler ise bal arılarına ve diğer canlılara da zarar vermektedir. Bu çalışmada görüntü işleme ve nesne tanıma uygulaması ile bal arısı kovanlarında güvenlik sağlanması hedeflenmiştir. Klasik arı kovanlarının yan cephesinde bulunan kovan girişi çalışma kapsamında kovanın üst kısmına alınmıştır. Kovan girişi çoklu kapıya sahip olacak şekilde bölümlendirilmiş ve bu kapıların kamera ile gerçek zamanlı olarak izlenmesi sağlanmıştır. Bu sayede kovana giren her canlının görüntüsü nesne tanıma programı ile izlenmiştir. Arı kovanına girmeye çalışan kovan zararlılarının tespiti halinde kovan girişinde bulunan mekanizma ile zararlıların kovana girmeden yakalanması sağlanmaktadır. Önerilen sistemin prototipi gerçekleştirilerek bal arısı kovanlarının yaşamlarına destek olunması amaçlanmış, arıcılık sektöründeki sorunları en aza indirgeyecek güvenli bal arısı kovanı önerilerek yapılan çalışmalar ve elde edilen veriler sunulmuştur.

**Anahtar Kelimeler:** Nesne tanıma, Görüntü işleme, Zararlılarla mücadele, Arıcılık, Arı kovanı

### FIGHTING PESTS IN HONEY BEE HIVES WITH OBJECT RECOGNITION METHOD

#### ABSTRACT

Products such as honey, pollen, royal jelly and propolis produced by bees have been used for thousands of years to strengthen the immune system, for food and treatment. Today, bee products have gained a serious commercial dimension. However, honey bees play an extremely important role in agriculture and nature as they provide pollination of plants. Beekeeping offers indispensable benefits in many fields, especially in the food, pharmaceutical and commercial sectors. In addition to these benefits, there are various problems that negatively affect the beekeeping sector. Honey bees are the target of many harmful species. Parasites and foreign bee infestations, especially seen in honey bees, are some of the biggest problems in this industry. People engaged in beekeeping suffer serious economic losses due to such reasons. There is no definitive method and honey bee hive model for solving these problems. Various drugs and poisons used for pests in beekeeping also harm honey bees and other living things. In this study, it is aimed to provide security in honey bee hives with image processing and object recognition application. The hive entrance, which is located on the side of the classical bee hives, was taken to the upper part of the hive within the scope of the study. The hive entrance is partitioned to have multiple doors, and these doors are monitored in real time with a camera. In this way, the image of every living thing that entered the hive was monitored with the object recognition program. In case of detection of hive pests trying to enter the beehive, the mechanism at the entrance of the hive ensures that the pests are caught before they enter the hive. By making the prototype of the proposed system, it is aimed to support the lives of honey bee hives, and the studies and data obtained by proposing a safe honey bee hive that will minimize the problems in the beekeeping sector are presented.

**Keywords:** Object recognition, Image processing, Pest control, Beekeeping, Beehive

## GOODİN MODELİ KULLANILARAK GÜNLÜK ORTALAMA SOLAR RADYASYONUN TAHMİN EDİLMESİ: KAHRAMANMARAŞ ÖRNEĞİ

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### ÖZET

Bu çalışmada, günlük solar radyasyonun ( $R_s$ ) hava sıcaklığı ( $T$ ) ve extraterrestrial radyasyona ( $R_a$ ) bağlı olarak tahmin edilmesinde kullanılan ampirik Goodin modelinin Kahramanmaraş koşullarına uygun kalibrasyonunun yapılarak, test edilmesi amaçlanmıştır. Öncelikle  $T$ ,  $R_s$  ve  $R_a$  verilerinin uzun yıllar ortalaması günlük değerleri kullanılarak (1938 – 2020), Microsoft Excel programı çözücü eklentisi ile modelin ( $R_s = a[1 - \exp(-b(T_{\max} - T_{\min})^c R_a^{-1})]R_a$ ) kalibrasyon katsayıları ( $a$ ,  $b$ ,  $c$ ) belirlenmiş ve kalibrasyon eşitliği oluşturulmuştur ( $R_s = 0.725[1 - \exp(-2.646(T_{\max} - T_{\min})^{1.759} R_a^{-1})]R_a$ ). Daha sonra, bu kalibrasyon eşitliği Kahramanmaraş Sütçü İmam Üniversitesinde (KSÜ) 2021 yılının Temmuz – Ekim döneminde ölçülen günlük ortalama  $T$  ve  $R_s$  verileri ile test edilmiştir. Bu verilerin ölçülmesinde Programlanabilir Lojik Kontrolör (PLC) cihazı tarafından yönetilen hava sıcaklığı ve solar radyasyon sensörleri kullanılmıştır. Bu doğrultuda CODESYS programlama dili kullanılarak bir yazılım hazırlanmış ve PLC cihazına yüklenmiştir. Günlük  $R_a$  değerleri ise enlem ve zamana bağlı olarak tahmin edilmiştir. Uzun yıllar ortalaması günlük ölçülen  $R_s$  değerleri  $4.99 - 32.56 \text{ MJ m}^{-2} \text{ gün}^{-1}$  aralığında değişmiştir. Benzer şekilde, kalibrasyon eşitliği ile tahmin edilen günlük ortalama  $R_s$  değerleri  $2.66 - 30.28 \text{ MJ m}^{-2} \text{ gün}^{-1}$  arasında değerler almıştır. Ölçülen ve tahmin edilen  $R_s$  değerleri arasındaki sapmanın bir göstergesi olarak hesaplanan ortalama mutlak göreceli hata oranı (MAPE) %11.36 olarak belirlenmiştir. KSÜ kampüsünde ölçülen ve kalibrasyon eşitliği kullanılarak tahmin edilen günlük ortalama  $R_s$  değerleri sırasıyla  $10.40 - 29.13 \text{ MJ m}^{-2} \text{ gün}^{-1}$  ve  $14.68 - 30.10 \text{ MJ m}^{-2} \text{ gün}^{-1}$  arasında değişmiştir. Temmuz, Ağustos, Eylül ve Ekim ayları boyunca incelenen 123 günlük süre için ortalama MAPE %8.88 olarak elde edilmiştir. Ölçülen ve tahmin edilen  $R_s$  değerlerinin oluşturduğu veri gruplarının ortalamaları arasındaki farklar istatistiksel olarak anlamlı bulunmamıştır ( $p > 0.05$ ,  $n = 123$ ). Bu sonuç, tahmin edilen değerlerin ölçülen değerler yerine kullanılabilmesini ortaya koymuştur. Yöre koşulları ile uyumlu kalibrasyonu yapılan Goodin modeli kullanılarak, doğruluk oranı yaklaşık %90 (MAPE  $\cong$  %10%) düzeyine ulaşan günlük ortalama solar radyasyon değerleri tahmin edilebileceği sonucuna ulaşılmıştır.

**Anahtar Kelimeler:** *Kalibrasyon, Solar Radyasyon, Tahmin Modeli*

### ESTIMATION OF DAILY AVERAGE SOLAR RADIATION USING THE GOODIN MODEL: CASE STUDY IN KAHRAMANMARAŞ

#### ABSTRACT

In this study, it is aimed to calibrating and testing the empirical Goodin model, used in estimating the daily solar radiation ( $R_s$ ) depending on the air temperature ( $T$ ) and extraterrestrial radiation ( $R_a$ ), in accordance with Kahramanmaraş conditions. First of all, the calibration coefficients ( $a$ ,  $b$ ,  $c$ ) of the model ( $R_s = a[1 - \exp(-b(T_{\max} - T_{\min})^c R_a^{-1})]R_a$ ) were determined by the Microsoft Excel program solver add-on, using the long-term average daily values of  $T$ ,  $R_s$  and  $R_a$  data (1938 – 2020), and calibration equation was created ( $R_s = 0.725[1 - \exp(-2.646(T_{\max} - T_{\min})^{1.759} R_a^{-1})]R_a$ ). Then, this calibration equation was tested by using the  $T$  and  $R_s$  data measured in Kahramanmaraş Sutcu Imam University (KSU) in the July – October period of 2021. These data were measured using air temperature and solar radiation sensors managed by the Programmable Logic Controller (PLC) device. In this direction, a software was prepared using the CODESYS programming language and loaded the PLC. Daily  $R_a$  values were estimated depending on latitude and time. The long-term average measured daily  $R_s$  values varied between the range of  $4.99 - 32.56 \text{ MJ m}^{-2} \text{ day}^{-1}$ . Similarly, the daily average  $R_s$  values estimated by the calibration equation varied

between 2.66 – 30.28 MJ m<sup>-2</sup> day<sup>-1</sup>. The mean absolute percentage error rate (MAPE), calculated as an indicator of the deviation between the measured and estimated R<sub>s</sub> values, was determined as 11.36%. The daily R<sub>s</sub> values measured at the KSU campus and estimated using the calibration equation varied between the range of 10.40 – 29.13 MJ m<sup>-2</sup> day<sup>-1</sup> and 14.68 – 30.10 MJ m<sup>-2</sup> day<sup>-1</sup>, respectively. The average MAPE for the 123-day period studied during the July, August, September and October was obtained as 8.88%. The differences between the means of the data groups formed by the measured and estimated R<sub>s</sub> values were not found to be statistically significant (p> 0.05, n= 123). This result revealed that the estimated values can be used instead of the measured values. It has been concluded that using the Goodin model, which is calibrated in accordance with the local conditions, daily average solar radiation values can be estimated with an accuracy rate of approximately 90% (MAPE ≅ 10%).

**Keywords:** *Calibration, Solar Radiation, Estimation Model*

## 200 DERECEDE ISIL İŞLEM GÖRMÜŞ AMAOUK (*Detarium macrocarpum* Harms) ODUNUNDA BAZI YÜZEY ÖZELLİKLERİNİN VE SHORE D SERTLİK DEĞERLERİNİN İNCELENMESİ

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### ÖZET

Isıl işlem uygulaması ile ahşap malzemeye ait olan parlaklık ve renk parametreleri değişmektedir. Bu çalışmada, amaouk (*Detarium macrocarpum* Harms) ağaç türüne ait ahşabında 200°C'de 3 saat süre ile ısıl işlem uygulaması sonrasında meydana gelen shore D sertlik, renk parametreleri, parlaklık değerleri ve beyazlık indeksi değerleri incelenmiştir. Renk formülleri ile toplam renk farklılıklarına ait değerler de hesaplanmıştır. Isıl işlem öncesi ve sonrasında elde edilen veriler karşılaştırılmıştır. Elde edilen sonuçlara göre, shore D sertlik değerleri, renk parametreleri ve beyazlık indeksi değerleri testleri üzerinde varyans analizlerine ait olan ısıl işlem faktörü anlamlı olarak elde edilmiştir.  $\Delta E^*$  değeri 26.32,  $\Delta L^*$  değeri -20.80,  $\Delta C^*$  değeri -16.06,  $\Delta H^*$  değeri 1.45,  $\Delta b^*$  değeri -13.25 ve  $\Delta a^*$  değeri -9.19 olarak belirlenmiştir.  $a^*$ ,  $L^*$ ,  $b^*$  ve  $C^*$  değerlerinde azalmalar görülürken,  $h^\circ$  açısı değerinde artış tespit edilmiştir. Yapılan ısıl işlem uygulaması ile ahşap malzeme üzerinde yüzey özelliklerini değiştirici etkide bulunduğu söylene bilir.

**Anahtar kelimeler:** Isıl işlem, amaouk, *Detarium macrocarpum* Harms, renk, parlaklık, shore D sertlik, beyazlık indeksi, ahşap

### INVESTIGATION OF SOME SURFACE PROPERTIES AND SHORE D HARDNESS VALUES OF AMAOUK (*Detarium macrocarpum* Harms) WOOD HEAT-TREATED AT 200 DEGREES

### ABSTRACT

With the heat treatment application, the brightness and color parameters of the wood material change. In this study, shore D hardness, color parameters, gloss values and whiteness index values that occur after heat treatment at 200°C for 3 hours in wood belonging to amaouk (*Detarium macrocarpum* Harms) tree species were investigated. The values of the total color differences were also calculated with the color formulas. The data obtained before and after heat treatment were compared. According to the results obtained, the heat treatment factor belonging to the analysis of variance on shore D hardness values, color parameters and whiteness index values tests was obtained significantly.  $\Delta E^*$  value was 26.32,  $\Delta L^*$  value was -20.80,  $\Delta C^*$  value was -16.06,  $\Delta H^*$  value was 1.45,  $\Delta b^*$  value was -13.25 and  $\Delta a^*$  value was -9.19.  $a^*$ ,  $L^*$ ,  $b^*$ , and  $C^*$  values were decreased while  $h^\circ$  angle value increased. It is known that the heat treatment application has a changing effect on the surface properties of the wood material.

**Keywords:** Heat treatment, amaouk, *Detarium macrocarpum* Harms, color, glossiness, shore D hardness, whiteness index, wood

## A REVIEW ON BIO-INSPIRED ENVELOPES TO ACHIEVE ENERGY EFFICIENT BUILDINGS

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### **ABSTRACT**

Biomimicry is the process of using natural systems as models for resolving human problems. When it comes to energy-efficient building skin, there are several ways that biomimicry can help. This paper aims to search for a solution to the problem of how to ensure energy efficiency in building envelopes that are inspired by nature. The paper employs a methodological approach that focuses on the animal skins and shells found in natural organisms that have adapted to their surroundings and have acquired certain skills to interact and work together with shifting environmental conditions in various climates. To understand how building shells, envelopes, and facades in architecture can be designed to respond to the environment, two stages of research into the concepts in animal skin and shells have been conducted. Investigating and characterizing the methods and adaption mechanisms used by animals to survive in various climatic zones is the first step. Then, ideas with architectural potential and solutions that can be applied to building envelopes are identified. The findings, in the context of four examples, demonstrate that bio-inspired/bio-informed surfaces have the potential to produce successful outcomes in building shells intended for use in various climatic regions. Finally, it is concluded that energy-efficient façade systems may be created by using biomimetic techniques and creative, long-lasting solutions based on control of temperature, light, air, and water.

**Keywords:** Biomimetic, Bio-Envelopes, Building envelope, Energy-efficient façade

## FARKLI İKLİM SINIFLANDIRMALARI İLE UŞAK İLİNİN KURAKLIK ANALİZİ

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### ÖZET

İklim koşulları hem sosyal hem de ekonomik olarak hayatımızı etkileyen bir faktördür. Günümüzde tüm dünyada olduğu gibi ülkemizde de iklim dalgalanmaları görülmekte ve kuraklığa doğru bir eğilim gözlenmektedir. Gelecekteki bir kuraklık zamanını tahmin etmek zor olsa da geriye dönük olarak kuraklık sıklığını gözlemlemek ve iklim tiplerinin karakterizasyonunu belirlemek mümkündür. Klimatolojik çalışmalarda iklim tiplerini belirlemek için iklim sınıflandırma sistemlerinden yararlanılmaktadır.

Uşak ili Türkiye'nin iç Batı Anadolu bölümünde yer almakta ve Türkiye yüzölçümünün yaklaşık %0,7'sini kaplamaktadır. Uşak ilinde son yıllarda yağış miktarı azalırken sıcaklıkların arttığı görülmektedir. Bu çalışmada, farklı iklim sınıflandırmaları ile Uşak ilinin kuraklık eğiliminin tahmin edilmesi amaçlanmaktadır. Bu doğrultuda Standartlaştırılmış Yağış İndeksi (SYİ), Ondalık İndeksi (Oİ) ve Thornthwaite İklim Sınıflandırma Sistemi (TİSS) kullanılmış ve elde edilen veriler Eklenik Sapma (ES) grafikleri ile karşılaştırılmıştır.

Uşak ili, Ege ile İç Anadolu bölgeleri arasında geçiş iklimi özelliğine sahip olup, karasal iklimin etkisi altındadır. Meteoroloji Genel Müdürlüğü istatistiklerine göre, Uşak ilinde 1939-2022 yılları arasında yıllık ortalama sıcaklık 12.5°C ve yıllık ortalama toplam yağış miktarı 557.6mm'dir. Bu süreçte yıllık en yüksek sıcaklık miktarı ise 40.2°C'dir. Thornthwaite su bilançosu ile Uşak'ta toplam 528.47mm yağıştan, potansiyel evapotranspirasyon (PET) 736.27mm, gerçek evapotranspirasyon (GET) 445.66mm, su fazlası (SF) 174.06mm ve su noksanı (SN) 290.61mm olarak belirlenmiştir.

84 yıllık dönemde SYİ yöntemine göre; 2 yıl "aşırı kurak" 4 yıl "çok kurak", 8 yıl "orta kurak" ve 28 yıl "hafif kurak" dönemler gözlenirken, Oİ yönteminde her biri 17'şer yıl olmak üzere toplam 34 yıl "normalin altı-normalin çok altı yağış" dönemleri gözlenmiştir. ES ile de toplam 44 yıl "kurak dönem" belirlenmiştir. TİSS'de beş farklı indis tanımlanmıştır; yağış etkinlik ( $I_m$ ), sıcaklık etkinlik (SE), kuraklık ( $I_a$ ), nemlilik ( $I_h$ ) ve sıcaklık rejim indisi (SRİ). Uşak için bu değerler sırasıyla -0.04, 736,27, 39.47, 23.64 ve 55.39 olarak hesaplanmıştır. Uşak ili iklim tipi " $C_1B'_2S_2b'_3$ "; " $I_m:C_1$ -yarı kurak-az nemli (-20-0)", "TE:B'\_2-2,derece mezotermal (713-855)", " $I_a:s_2$ -yazın çok kuvvetli su noksanı ( $\geq 33.3$ )", " $I_h:s_2$ -kışın çok kuvvetli su fazlası ( $\geq 20$ )" ve "SRİ:b'\_3-yarı-denizel (52-56.3)".

İklim kategorisi belirleme yöntemlerine göre Uşak ilinin kuraklık eğilimi gösterdiği tahmin edilmektedir. Bu durumun bölge halkının çevresel aktivitelerini, tarımsal faaliyetlerini ve ekonomilerini etkileyeceği düşünüldüğünden önlem alınması ve geleceğe yönelik gerekli iyileştirmelerin planlanması gerekmektedir.

**Anahtar Kelimeler:** İklim sınıflandırması, kuraklık analizi, Uşak

### DROUGHT ANALYSIS OF UŞAK PROVINCE WITH DIFFERENT CLIMATE CLASSIFICATIONS

#### ABSTRACT

Climate conditions are a factor that affects our lives both socially and economically. Today, climate fluctuations are seen in our country as well as all over the world and a trend towards drought is observed. Although it is difficult to forecast a future drought time, retrospective it is possible to observe drought frequency and to identification characterization of climatic types. Climate classifications are used to determine climate types in climatological studies.

The province of Uşak is located in the Central Western Anatolian part of Turkey and covers approximately 0.7% of Turkey's surface area. It is observed that while the amount of precipitation has decreased in the

province of Uşak in recent years, the temperatures increase. In this study, it is aimed to predict the drought tendency of Uşak province with different climate classifications. In this direction, Standardized Precipitation Index (SPI), Deciles Index (DI) and Thornthwaite Climate Classification System (TCCS) were used and the obtained results were compared with the Additive Deviation (AD) graphs.

Uşak province has transition climate feature between the Aegean and Central Anatolian regions and also under the influence of terrestrial climate. According to Turkish State Meteorological Service Statistics, the annual average temperature and the total precipitation are 12.5°C, 557.6mm, respectively. The highest annual temperature is 40.2°C in this process. Potential evapotranspiration (PET) 736.27mm, actual evapotranspiration (AET) 445.66mm, water surplus (EXC) 174.06mm and deficiency (DEF) 290.61mm were determined from a total precipitation of 528.47mm in Uşak with Thornthwaite water balance.

According to the SPI method in the 84-year period; While 2 years “extreme arid”, 4 years “very arid”, 8 years “medium arid” and 27 years “slight arid” periods are observed, in the DI method, “subnormal-very subnormal precipitation” period was observed a total of 34 years as 17 years each. In AD, "arid period" was determined a total of 44 years. Five different indices are defined in TCCS: moisture ( $I_m$ ), temperature efficiency (TE), aridity ( $I_a$ ), humidity ( $I_h$ ) and summer concentration of temperature efficiency (SCTE). These indices values for Uşak were calculated as -0.04, 736.27, 39.47, 23.64 and 55.39, respectively. Uşak province climate type is “ $C_1B'_2s_2wb'_3$ ”; “ $I_m:C_1$ -dry subhumid (-20 to 0)”, “TE:B'\_2-second mesothermal (713-855)”, “ $I_a:s_2$ -large summer water deficiency ( $\geq 33.3$ )”, “ $I_h:s_2$ - large winter water surplus ( $\geq 20$ )”, and “SCTE:b'\_3- semi-marine (52-56.3)”.

According to the climatic type determination methods, it is predicted that Uşak has a tendency to drought. Since this situation is thought to affect the environmental activities, agricultural activities and economies of the people in the region, it is necessary to take precautions and plan the necessary improvements in the future.

**Keywords:** *Climate classification, drought analysis, Uşak*



## LOTOFA (*Sterculia rhinopetala* K. Schum.) ODUNU YÜZEYLERİNDE DOĞAL YAŞLANDIRMA PERFORMANSI

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### ÖZET

Lotofa (*Sterculia rhinopetala* K. Schum.) ağaç türü yurt dışında önemli ahşap işleyen endüstri alanlarında (kontrplak, kaplama, kaliteli mobilya, vb.) kullanılmaktadır. Bu çalışmada 2 aylık bir süre ile doğal yaşlandırma işlemlerine maruz kalmış olan lotofa ahşabında renk, parlaklık ve beyazlık indeksi değerleri araştırılmıştır. Çalışma sonuçlarına göre, yaşlandırma sonunda liflere paralel yönde beyazlık indeksi değerleri ile  $a^*$  parametresine ait değerlerin azaldığı tespit edilmiştir. Liflere dik yönde beyazlık indeksi değerlerinin ve bütün parlaklık dereceleri üzerindeki ve ahşap yönlerindeki parlaklık değerlerinin, buna ek olarak da,  $h^o$ ,  $b^*$ ,  $C^*$  ve  $L^*$  parametrelerinin arttığı belirlenmiştir. 30 günün sonunda  $\Delta E^*$  değeri 7.23 ve 60 günün sonunda  $\Delta E^*$  değeri 7.44 elde edilmiştir. Yaşlandırma süresinin artmasıyla  $\Delta b^*$ ,  $\Delta L^*$  ve  $\Delta C^*$  değerleri de artarken,  $\Delta H^*$  değerleri azalmıştır. Doğal yaşlandırma uygulaması ahşaba ait yüzey üzerinde değiştirici bir etkide bulunduğu söylenebilir.

**Anahtar kelimeler:** Lotofa, *Sterculia rhinopetala* K. Schum., renk parametreleri, parlaklık değerleri, beyazlık indeksi, doğal yaşlandırma uygulaması

### NATURAL WEATHERING PERFORMANCE ON LOTOFA (*Sterculia rhinopetala* K. Schum.) WOOD SURFACES

### ABSTRACT

Lotofa (*Sterculia rhinopetala* K. Schum.) wood species is used abroad in important woodworking industries (plywood, veneer, quality furniture, etc.). In this study, color, glossiness and whiteness index values were investigated in lotofa wood, which was exposed to natural weathering processes for a period of 2 months. According to the results of the study, it was determined that whiteness index values in the direction parallel to the fibers and  $a^*$  parameter decreased at the end of weathering. It was determined that the whiteness index values perpendicular to the fibers and the gloss values on all glossiness grades and wood directions, in addition to this,  $h^o$ ,  $b^*$ ,  $C^*$ , and  $L^*$  parameters increased. The  $\Delta E^*$  value was 7.23 at the end of 30 days and the  $\Delta E^*$  value was 7.44 at the end of 60 days. While  $\Delta b^*$ ,  $\Delta L^*$ , and  $\Delta C^*$  values increased with increasing weathering period,  $\Delta H^*$  values decreased. It can be said that the natural weathering application has a modifying effect on the surface of the wood.

**Keywords:** Lotofa, *Sterculia rhinopetala* K. Schum., color parameters, glossiness values, whiteness index, natural weathering application

## AVM OTOPRAKLARINDA ALINAN ÜCRETLER

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### ÖZET

Tüketiciler için sosyal yaşam merkezi haline gelen ve birçok olanağı bir arada sunan Alışveriş Merkezleri, Ulaşım Koordinasyon Merkezi (UKOME) kararlarına karşın 0-3 saat için otopark ücreti almaya devam etmektedirler. Üstelik bu ücret Otopark Yönetmeliği ve Danıştay Kararına aykırı olarak alındığı için hukuka aykırı nitelik taşımaktadır. Tüketici lehine olan yönetsel ve hukuksal kararların uygulanmaması AVM otopark işletmecileri ile tüketicileri karşı karşıya getirdiği gibi bu konuda gerek belediye gerekse içişleri ve ticaret bakanlıklarının konuya ilgisiz kalmaları soru işaretlerine neden olmaktadır.

Bu çalışmada özellikle İstanbul'daki AVM otoparklarında alınan otopark ücretleri üzerinde durulmakta ve tüketici hakları çerçevesinde sorun irdelenmektedir.

**Anahtar Sözcükler:** AVM, Otopark, Ücret

### FEES CHARGED AT SHOPPING CENTER PARKING LOTS

#### ABSTRACT

Shopping Malls, which have become a centre of social life for consumers and offer many opportunities, continue to charge parking fees for 0-3 hours despite the Decision of the Transportation Coordination Center (UKOME). Moreover, this fee is illegal because it was taken in violation of the Parking Regulations and the Decision of the Council of State. The lack of implementation of administrative and legal decisions in favor of the consumer confronts mall parking operators and consumers, as well as the lack of interest in this issue by both the municipality and the ministries of internal affairs and trade causes question marks.

In this study, especially the parking fees charged at shopping mall parking lots in Istanbul are focused on and the problem is examined within the framework of consumer rights.

**Keywords:** Shopping Mall, parking, fees

## ORMAN ALANLARININ MADENCİLİK AMACIYLA KULLANIMI SORUNLAR VE SORULAR

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### ÖZET

Tün dünyada olduđu gibi, ülkemizde de ormanlar deđişik amaçlarla kullanılmakta ve en çok da ormancılık dışı faaliyetler ile bozulmakta ya da tahrip olmaktadır. Bu faaliyetlerin başında madencilik gelmektedir. 6831 sayılı Orman Kanunu'nun 16, 17, 18 ve 115. maddeleri ormanların diđer amaçlarla kullanımını düzenlemekte ve ayrıca bu düzenlemeler yönetmelikler ile pekiştirilmektedir. 3213 sayılı Maden Kanunu da ormanların amaç dışı kullanımına zemin hazırlamaktadır. Yasal düzenlemeler ile ormanların amaç dışı kullanımı sonucu bitki örtüsü zarar görmekte ve bu tür kullanımlar erozyon, habitat kaybı, drenaj bozulmasına neden olmaktadır. Ayrıca iklim, röliyef, jeolojik yapı, su rejimi, topografya ve peyzajın olumsuz olarak etkilenmesi gündeme gelmektedir. Ülke ekonomisine büyük katkı sağlayan madencilik faaliyetlerinin tamamen durdurulması mümkün olmasa da, bu faaliyetlerin orman ve çevre üzerindeki etkilerini en az düzeyde tutacak yol ve yöntemleri bir an önce hayata geçirmek gerekmektedir.

Bu çalışmada, orman alanlarının madencilik amacıyla kullanımında karşılaşılan sorun ve sorular ele alınmakta ve bütünsel bir yaklaşımla bu sorun ve sorulara yanıtlar aranmaktadır.

**Anahtar Sözcükler:** Orman, maden, amaç dışı kullanım

## USE OF FOREST AREAS FOR MINING PURPOSES PROBLEMS AND QUESTIONS

### ABSTRACT

As in the whole world, forests are used for various purposes in our country and are mostly degraded or destroyed by non-forestry activities. Mining is at the beginning of these activities. Articles of 16, 17, 18 and 115. of the Forest Law No. 6831 regulate the use of forests for other purposes, and in addition, these regulations are reinforced by regulations. The Mining Law No. 3213 also prepares the ground for the non-purpose use of forests. As a result of the non-purpose use of forests with legal regulations, vegetation is damaged and such uses cause erosion, habitat loss, drainage degradation. In addition, the negative effects of climate, relief, geological structure, water regime, topography and landscape are on the agenda. Although it is not possible to completely stop mining activities that make a great contribution to the country's economy, it is necessary to implement ways and methods that will minimize the effects of these activities on the forest and environment as soon as possible.

In this study, the problems and questions encountered in the use of forest areas for mining purposes are addressed and answers to these problems and questions are sought with a holistic approach.

**Keywords:** Forest, Mine, None-purpose use

## UÇUCU YAĞLARIN KULLANIM ALANLARI

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### ÖZET

Ülkemiz, zengin bir flora sahne sahip olması nedeniyle geniş bir tıbbi ve aromatik bitki alanına sahiptir. Tıbbi ve aromatik bitkilerden; boya, gıda, kozmetik, tekstil, tarım ve ilaç gibi bir çok sektörde faydalınılmaktadır. Tıbbi ve aromatik bitkilerin en çok kullanılan materyalleri uçucu esansiyel yağlardır. Uçucu yağlar, bitkilerden ya da bitkisel droglardan, su veya subuharı distilasyonuyla elde edilen, oda sıcaklığında sıvı halde olan ve fakat bazen donabilen, uçucu, kuvvetli kokulu ve yağimsı karışımlardır. Uçucu yağların kullanımı milattan önce Doğu'da, İran, Hindistan, Mısır ve bölgedeki diğer ülkelerdeki üretim merkezleriyle başlamıştır. Zamanla dünyanın dört bir yanında uçucu yağ damıtma tesisleri ortaya çıkmıştır, ancak bu faaliyet kimyasal yapılarının belirlenmesiyle ivme kazanmış ve çeşitli bilimsel uygulamalarla ürünlerin pazara dahil edilmesine olanak sağlamıştır. Bitki uçucu yağları bitki kimyasının önemli bileşenleridir. Bitki hücrelerinde hormonların yapısını oluşturmakla birlikte, hücreler arası bilgi taşınmasında ve bitkilerin savunma mekanizmalarında rol oynamaktadırlar.

Antimicrobial, antibakteriyel, antifungusid, antiparasidal, insektisidal olarak kullanılan uçucu yağlar, tıbbi ve kozmetik uygulamalarla kendini göstermiş, son yıllarda ise farmakolojide, gıda ve temizlik endüstrilerinde yoğun biçimde kullanılır olmuştur.

Etnobotanik, aromatik, ve endüstriyel kullanımı mevcut olan, günümüzde ulaşılması çok kolay uçucu esansiyel yağların, günümüzde pek çok çözülmemiş hastalığının tedavisi için kullanıldığı ve birçok sentetik ve polimer maddenin üretimine potansiyel bir alternatif kaynak olduğu açıktır. Çoğu bitki esansiyel yağında herhangi mutajenik etki olmadığı için bu durum gıdalarda koruyucu olarak kullanılması konusunda güven oluşturmaktadır. Ancak uçucu yağların gıda ve ilaçlarla olan etkileşimleri farklı kimyasal reaksiyonlara neden olduğundan daha detaylı çalışmalara ihtiyaç vardır.

**Anahtar Kelimeler:** *Uçucu yağ, Aromatik, Tıbbi bitkiler*

## USES OF ESSENTIAL OILS

### ABSTRACT

Our country has a wide area of medicinal and aromatic plants due to its rich flora. Medicinal and aromatic plants are used in many sectors such as paint, food, cosmetics, textile, agriculture and medicine. The most widely used materials of medicinal and aromatic plants are volatile essential oils. Essential oils are volatile, strongly odoured and oily mixtures obtained from plants or herbal drugs by distillation of water or water vapour, which are liquid at room temperature but sometimes freeze. The use of essential oils began in the East before Christ, with production centres in Iran, India, Egypt and other countries in the region. Over time, essential oil distilleries have emerged all over the world, but this activity has gained momentum with the determination of their chemical structure and has allowed the products to be included in the market with various scientific applications. Plant essential oils are important components of plant chemistry. They form the structure of hormones in plant cells and play a role in intercellular information transport and defence mechanisms of plants.

Essential oils, which are used as antimicrobial, antibacterial, antifungicidal, antifungusid, antiparasidal and insecticidal, have manifested themselves in medical and cosmetic applications and have been used extensively in pharmacology, food and cleaning industries in recent years.

Ethnobotanical, aromatic, and industrial uses of essential oils, which are very easy to access today, are used for the treatment of many unsolved diseases and are a potential alternative source for the production of many synthetic and polymer substances. Since there is no mutagenic effect in most plant essential oils, this creates confidence in their use as preservatives in foods. However, since the interactions of essential oils with food and drugs cause different chemical reactions, more detailed studies are needed.

**Keywords:** *Essential oil, Aromatic, Medicinal plants*

## DENİZ YÜZEYİNDEN PETROL SIZINTILARIN POLİİMİT TABANLI NANOLİF MEMBRANLARIYLA TEMİZLENMELERİ

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### ÖZET

Deniz ekosisteminin ve su kaynaklarının petrol sızıntılarıyla kirletilmeleri deniz yaşamını ve kuşları ve dolaylı olarak insan sağlığını tehlikeye atmaktadır. Bu bağlamda, düzensiz aralıklarla bir dizi tanker kazalarıyla petrol sızıntıları meydana gelmeye devam etmektedir: 2021 yılında tanker kazaları sonucu çevreye saçılan toplam petrol sızıntı miktarı dünya çapında yaklaşık 10.000 ton olmuştur. Petrol boru hatlarındaki farklı sebeplerden dolayı vuku bulan sızıntılarda deniz petrol kirliliğine önemli ölçüde katkıda bulunmaktadır. Sızıntı sonrası yağlar, emülsiyon, çözünme, yayılma, adsorpsiyon ve çökeltme gibi fiziksel ve kimyasal değişime uğrarlar. Bu nedenle, petrol sızıntıları deniz ekosisteminden ciddi problemlere sebep olmadan uzaklaştırılmamaları yüzey kirliliğine ve su yaşamı üzerinde uzun vadeli kümülatif etkilere neden olmaktadır. Denizde vuku bulan petrol sızıntılarının hızlı ve verimli bir şekilde temizlemek için birçok adsorban geliştirilmiş ve etkili olarak kullanılmıştır. Bu kapsamda son 10 yılda yapılan çalışmalarda hidrofobik yapıdaki nanolif sorbentlerin kullanılmasıyla yağ sızıntıları hızlı bir şekilde uzaklaştırılabildikleri gösterilmiştir. Nanolif sorbentler gerek esnek yapıları ve gerekse de yüksek yağ emme kapasiteleri sebebiyle yağ adsorbanları olarak kullanımları daha da artmakta olup, bu kapsamda grubumuzda poliimit tabanlı nanolif sorbentler geliştirilmiş ve etkili olarak yağ sızıntılarının temizlenmelerinde kullanılmıştır. Sunumda deniz suyu üzerinden ham petrol ve türevlerinin temizlenmesi için geliştirilen poliimit nanolif sorbentlerin özellikleri ve yağ tutma performansları üzerine değinilecek olup, bu malzemelerde mikrogözeneklerin bulunmasının yağ adsorpsiyonuna etkisi üzerine konuşulacaktır.

**Anahtar Kelimeler:** Yağ sızıntıları, adsorbanlar, nanolif membranlar, elektroğirme, nanolifler, poliimit

### CLEANUP OF OIL SPILLS BY POLYIMIDE-BASED NANOFIBROUS MEMBRANES FROM SEAWATER

### ABSTRACT

Pollution of marine ecosystems and water resources from oil spills endangers marine life and birds, and indirectly human health. In this context, a number of accidental oil spills still occur at irregular intervals: the total amount of oil leakage to the environment from tanker accidents as a result of tanker accidents in 2021 was about 10,000 tons worldwide. Pipeline-related oil spills also contribute to marine oil pollution. When spilled, oils undergo many physical and chemical changes through processes including emulsification, dissolution, spreading, adsorption and sedimentation. Therefore, oil spills cause drastic impacts on the marine ecosystem, resulting in surface contamination and long-term cumulative impacts on aquatic life. Several adsorbents have been developed that can be used to quickly and efficiently clean up oil spills from the sea. The use of hydrophobic nanofibrous sorbents not only offers great potential for rapid removal but also for a high oil absorption capacity. In this presentation, I will talk about the development of nanofiber sorbents using different polyimides and their use in oil removal from seawater. The influence of intrinsic porosity on oil uptake is also discussed, and the affinity of membranes to various oils is also mentioned.

**Keywords:** Oil spills, adsorbents, nanofibrous membranes, electrospinning, nanofibers, polyimide

## SANAL EKOLOJİLERDE YAŞANAN ÖLÇME VE DEĞERLENDİRME SORUNLARI

Ender ÖZEREN

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### ÖZET

Bu çalışmanın amacı, Bilgi Çağı ile birlikte giderek sanal ve dijital ekolojilere dönüşen eğitimdeki ölçme-değerlendirme sorunlarını irdelemektir. Bu irdeleme, Bilgi Çağı eğitim paradigması, uzaktan eğitim, on-line eğitim çerçevesinde yaşanan ölçme-değerlendirme sorunlarına odaklıdır. Derleme yöntemi (Belge tarama) ve dokümaner analiz metodolojisiyle yürütülen çalışmada, veriler, belge tarama yönetime uygun olarak, belirli ölçütlere göre seçilen kaynaklardan elde edilmiştir. Bu kaynakların, çalışmanın amacı doğrultusunda okunması, betimlenmesi ve yorumlanmasına dayalı olarak şu sonuçlara ulaşılmıştır: Sanal ekolojiler, sadece doğal felaket veya pandemi gibi olağanüstü durumların değil; Bilgi Çağının dijital pedagojisinin de gereğidir. Dolayısıyla bundan kaçınmak değil, buna hazır olmak önemlidir. Sanal ekolojiler şeklinde yürütülen uzaktan eğitime hazır olmak bakımından en önemli sorunlardan birisi de, bu ekolojilere uygun ölçme ve değerlendirmedir. Çünkü kısa da olsa deneyimlenmiş olan uzaktan eğitimde en fazla serzeniş, mevcut ölçme ve değerlendirme sistemlerinin bu yeni durum karşısında sınırlı kalmasıdır. Bunun başlıca nedeni, sanal ve dijital pedagojinin, mevcut ölçme ve değerlendirme sistemlerinin dayanak ve anlamlarını erozyona uğramış olmasıdır. Dolayısıyla da, mevcut öğretim sürecinin önemli bir halkası olan ölçme ve değerlendirme boyutu adeta sarsılmıştır. Bu erozyon ve sarsılmanın anlaşılması, Türk Eğitim Sisteminin, uygulama boyutu itibarıyla Bilgi Çağına uyumu bakımından değerlidir. Bu itibarla, sanal ekolojilerde ölçme ve değerlendirmeye dair teorik ve uygulamalı çalışmalara ivedi ihtiyaç olduğu belirtilebilir.

**Anahtar Kelimeler:** Dijital değerlendirme, sanal ekolojiler, uzaktan eğitim, dijital pedagoji.

### ASSESSMENT AND EVALUATION PROBLEMS IN VIRTUAL ECOLOGIES

#### ABSTRACT

This study discusses the assessment and evaluation problems in education, which have gradually turned into virtual and digital ecologies with the information age. This discussion focuses on the assessment and evaluation problems experienced within the educational paradigm of the information age, distance, and online education. The data of the study, which is a review article, are the sources selected according to certain criteria following the document analysis. Based on the reading and reviewing of these sources in line with the purpose of the study, the following conclusions are reached: Virtual ecologies are not only a requirement of extraordinary situations such as natural disasters or pandemics but also of the digital pedagogy of the information age. Therefore, it is important not to avoid them, but to get ready for them. One of the most important problems in terms of getting ready for distance education within virtual ecologies is the proper assessment and evaluation for these ecologies because the limitedness of measurement and evaluation in distance education, which has been experienced even for a short time, is criticized. The main reason for this is that virtual and digital pedagogy has eroded the foundations and significance of existing measurement and evaluation. Therefore, the assessment and evaluation, which is an important part of the current teaching process, has been shaken deeply. Understanding this erosion and shaking is valuable in terms of adaptation of the Turkish Education System to the information age. In this respect, it can be claimed that there is an urgent need for theoretical and applied studies on assessment and evaluation in virtual ecologies.

**Keywords:** Digital evaluation, virtual ecologies, distance education, digital pedagogy

## AMBALAJ VE ÇEVRE BİLİNCİ

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### ÖZET

Ambalaj insanlık tarihi ile aynı yaşıdadır. İnsanoğlu ihtiyaç fazlası besinlerini, gerektiğinde tekrar kullanmak için çeşitli doğal maddeler ile sarmak ve saklamak ihtiyacını hissetmiştir. Ambalaj insanlığın ilk yıllarında olduğu gibi günümüzde de koruma ve saklama amaçlı bir örtüdür. Ancak günümüzde ambalajın işlevinde büyük değişimler olmuş, korumanın ve taşıma fonksiyonlarının yanında; tanıtma fonksiyonu da barındırmak zorunda kalmıştır. Ambalajdaki bu değişimlerin temelinde ise rekabet ve üstün olma gibi egolar yatmaktadır. Firma sahipleri, ürünlerinin en iyisi olduklarını anlatabilmek için ambalajın tanıtım fonksiyonuna her zaman ihtiyaç duymuşlardır. Ambalaj ile tüketici arasında psikolojik bağ kurma çabaları, ambalajın başarısı ile gelmiş, tüketicinin bağımlılık derecesine varan alışkanlıklar edinmesi sağlanmıştır.

Bu araştırma ile şu bulgular tespit edilmiştir. Gelişen ambalaj teknolojisi, yeni ambalaj maddelerini beraberinde getirmiş, daha kullanışlı ve daha gösterişli ambalajlar üretilmiştir. Üstün olma egosu, çok daha fonksiyonlu ve gösterişli ambalajları üretmiştir. Sadece ambalajını beğendikleri için ürün satın alan tüketiciler gibi alışveriş çılgına neden olmuştur. Doğal olarak bu kadar çok ambalajın üretilmesi çevre sorunlarını da beraberinde getirmiş, ambalajlar atıklarıyla gündemi meşgul etmeye başlamıştır. Birçok ülkede belediyeler ambalaj atığı toplama yasaları yürürlüğe koyarak, atıkları tekrar değerlendirme zorunluluğu hissetmişlerdir. Çünkü bu aşamadan sonra egonun yerini çevre bilinci ve ortak yaşam kaygıları almaya başlamıştır. Çevreyi koruyarak gelişen toplumlar, refah düzeyi yüksek, kaynaklardan eşit kullanabilen, bilinçli ve sorumlu bir dünya yaşamı sunmayı vaat eder. Böyle bir toplumun oluşturulmasında herkes çaba göstermelidir. Özellikle de imalatçılar sonrasında tüketiciler ve hatta ambalaja ilgi duyan herkes çaba göstermelidir. Artık ambalajın amacı üçüncü kez değişmiştir. İnsanlığın yaratılışından itibaren ilk aşamadaki saklama-koruma, ikinci aşamasında koruma-taşıma-satış ve üçüncü aşamasında çevre ve yaşam alanı oluşturma ambalajda son nokta durumundadır. Başka bir deyişle ambalaj dünyasında çevre koruma, ürün sorumluluğu ve evrensel tasarımlar gibi yeni anlayışlar hüküm sürmeye başlamıştır ve başlamalıdır.

**Anahtar Sözcükler:** Ambalaj, tasarım, çevre kirliliği, bilinçli toplum.

## PACKAGING AND ENVIRONMENTAL AWARENESS

### Abstract

Packaging is as old as human history. Humanity has felt the need to wrap and store surplus food with various natural substances to use again when necessary. Packaging is a cover for protection and storage today as it was in the first years of humanity. However, today, there have been significant changes in the function of the packaging, besides the protection and transportation functions; It also had to include an introduction function. Egos such as competition and superiority lie based on these changes in packaging. Company owners have always needed the promotional function of the packaging to explain that their products are the best. The efforts to establish a psychological bond between the packaging and the consumer came with the success of the packaging, enabling the consumer to acquire habits up to the level of addiction.

This research determined the following findings. Developing packaging technology has brought new packaging materials, producing more valuable and attractive packaging. The ego of being superior has produced much more functional and flashy packaging. Shopping has caused a frenzy, as have consumers who buy products because they like the packaging. Naturally, producing so much packaging has brought environmental problems, and packaging has started to occupy the agenda with its waste. Municipalities have enacted packaging waste collection laws in many countries and felt obliged to reuse waste. Because after this stage, environmental awareness and common life concerns began to replace ego. Societies that develop by protecting the environment promise to offer a conscious and responsible worldly life with a high level of



welfare and equal use of resources. Everyone should make an effort to create such a society. Especially manufacturers, consumers, and even anyone interested in packaging should make an effort. Now the purpose of the packaging has changed for the third time. Since the creation of humanity, storage-protection in the first stage, protection-transport-sale in the second stage, and creating the environment and living space in the third stage is the last point in packaging. In other words, new understandings such as environmental protection, product responsibility, and universal designs have started to prevail in the packaging world and should.

**Keywords:** Packaging, design, environmental pollution, conscious society.

## DOĞAL AFETLERİN ETKİLERİNİN AZALTILMASINDA AKILLI KENT UYGULAMALARI

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### ÖZET

Genel anlamda insan kontrolü dışında gelişen doğal afetler, sonuçları itibariyle büyük can ve mal kayıplarına sebebiyet verebilmektedir. Günümüzde önleme noktasında her ne kadar kayda değer bir etki yapılamazsa da, oluşturacağı yıkımlarının etkilerini azaltma konusunda sürekli bir arayış içerisinde olduğu bilinen bir gerçektir. Bu bağlamda bilgi ve iletişim teknolojileri alanında yaşanan baş döndürücü gelişmelerin doğal afetlerinin etkilerinin azaltılmasında önemli bir işlev üstlenebileceğini söylemek mümkündür. Söz konusu gelişmelerin yaşandığı bu dönemde öne çıkan yeni kavramlardan biri de “akıllı kent” olgusudur. Literatürde üzerinde hemfikir olunan belirgin bir tanımı olmamasına karşın, “kentlerin daha etkin yönetilmesi” fikri, akıllı kent kavramının altında yatan en önemli düşüncedir. Böylelikle insan hayatını kolaylaştıran uygulamalarla kent yaşamını daha kaliteli, daha güvenli ve sürdürülebilir bir yönetim anlayışıyla idare edilmesi amaçlanmaktadır. Mevcut teknolojik gelişmelerle eşanlı olarak gelişen akıllı kent uygulamaları kapsamında deprem, sel, tsunami, yanardağ patlaması, fırtına, hortum gibi doğal afetlerin önceden bilinmesi ve buna yönelik önlem alınması büyük ölçekli can ve mal kayıplarının önüne geçebileceği öngörülmektedir. Yakın zaman içerisinde tanık olduğumuz Kahramanmaraş merkezli 7,7 ve 7,6’lık deprem felaketleri bu tür çalışma ve uygulamalara ne denli ihtiyaç duyulduğunu bir kez daha ortaya koymuştur. Bu çerçevede akıllı kent kavramının klasik uygulamalarının kapsamının genişletilmesi ve bir bütün olarak toplumun güvenliğine yönelik uygulamaların da sisteme entegre edilmesi bir ihtiyaç olarak karşımıza çıkmaktadır.

Çalışmada doğal afetler konusunda bir literatür taraması yapılarak akıllı kent retoriği çerçevesinde alınabilecek önlemler ile doğal afetlerin etkilerinin azaltılması konusundaki rolü analiz edilmeye çalışılacaktır.

**Anahtar Kelimeler:** Doğal Afet, Akıllı kentler, akıllı çevre

### SMART CITY APPLICATIONS IN REDUCING THE EFFECTS OF NATURAL DISASTERS

#### ABSTRACT

In general, natural disasters that develop outside of human control can cause great loss of life and property as a result. As of today, it is a well-known fact that there is a constant search for reducing the effects of the destruction it will create, although no significant effect can be made at the point of prevention. In this context, it is possible to say that the dizzying developments in the field of information and communication technologies can play an important role in reducing the effects of natural disasters. One of the new concepts that came to the fore in this period when the aforementioned developments were experienced is the "smart city" phenomenon. Although there is no clear definition agreed upon in the literature, the idea of “more effective management of cities” is the most important idea underlying the concept of smart city. In this way, it is aimed to manage the city life with a better quality, safer and sustainable management approach with practices that facilitate human life. Within the scope of smart city applications that develop simultaneously with current technological developments, it is predicted that knowing natural disasters such as earthquakes, floods, tsunamis, volcanic eruptions, storms and tornadoes in advance and taking measures against them can prevent large-scale loss of life and property. The 7.7 and 7.6 earthquake disasters in Kahramanmaraş, which we have witnessed recently, have once again revealed how much such studies and practices are needed. In this context, it is a necessity to expand the scope of the classical applications of the smart city concept and to integrate the applications for the security of the society as a whole into the system.

**Keywords:** Natural Disaster, Smart cities, smart environment

## ORGANİK BESLENMENİN KENT İNSANINA MALİYETİ: BİR SANAL PAZAR ARAŞTIRMASI

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### ÖZET

**Arkaplan:** Organik gıdalar en basit anlamıyla böcek ilaçları gibi sentetik kimyasallar ve/veya genetiği değiştirilmiş organizmalar içermeyen besinler olarak tanımlanmaktadır. 20. yüzyılın sonundan itibaren önemli ölçüde gelişme gösteren organik gıda pazarı neredeyse tüm taze ve işlenmiş ürünlere alternatifler geliştirmiş ve organik ürünler bir çok market raflarında hızla yerini almıştır. Organik gıdalar daha yüksek emek ve sertifikasyon maliyetleri nedeniyle genellikle diğer gıdalardan daha yüksek fiyat etiketine sahip olmaktadır. Fakat buna rağmen tüketiciler organik gıdaların sağlık açısından daha avantajlı olmaları nedeniyle bir miktar daha fazla ücret ödemeyi göze almaktadır. Ürünler arasındaki çok yüksek görünmeyen fiyat farklılıkları ise bir market alışveriş sepetinin toplam maliyetini ve hane bütçesinin gıda masraflarının yüzdesini etkileyebilir. **Amaç:** Bu çalışmada organik beslenmeye sağlık açısından yaklaşım, organik beslenme maliyetinin organik olmayan beslenme tarzıyla karşılaştırılması ve mevcut durumda hanehalkının gıda bütçesini nasıl yöneteceği konularını tartışmak amaçlanmaktadır.

**Yöntem:** Şubat 2023 tarihinde Türkiye’de en yaygın tüketimi ve üretimi olan 12 farklı organik ürün belirlendi ve bu ürünlerin satıldığı iki farklı sanal market seçildi. Seçilen bu sanal marketler üzerinden organik en ucuz sepet, organik en pahalı sepet, organik olmayan en ucuz sepet ve organik olmayan en pahalı sepet olmak üzere dörder farklı alışveriş sepetleri oluşturuldu. Ek olarak, market adına bakılmaksızın Google arama motoru kullanılarak alışveriş sekmesi üzerinden yapılan internet taramasında bu 12 farklı ürünün organik olan ve olmayan alternatiflerinin satıldığı en düşük fiyatlar tarandı ve elde edilen tüm bulgular karşılaştırıldı. **Bulgular:** Farklı marketlerin de tarandığı Google arama motoru alışveriş sekmesi üzerinden gerçekleştirilen alışveriş diğer seçeneklere kıyasla en ucuz organik olan (509,4 Türk Lirası) ve organik olmayan (315 Türk Lirası) liste fiyatını belirledi. Organik olmayan en pahalı sepet fiyatının ise 652,35 Türk lirası ile diğer iki uygun fiyatlı organik alışveriş sepeti tutarından daha fazla olduğu görülmüştür.

**Sonuç:** Organik ürünlerin fiyatları genel olarak organik olmayanlara kıyasla daha yüksek olsa da bazı organik olmayan ürünler bu durumun dışında kalmaktadır. Ayrıca organik ürünlerin fiyatları organik olmayanlara kıyasla marketler arasında daha büyük fiyat farklılıklarına sahiptir. Bu nedenle organik ürün tüketmek isteyen bireylerin alışveriş öncesinde bir market araştırması yapması bütçe yönetimi açısından faydalı olabilir.

**Anahtar Kelimeler:** Organik Gıda, Alışveriş Bütçesi, Sağlıklı Beslenme

### COST OF ORGANIC NUTRITION TO URBAN PEOPLE: AN ONLINE MARKET RESEARCH

#### ABSTRACT

**Background:** Organic foods are simply defined as foods that do not contain synthetic chemicals such as pesticides and/or genetically modified organisms. The organic food market, which has developed significantly since the end of the 20th century, has developed alternatives to almost all fresh and processed products, and organic products have quickly taken their place on the shelves of many supermarkets. Organic foods often have a higher price tag than other foods due to higher labor and certification costs. However, consumers are willing to pay a little more because organic foods are more advantageous in terms of health. Price differences between products that don't seem too high can affect the total cost of a grocery shopping cart and the percentage of food costs in the household budget. **Objective:** This study, it is aimed to discuss

the approach to organic nutrition from a health perspective, the comparison of the cost of an organic diet with a non-organic diet, and how the household will manage the food budget in the current situation.

**Methods:** In this study, first of all, 12 different organic products, which are the most common consumption and production in Turkey, were determined and two different online markets where these products were sold were selected. Four different shopping baskets were created over these selected online supermarkets: the cheapest organic basket, the most expensive organic basket, the cheapest non-organic basket, and the most expensive non-organic basket. Additionally, the lowest prices at which organic and non-organic alternatives of these 12 different products were sold were scanned in the internet search performed on the shopping section using the Google search engine, regardless of the supermarket name, and all the findings were compared. **Results:** The shopping performed through the Google search engine shopping section, in which different supermarkets are also scanned, determined the cheapest organic (509.4 Turkish Liras) and the cheapest non-organic (315 Turkish Liras) list prices compared to other options. The price of the most expensive non-organic basket was 652.35 Turkish liras, higher than the other two affordable organic shopping baskets.

**Conclusion:** As a result, although the prices of organic products are generally higher than non-organic products, some non-organic products are excluded from this situation. Additionally, the prices of organic products have larger price differences between grocery stores compared to non-organic ones. For this reason, it may be beneficial for budget management for individuals who want to consume organic products to conduct supermarket research before shopping.

**Keywords:** Organic Food, Shopping Budget, Healthy Eating

## REMOVAL OF AZO DYES BY BOTTOM ASHES FROM THE USE OF COAL AND WOOD PELLETS AS FUEL FOR SUSTAINABLE WASTE MANAGEMENT

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### ABSTRACT

In this study, the usability of bottom ash formed by coal and wood pellets used as fuel in various industries in the removal of azo dyes was investigated in detail in the concept of sustainable waste management. For this purpose, Reactive Red 239 (RR239) dye as mono azo and Reactive Black 5 (RB5) dye as diazo were used, and the best dye removal conditions were determined by dye adsorption. Coal bottom ash (CBA) and wood pellet bottom ash (WPBA) were used as adsorbent materials by passing them through a 75 µm sieve after being taken from the textile industry, which uses coal and wood pellets as fuel, respectively. SEM analysis shows that these two materials have different and heterogeneous structures. While rod-like structures are seen more densely in CBA, there are nano-sized particles in both bottom ashes. When the EDAX spectra of the bottom ash are examined, it is seen that there are more elements (C, O, Zn, Mg, Al, Si, Cl, K, Ca, and Fe) in CBA. WPBA consists of C, O, Mg, Al, Si, K, and Ca. The highest RR239 and RB5 dye removal were obtained at pH 11 for all coal bottom ash amounts. In the amount of 15 g/L CBA, RB5 removal at pH 2, 3, and 11 were reported as 64.0%, 49.1%, and 71.0%, respectively. At pH 2, 3, and 11 at the same initial ash dose of wood pellets, 49.9%, 43.1%, and 92.8% RR239 dye removal were achieved, respectively. For RR239 dye, the  $q_{max}$  values of CBA and WPBA were calculated as 13.16 and 17.12 mg/g, respectively. For RB5 dye, the  $q_{max}$  values of CBA and WPBA were 4.13 and 6.96 mg/g, respectively. Higher adsorption capacity was obtained for RR239 and RB5 dyes with WPBA.

**Keywords:** adsorption, dye removal, sustainable waste management

## SÜRDÜRÜLEBİLİR ATIK YÖNETİMİ İÇİN KÖMÜR VE ODUN PELETİNİN YAKIT OLARAK KULLANIMINDAN OLUŞAN TABAN KÜLLERİNİN AZO BOYALARIN GİDERİMİNDE KULLANILMASI

### ÖZET

Bu çalışmada çeşitli endüstrilerde yakıt olarak kullanılan kömür ve odun peletlerinin oluşturduğu taban külünün azo boya gideriminde kullanılabilirliği sürdürülebilir atık yönetimi kapsamında detaylı olarak incelenmiştir. Bu amaçla mono azo olarak Reactive Red 239 (RR239) boyası ve diazo olarak Reactive Black 5 (RB5) boyası kullanılmış ve boya adsorpsiyonu ile en iyi boya giderim koşulları belirlenmiştir. Kömür taban külü (CBA) ve odun peleti taban külü (WPBA) yakıt olarak sırasıyla kömür ve odun peleti kullanan tekstil endüstrisinden alındıktan sonra 75 µm elekten geçirilerek adsorban malzeme olarak kullanılmıştır. SEM analizi, bu iki malzemenin farklı ve heterojen yapıya sahip olduğunu göstermektedir. CBA'da çubuk benzeri yapılar daha yoğun görülürken, her iki dip külünde de nano boyutlu parçacıklar bulunmaktadır. Taban külünün EDAX spektrumları incelendiğinde CBA'da daha fazla element (C, O, Zn, Mg, Al, Si, Cl, K, Ca ve Fe) olduğu görülmektedir. WPBA ise C, O, Mg, Al, Si, K ve Ca'dan oluşmaktadır. Tüm kömür taban külü miktarları için en yüksek RR239 ve RB5 boya giderimi pH 11'de elde edilmiştir. 15 g/L CBA miktarında, pH 2, 3 ve 11'de RB5 giderimi sırasıyla %64.0, %49.1 ve %71.0 olarak tespit edilmiştir. pH 2, 3 ve 11'de odun peletlerinin aynı giriş kül dozunda sırasıyla %49.9, %43.1 ve %92.8 RR239 boya giderimi

sađlanmıřtır. RR239 boyasında CBA ve WPBA'nın  $q_{max}$  deđerleri sırasıyla 13.16 ve 17.12 mg/g olarak hesaplanmıřtır. RB5 boyası iin CBA ve WPBA'daki  $q_{max}$  deđerleri sırasıyla 4.13 ve 6.96 mg/g'dir. WPBA'da RR239 ve RB5 boya ları ile daha yksek adsorpsiyon kapasitesi elde edilmiřtir.

**Anahtar Kelimeler:** adsorpsiyon, boya giderimi, srdrlebilir atık ynetimi

## DEPREMLER GIDA GÜVENCESİNİ VE BESLENMEYİ NASIL ETKİLEDİ? RAPORLANAN SORUNLAR VE POTANSİYEL ÇÖZÜMLER

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### ÖZET

Ölümlere, mal kayıplarına ve/veya sosyal çevrenin bozulmasına neden olabilen, atmosferik, jeolojik ve hidrolojik kökenli (kuraklık, deprem, sel, kasırga, toprak kayması gibi) felaket olayları doğal afetler olarak adlandırılır. 2018-2022 yılları arasında dünya çapında 1.914 doğal afet yaşanmıştır ve bunun 123 tanesini depremler oluşturmuştur. 6 Şubat 2023 tarihinde de Türkiye’de 7.8 Mw ve 7.5 Mw büyüklüğünde iki büyük deprem yaşanmıştır. Doğal afetler, bebekler, çocuklar, gebeler ve yaşlılar gibi hassas popülasyonlar başta olmak üzere tüm insanlar için gıda ve beslenme güvencesi açısından büyük riskler oluşturmaktadır. Gıda güvencesi gıdanın bulunabilirliği, erişimi, kullanılabilirliği ve istikrar olmak üzere dört temel boyutta ele alınmaktadır. Afetler gıda güvencesinin her boyutunu çeşitli nedenlerden dolayı olumsuz etkileyebilmektedir. Gıda güvencesizliği neticesinde meydana gelen beslenme ve sağlık sorunları ise kısa ve uzun dönemde toplum sağlığında bozulmalara neden olabilir.

Bilim insanları geçmişten günümüze yaşanmış deprem olayları sonucunda insanların beslenmesi ile ilgili problemleri tespit etmiş ve bu problemleri çözmek için çeşitli öneriler geliştirmiştir. Bu bilimsel çalışmalar doğrultusunda ortaya çıkan sonuçları değerlendirmek ve gelecekte yaşanmaları halinde önlem almak insanların sağlığı ve refahı açısından oldukça önemlidir. Bu derleme, dünyada son yıllarda yaşanmış deprem olayları neticesinde yürütülmüş gıda güvencesi ve beslenme konulu bilimsel çalışmalar ışığında depremlerin insan beslenmesini kısa ve uzun vadede nasıl etkilediğini/etkileyebileceğini göstererek olası çözüm önerilerini tartışmaktadır. Bu sayede gelecekte yürütülecek halk sağlığı ve afet yönetimi çalışmalarında alınacak önlemlerin ve çözümlerin geliştirilmesine katkı sağlamak amaçlanmaktadır.

**Anahtar Kelimeler:** Deprem, Gıda Güvencesi, Doğal Afetler

## HOW DID EARTHQUAKES AFFECT FOOD SECURITY AND NUTRITION? REPORTED PROBLEMS AND POTENTIAL SOLUTIONS

### ABSTRACT

Catastrophic events of atmospheric, geological, and hydrological origin (such as drought, earthquake, flood, hurricane, and landslide) that can cause deaths, property losses, and/or deterioration of the social environment are called natural disasters. Between 2018 and 2022, there were 1,914 natural disasters worldwide, of which 123 were earthquakes. On February 6, 2023, two major earthquakes of 7.8 Mw and 7.5 Mw were experienced in Turkey. Natural disasters pose great risks in terms of food and nutrition security for all people, especially vulnerable populations such as infants, children, pregnant, and the elderly. Food security is addressed in four main dimensions: availability, access, utilization, and stability of food. Disasters can negatively affect all aspects of food security for various reasons. Nutrition and health problems that occur as a result of food insecurity may cause deterioration in public health in the short and long term.

As a result of earthquake events experienced from the past to the present, scientists have identified the problems related to the nutrition of people and have developed various suggestions to solve these problems. It is very important for people's health and well-being to evaluate the results of these scientific studies and to take precautions in case they occur in the future. This review discusses possible solutions by showing how earthquakes affect human nutrition in the short and long term, in the light of scientific studies on food

security and nutrition carried out as a result of earthquake events in the world in recent years. In this way, it is aimed to contribute to the development of measures and solutions to be taken in public health and disaster management studies to be carried out in the future.

**Keywords:** Earthquake, Food Security, Natural Disasters



## SKEMORFİK TASARIM VE YAŞAMSAL ETKİLERİ

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### ÖZET

Skemorfizim adı verilen yeni yöntem, dijital ortamda teknolojinin karmaşık ve anlaşılmaz yüzünü, görüntüde gerçeklik algısı oluşturarak, objelerin fiziksel veya süsleme özelliklerinin sanal ortamda yeniden oluşturulmasıdır. Skemorfik tasarımlar, yeni teknolojilerin korkutucu yüzlerini gizlemek, kullanıcılara günlük yaşantılarından çok farklı bir ortam olmadığını anlatma görevini üstlenmişlerdir. Bu nedenle ekranı olan her türlü bilgisayarlı cihazlarda rahatlıkla kullanılmıştır. Ancak gelişen teknoloji, bir zamanların kurtarıcı durumundaki skemorfik tasarımları yetersiz bulmaya başlamıştır. Yeni teknolojik cihazların, yüksek çözünürlüklü ve hızlı işlemci olmalarına karşın, piksel tabanlı skemorfik tasarımları hantal ve yorgun olarak görmeye başlamıştır. Özellikle de kullanıcıların yaş ortalamalarının daha da düşüyor olması, algı sorununu en aza indirmesiyle birlikte, gerçek dünyadaki nesnelere biçimsel taklitçilik esasına dayanan yüksek pikseli skemorfik tasarımlarından etkilenmemeye başladılar. Üstelik uyum sorunları, sistem yavaşlatılması ve gereksiz ayrıntılardan oluşan görüntü kirlilikleri gibi teknik sorunlar, popülerliğinin azalmasına neden olmuştur.

Bu araştırma gösteriyor ki, yeni dönem teknolojik cihazların ara yüzlerinde, iyice yaşlanan ve cazibesini kaybetmeye başlayan skemorfizmin geliştirilmesi kaçınılmaz olmuştur. Örneğin Apple, IOS 7 mobil işletim sisteminde, piksel tabanlı tasarım anlayışından vektörel tabanlı tasarım anlayışına hızlı bir geçiş yapmış, bugün IOS 16 ile yapay zekâ ürünü analitik çözümleme ve bilişsel yetenekler ile hayatımızın her alanına yerleşmiş, vektör sembollere öncülük etmeye başlamıştır. Bu tasarım anlayışında çözünürlükten bağımsız; hareketli, her bir nesnenin matematiksel ifadelerle oluşturulduğu ve detay kaybetmeden herhangi bir boyuta yeniden ölçeklendirilebilen bir özelliğe sahiptir.

Bu makalede, öncelikle skemorfik tasarım incelenmiştir. Skemorfik tasarımın yerini almaya başlayan yapay zekâ ürünü flat tasarım ise yeni bir tasarım mı yoksa geliştirilmiş bir skemorfik tasarım mı olduğu irdelenmiştir.

**Anahtar Kelimeler:** Skemorfizim, flat tasarım, tasarım, biçimsel gerçekçilik.

## SKEUOMORPHIC DESIGN AND ITS VITAL EFFECTS

### ABSTRACT

The new method, called skeuomorphism, is the recreation of objects' physical or decorative features in the virtual environment by creating the complex and incomprehensible face of technology in the digital environment, a perception of reality in the image. Skemorphic designs have undertaken the task of hiding the frightening faces of new technologies and telling users that it is not a very different environment from their daily lives. For this reason, it can be easily used in all kinds of computer devices with a screen. However, the developing technology has begun to find the skeuomorphic designs, which were once a savior, insufficient. Even though new technological devices are high-resolution and fast processors, they have begun to see pixel-based skeuomorphic designs as cumbersome and tired. In particular, since the average age of the users is getting lower and the perception problem is minimized, they have begun to be unaffected by their high-pixel skeuomorphic designs based on formal imitation of real-world objects. Moreover, technical problems such as compatibility problems, system slowdowns, and image pollution caused by unnecessary details caused its popularity to decline.

This research shows that the rejuvenation of skeuomorphism, which is getting old and losing its appeal, has become inevitable at the interfaces of new-era technological devices. For example, in the IOS 7 mobile operating system, Apple rapidly transitioned from pixel-based to vector-based design. Today, with IOS 16,

artificial intelligence product analytical analysis and cognitive abilities have settled in all areas of our lives and started to lead vector symbols. This design approach is independent of resolution; movable has a feature where each object is created with mathematical expressions and can be rescaled to any size without losing detail.

In this article, first of all, skeuomorphic design is examined. Artificial intelligence product flat design, which has started to replace skeuomorphic design, has been examined whether it is a new or rejuvenated skeuomorphic design.

**Keywords:** Skermorphism, flat design, design, formal realism.

## REUSING OF WOOD BOTTOM ASH RELEASED FROM THE FURNITURE INDUSTRY FOR REACTIVE DYE REMOVAL

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### ABSTRACT

The disposal of wood bottom ash (WBA), which is a by-product of industry, causes problems in terms of the environment and economy. Sending this ash to the landfill sites both reduces the capacities of landfills, which are already lacking, and causes congestion in disposal lagoons. Reusing them in the construction industry also raises some safety questions. Recently, the use of ash as an adsorbent to remove water pollutants for low-cost and environmentally friendly recycling has attracted the attention of many researchers. Therefore, the utilisation of WBA for the removal of Reactive Blue 21 was investigated in this study in detail. Wood waste, which was formed as a result of the combustion of various trees such as poplar and oak, was taken from the furniture industry. After grinding WBA, it was passed through a 75-micron sieve. SEM analysis proved that, WBA has rod-like structures and a heterogeneous appearance. EDAX analysis also showed that WBA consists of 27.99±0.33% C and 47.05±0.28% O. In the content of WBA, Si and Ca, which also have high ratios, exhibit a similar distribution, while P demonstrates a homogeneous dispersal. It was also observed that elements such as Fe and Al are concentrated in certain regions. It was found that the maximum RB21 removal was 90.6% at pH 3 and over 95% RB21 dye removal was observed up to 100 mg/L RB21 dye concentration. It was seen that RB21 adsorption with WBA was more suitable for pseudo 2nd order kinetics. Langmuir isotherm was more favourable for the adsorption.  $q_{max}$  was calculated as 90.91 mg/g, which indicates that RB21 adsorption with WBA is quite higher than many low-cost adsorbents such as clay, sepiolite, fly ash and tea waste.

**Keywords:** adsorption, reuse, wood bottom ash

## MOBİLYA ENDÜSTRİSİNDEN ÇIKAN TABAN KÜLÜNÜN REAKTİF BOYA GİDERİMİNDE YENİDEN KULLANILMASI

### ÖZET

Sanayi yan ürünü olan taban külünün bertarafı, çevre ve ekonomi açısından birtakım sorunlara sebep olmaktadır. Bu külün düzenli depolama alanlarına gönderilmesi hem halihazırda eksik olan depolama kapasitelerini azaltmakta hem de bertaraf lagünlerinde tıkanıklığa neden olmaktadır. Bunları inşaat sektöründe yeniden kullanmak da bazı güvenlik sorularını gündeme getirmektedir. Son zamanlarda, düşük maliyetli ve çevre dostu geri dönüşüm için su kirleticilerini gidermede bir adsorban olarak külün

kullanılması birçok arařtırmacının dikkatini çekmeye başlamıřtır. Bu nedenle, Reactive Blue 21 boyasının giderilmesi için odun taban külünün (WBA) kullanımı bu alıřmada ayrıntılı olarak incelenmiřtir. Kavak, meře gibi çeřitli ağaların yanması sonucu oluřan odun atıkları mobilya sektöründen temin edilmiřtir. WBA öęütüldükten sonra 75 mikronluk elekten geçirilmiřtir. SEM analizi, WBA'nın ubuk benzeri yapılara ve heterojen bir görünüme sahip olduęunu göstermektedir. EDAX analizi ayrıca WBA'nın %27.99±0.33 C ve %47.05±0.28% O'dan oluřtuęunu kanıtlamıřtır. WBA içerięinde yine yüksek oranlara sahip olan Si ve Ca benzer bir daęılım gösterirken, P homojen bir daęılıma sahiptir. Fe ve Al gibi elementlerin de belirli bölgelerde yoğunlařtıęı gözlemlenmiřtir. pH 3'te maksimum RB21 gideriminin %90.6 olduęu ve 100 mg/L RB21 boya konsantrasyonuna kadar %95'in üzerinde RB21 boya gideriminin olduęu tespit edilmiřtir. WBA ile RB21 adsorpsiyonunun 2. derece pseudo kinetięi için daha uygun olduęu görülmüřtür. Adsorpsiyon için ayrıca Langmuir izotermi daha uygun bulunmuřtur.  $q_{max}$  90.91 mg/g olarak hesaplanmıřtır, bu da WBA ile RB21 adsorpsiyonunun kil, sepiyolit, uçucu kül ve ay atıęı gibi birçok düşük maliyetli adsorbandan oldukça yüksek olduęunu göstermektedir.

**Anahtar Kelimeler:** adsorpsiyon, yeniden kullanım, odun taban külü

## MUŞ BASININDA YER ALAN REKLAMLARDA TAŞRA TÜKETİM KÜLTÜRÜNE BAKIŞ

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### ÖZET

Dünyanın yaşamsal döngüsünde, insanın ihtiyaçlarını gidermesini sağlayan en önemli iki eylem üretim ve tüketimdir. Bu üretim ve tüketim sürecini belirleyen başlıca etken ise mal ve hizmetlerin varlığıdır. İnsan hayatının bir parçası olan tüketim olgusu ihtiyaçların giderilmesinden, alışkanlık ve yaşam tarzı oluşturma boyutuna kadar önemli bir etki alanına sahiptir. Sanayi devrimi birlikte ortaya çıkan endüstriyel kapitalizm ve küreselleşme, tüketim ve kültür kavramını da değiştirmiş ve tüketim, kendi kültürü oluşturmaya başlamıştır. İlk olarak Tüketim kültürü Amerikan toplumunda başlamış ve daha sonra hem ekonomik hem kültürel boyutta diğer ülkelere yayılmıştır. Türkiye'de 1950'li yıllarda gerçekleşen ekonomi politikaları ve 1980'li yıllarda serbest piyasa ekonomisine geçiş sonucunda tüketim kültürü oluşmuştur. Reklamlar tüketim kültürünün en önemli araçlarından biridir. Medya reklamlar aracılığıyla tüketimi kitlesel olarak empoze eder ve kitlelerin özendirilmesini sağlar. Reklamlarda tanıtılan ürün ve mallar vasıtasıyla yeni bir yaşam tarzı kazandırmak amacıyla gündelik tüketim alışkanlıkları ve davranışları oluşturulmaya çalışılır. Bu bağlamda çalışmanın amacı, Muş yerel basınında örneklem olarak seçilen ve incelenen gazetelerde, taşradaki tüketim kültürünün reklamlarla nasıl temsil edildiğini ortaya koymaktır. Çalışmanın araştırma bölümünde; Muş İl Gazetesi'nde 1 Ocak – 29 Haziran 2019 ve Muş Ovası Gazetesi'nde 1 Temmuz – 31 Aralık 2019 tarihleri arasında yayınlanan reklamlar içerik analizi yöntemiyle incelenmiş ve elde edilen veriler doğrultusunda reklamların analizleri gerçekleştirilmiştir. Çalışmanın sonuç bölümünde ise, taşra tüketim kültürü bağlamında reklamların, satış ve marka imajı temelinde gerçekleştirildiği ortaya çıkmaktadır.

**Anahtar Kelimeler:** *Taşra Tüketim Kültürü, Yerel Basın, Reklam*

### OVERVIEW OF PROVINCIAL CONSUMPTION CULTURE IN ADVERTISEMENTS IN MUŞ PRESS

#### ABSTRACT

Production and consumption are the two most important actions that enable people to meet their needs in the life cycle of the world. The main factor that determines this production and consumption process is the existence of goods and services. The phenomenon of consumption, which is a part of human life, has an important impact area from meeting the needs to creating habits and lifestyles. Industrial capitalism and globalization, which emerged together with the industrial revolution, changed the concept of consumption and culture, and consumption began to create its own culture. Firstly, the consumption culture started in the American society and then spread to other countries both economically and culturally. As a result of the economic policies realized in the 1950s in Turkey and the transition to the free market economy in the 1980s, a culture of consumption was formed. Advertising is one of the most important tools of consumption culture. Media imposes consumption massively through advertisements and encourages the masses. Daily consumption habits and behaviors are tried to be created in order to gain a new lifestyle through the products and goods promoted in advertisements. In this context, the aim of the study is to reveal how the consumption culture in the provinces is represented by advertisements in the newspapers selected and examined as samples in the local press of Muş. In the research part of the study; Advertisements published in Muş Provincial Newspaper between January 1 – June 29, 2019 and in Muş Ovası Newspaper between July 1 and December 31, 2019 were examined by content analysis method and the analyzes of the ads were carried out in line with the data obtained. In the conclusion part of the study, it is revealed that advertisements in the context of provincial consumption culture are carried out on the basis of sales and brand image.

**Keywords:** *Provincial Consumption Culture, Local Press, Advertising*

## İLKOKUL TÜRKÇE DERS KİTAPLARINDA YER VERİLEN SOSYO-KÜLTÜREL ÖGELERİN İLETİŞİMSSEL YAKLAŞIM AÇISINDAN İNCELENMESİ

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### ÖZET

Bu araştırma 2021-2022 eğitim öğretim yılında Giresun ilinde Millî Eğitim Bakanlığına bağlı resmi ilkokullarda kullanılan Türkçe ders kitaplarında yer verilen sosyo-kültürel öğelerin iletişimsel yaklaşım açısından kullanımının incelenmesi amacıyla yapılmıştır. Araştırma nitel araştırma yaklaşımlarından biri olan durum çalışması ile yapılmıştır. Ders kitapları doküman inceleme yöntemi ile incelenmiştir. Araştırmada kullanılan Türkçe ders kitaplarında yer verilen sosyo-kültürel öğelerin belirlenmesinde Diller İçin Avrupa Ortak Öneriler Çerçevesi [DİAOÖÇ] (TELC, 2013) ve Somut ve Somut Olmayan Kültürel Miras Listesi (Ashworth, 1994; Aslan ve Ardemagni, 2006; Hereduc, 2005; Howard, 2003; Yılmaz, 2005'ten akt: Dönmez ve Yeşilbursa, 2014, s. 427) esas alınmıştır. Elde edilen veriler içerik analizi ile analiz edilmiştir. Araştırma sonucunda elde edilen veriler ışığında Türkçe ders kitaplarında kullanılan sosyo-kültürel öğelerin kullanımının iletişimsel yaklaşımın bakış açısını karşıladığı sonucuna ulaşılmıştır.

**Anahtar Kelimeler:** İlkokul Türkçe ders kitapları, İletişimsel yaklaşım, Sosyo-kültürel öğeler

### EXPLORING THE SOCIO-CULTURAL ELEMENTS IN PRIMARY SCHOOL TURKISH TEXTBOOKS IN TERMS OF COMMUNICATIVE APPROACH

### ABSTRACT

The main aim of this research is to explore the use of socio-cultural elements in the communicative approach in the Turkish textbooks used in the official primary schools affiliated to the Ministry of National Education in Giresun in the 2021-2022 academic year. The research was conducted with a case study, which is one of the qualitative research approaches. Textbooks were examined by document analysis method. The Common European Framework of Reference for Languages [CEFR] (TELC, 2013) and the Concrete and Intangible Cultural Heritage List (Ashworth, 1994; Aslan and Ardemagni, 2006; Hereduc, 2005; Howard, 2003; Yılmaz, 2005 as cited in Dönmez and Yeşilbursa, 2014, p. 427) were used to determine the socio-cultural elements included in the Turkish textbooks used in the research. The obtained data were analyzed by content analysis. As a result of the research in the light of the data obtained, it was concluded that the use of socio-cultural elements used in Turkish textbooks meets the point of view of the communicative approach.

**Keywords:** Primary school Turkish textbooks, Communicative approach, Socio-cultural elements

## İLKOKUL İNGİLİZCE DERS KİTAPLARINDA YER VERİLEN SOSYO-KÜLTÜREL ÖGELERİN İLETİŞİMSEL YAKLAŞIM AÇISINDAN İNCELENMESİ

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### ÖZET

Bu araştırma 2021-2022 eğitim öğretim yılında Giresun ilinde Millî Eğitim Bakanlığına bağlı resmi ilkokullarda kullanılan İngilizce ders kitaplarında yer verilen sosyo-kültürel öğelerin iletişimsel yaklaşım açısından kullanımının incelenmesi amacıyla yapılmıştır. Araştırma nitel araştırma yaklaşımlarından biri olan durum çalışması ile yapılmıştır. Ders kitapları doküman inceleme yöntemi ile incelenmiştir. Araştırmada kullanılan İngilizce ders kitaplarında yer verilen sosyo-kültürel öğelerin belirlenmesinde Diller İçin Avrupa Ortak Öneriler Çerçevesi [DİAOÖÇ] (TELC, 2013) ve Somut ve Somut Olmayan Kültürel Miras Listesi (Ashworth, 1994; Aslan ve Ardemagni, 2006; Hereduc, 2005; Howard, 2003; Yılmaz, 2005'ten akt: Dönmez ve Yeşilbursa, 2014, s. 427) esas alınmıştır. Elde edilen veriler içerik analizi ile analiz edilmiştir. Araştırma sonucunda elde edilen veriler İngilizce ders kitaplarında kullanılan sosyo-kültürel öğelerin kullanımının iletişimsel yaklaşımın bakış açısını karşıladığı sonucuna ulaşılmıştır.

**Anahtar Kelimeler:** İlkokul İngilizce ders kitapları, İletişimsel yaklaşım, Sosyo-kültürel öğeler

### EXPLORING THE SOCIO-CULTURAL ELEMENTS IN PRIMARY SCHOOL ENGLISH TEXTBOOKS IN TERMS OF COMMUNICATIVE APPROACH

### ABSTRACT

The main aim of this research is to explore the use of socio-cultural elements in terms of communicative approach in the English textbooks used in official primary schools affiliated to the Ministry of National Education in the province of Giresun in the 2021-2022 academic year. The research was conducted with a case study, which is one of the qualitative research approaches. Textbooks were examined by document analysis method. The Common European Framework of Reference for Languages [CEFR] (TELC, 2013) and the Concrete and Intangible Cultural Heritage List (Ashworth, 1994; Aslan and Ardemagni, 2006; Hereduc, 2005 as cited in Dönmez and Yeşilbursa, 2014, p. 427) in determining the socio-cultural elements included in the English textbooks used in the research. The obtained data were analyzed by content analysis. As a result of the research in the light of the data obtained, it was concluded that the use of socio-cultural elements used in English textbooks meets the point of view of the communicative approach.

**Keywords:** Primary school English textbooks, Communicative approach, Socio-cultural elements

## İŞYERİNDE PSİKOLOJİK ŞİDDET: MOBBİNG DAVALARI MAHKEME KARARLARI ÜZERİNE BİR İNCELEME

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### ÖZET

Geleneksel toplumlarda ziyadesiyle az sayıda çalışanın bir araya geldiği iş yeri örgütlenme tarzı, Sanayi Devrimiyle birlikte çok sayıda çalışanın aynı örgüt çatısı altında birleşmesi şeklinde dönüşüme uğramıştır. Zamanla genişleyen ve değişen örgüt yapılanması, post-endüstriyel dönemde daha işlevsel ve yenilikçi yönetim stratejileri gerektirmiştir. Bu stratejilerin önemli bir yönü insan unsuru olup, çalışanların motivasyonunun yükseltilmesi, baskı unsurlarının azaltılması, sağlıklı bir iletişim ortamının sağlanması gibi yönetsel beceriler örgüt başarısını etkilemektedir. Mobbing yani işyerinde psikolojik şiddet olgusu da yeni yönetim düşüncesi bağlamında yapılan çalışmalardan ortaya çıkmış olan bir kavramdır.

1970'lerde sosyal bilimler alanına kazandırılmış olan mobbing kavramı, 1980'lerde ilk kez Heinz Leymann tarafından işyerinde tekrarlanan düşmanca davranışları ifade etmek için kullanılmıştır. Günümüzde zorbalık, saldırganlık, taciz, itibarı ve özgüveni zedeleme, küçük düşürme, yalnızlaştırma, yok sayma, dışlama, yıldırma gibi fiziksel, ruhsal veya duygusal tahribat oluşturan, belli bir sürece yayılan ve tekrarlanan açık veya örtülü psikolojik şiddet biçimleri şeklinde tanımlanan mobbing davranışları, çok geniş bir yelpazede ele alınmaktadır.

1990'larda yükselişe geçen mobbing karşıtı politikalar ve çalışmalar, internet teknolojilerinin gelişimiyle birlikte ivme kazanmıştır. Yapılan hukuki ve yönetsel birçok düzenlemenin yanı sıra mobbinge mücadele etmek amacıyla kurulan dernekler, toplumda farkındalık oluşturarak ve işveren ve mağdurlarla işbirliği yaparak psikolojik şiddete yönelik çözüm önerileri ortaya koymayı ve çalışma hayatına katkı sağlamayı amaç edinmiştir. Bu bağlamda çalışmada amaçlı örnekleme ile belirlenen Mobbing İle Mücadele Derneği internet sitesinde yer alan mahkeme kararları içerik analizi yöntemiyle değerlendirilmiş, dava konularının ağırlıklı olarak kötü muamele, tehdit, aşağılama, hakaret, taciz, nitelikli iş verilmemesi, çalışana fazla ağır yüklenmesi, görev yerinin sürekli değiştirilmesi olduğu tespit edilmiştir.

**Anahtar Kelimeler:** *mobbing, psikolojik şiddet, mobbing davaları*

## PSYCHOLOGICAL VIOLENCE IN THE WORKPLACE: A STUDY ON COURT DECISIONS OF MOBBING CASES

### ABSTRACT

The workplace organization style, in which a very small number of employees come together in traditional societies, has transformed into a large number of employees uniting under the same organization with the Industrial Revolution. The organizational structure that has expanded and changed over time has required more functional and innovative management strategies in the post-industrial period. An important aspect of these strategies is the human factor, and managerial skills such as raising the motivation of the employees, reducing the pressure elements and providing a healthy communication environment affect the success of the organization. Mobbing, that is, the phenomenon of psychological violence in the workplace, is a concept that emerged from the studies carried out in the context of new management thought.

The concept of mobbing, which was introduced to the field of social sciences in the 1970s, was first used by Heinz Leymann in the 1980s to express repeated hostile behaviors in the workplace. Today, mobbing behaviors, which are defined as forms of open or covert psychological violence that cause physical, mental or emotional damage such as bullying, aggression, harassment, damage to reputation and self-confidence, humiliation, isolation, ignorance, exclusion, intimidation, spread over a certain period and repeated, are very common. covered in a wide range.



Policies and studies against mobbing, which started to rise in the 1990s, gained momentum with the development of internet technologies. In addition to many legal and administrative regulations, associations established to combat mobbing aim to raise awareness in the society and cooperate with employers and victims to offer solutions to psychological violence and contribute to working life. In this context, the court decisions on the website of the Association for Combating Mobbing, which were determined by purposeful sampling, were evaluated by content analysis method in the study, and the subjects of the case were mainly ill-treatment, threats, humiliation, insults, harassment, lack of qualified work, overloading the employee, constantly changing the place of duty. has been found to be.

**Keywords:** *mobbing, psychological violence, mobbing cases*

## THE IMPORTANCE OF VISUAL CULTURE IN TODAY'S ART EDUCATION

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### ABSTRACT

Visual culture, which is handled together with aesthetic and design dimensions, activates the acquisition of ideas about visuals through the cultural experiences of individuals in the local and global context. Art, which is a cultural phenomenon by its nature, is handled with art education and cultural components. Visual culture, which is very deep and complex, develops with visual technologies and continues to exist with the progress in technology systems and the structural mechanism in visual culture elements. Visual culture, which is the way of conceptualizing communication and visual phenomena, includes the visual perception, aesthetic knowledge, judgment and interpretation ability of the person through art. Art, art education and teaching is one of the areas affected by postmodernism, postmodernism; arts education exhibits a power that can guide educators and students, who are the targets of education, in terms of pedagogy. In the works of art after 1960, aesthetic appreciation has led to the concepts and analyzes of the artwork, the relationship between image and language, to convey the thought directly as well as with a certain language, and to understand, solve and integrate them with their own thoughts.

Trends emerging with sub-headings such as expanding borders, multiculturalism, visual culture studies, the student as a micro-discourse, the use of metaphors are widely discussed in postmodern art education. In order to increase the effectiveness of art education, it is necessary and important for individuals receiving art education to engage in applied studies and acquire sufficient knowledge and experience in cultural, critical and aesthetic dimensions. Culture, which covers everything produced, is in close relationship with the field of fine arts. For this reason, art education constitutes one of the indispensable subjects of the curriculum and is intertwined with life in visual arts education. Visual arts education provides the individual with features such as critical looking, creativity, awareness of cultural values, awareness of art-culture products, and awareness in perception and aesthetics. It is necessary and important to evaluate the components of visual culture within the scope of art education in order to increase the adaptation of people to today's rapid visual environment and to examine their effects on society in the visual culture period surrounded by visuals. In this context, the aim of the study is to examine the necessity and importance of visual culture within the scope of today's art education with the literature review method.

**Key words:** Contemporary art, Contemporary art education, Culture, Visual culture.

## GÜNÜMÜZ SANAT EĞİTİMİNDE GÖRSEL KÜLTÜRÜN ÖNEMİ

### ÖZET

Estetik ve tasarımsal boyutlarla birlikte ele alınan görsel kültür bireylerin lokal ve global bağlamdaki kültürel yaşantıları aracılığıyla görsellere yönelik fikir edinme kazanımını harekete geçirmektedir. Doğası gereği kültürel bir olgu olan sanat, sanat eğitimi ve kültürel bileşenlerle ele alınmaktadır. Çok derinlikli ve karmaşık olan görsel kültür görsel teknolojilerle birlikte gelişmekte ve teknoloji sistemlerindeki ilerleme ile görsel kültür öğelerindeki yapısal düzenle varlığını sürdürmektedir. İletişim ve görsel fenomenleri kavramsalaştırmanın yöntemi olan görsel kültür sanat aracılığı ile kişinin görsel algı, estetik bilgi, yargı ve yorum yeteneğini kapsamaktadır. Sanat, sanat eğitimi ve öğretimi de postmodernizmin etkilediği alanlardan olup, postmodernizm; sanat eğitimi, eğitimcileri ve eğitimin hedefleri konumundaki öğrencileri pedagojik açıdan yönlendirebilecek önemlilikte güç sergilemektedir. 1960 sonrası sanat yapıtlarında estetik beğeni yerini sanat yapıtının barındırdığı kavram ve çözümlemelere, imge ve dil ilişkisine, belirli bir dille düşüncüyü olduğu gibi dolaysız aktarmaya ve izleyiciyi de bunları anlama, çözme ve kendi düşünceleriyle bir araya getirip bütünleştirmeye yönlendirmiştir

Sınırların genişletilmesi, çok kültürlülük, görsel kültür çalışmaları, bir mikro söylem olarak öğrenci, metaforlarının kullanımı gibi alt başlıklarla ortaya çıkan eğilimler postmodern sanat eğitiminde yaygın olarak ele alınır. Sanat eğitiminin etkinliğini arttırmak için, sanat eğitimi alan bireylerin uygulamalı çalışmalarda bulunması ve kültürel, eleştirel ve estetik boyutta yeterli bilgi ve deneyim edinmesi gerekli ve önemlidir. Üretilen her şeyi kapsayan kültür, güzel sanatlar alanı ile yakın ilişki içindedir. Bu nedenle sanat eğitimi, öğretim programının vazgeçilmez konularından birini oluşturmakta ve görsel sanatlar eğitiminde yaşamla iç içedir. Görsel sanatlar eğitimi bireye eleştirel bakış açısı, yaratıcılık, kültürel değerlere yönelik farkındalık, sanat-kültür ürünlerinin bilincinde olmak ve algı ve estetikte bilinçlilik gibi özellikler kazandırır. İçinde bulunulan görsellerle kuşatılmış görsel kültür döneminde kişilerin günümüzdeki hızlı görsel çevreye uyumunun artırılması, toplum üzerindeki etkilerinin irdelenmesi için görsel kültür bileşenlerinin sanat eğitimi kapsamında değerlendirilmesi gerekli ve önemlidir. Bu bağlamda çalışmanın amacı, literatür tarama yöntemi ile günümüz sanat eğitimi kapsamında görsel kültürün gereği ve önemini incelemektir.

**Anahtar sözcükler:** Günümüz sanatı, Günümüz sanat eğitimi, Kültür, Görsel kültür.

## KARİZMANIN MEDYATİK İNŞASI

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### ÖZET

Karizma kavramı köken itibarıyla Antik Yunan dönemine kadar uzatılabilecek bir geçmişe sahiptir. Söz konusu dönemde tanrısal ilham yeteneği gibi bir anlamda kullanılan bu kavram hediye, bağış gibi karşılıklara gelecek bir içeriğe sahiptir. İncil’de de geçen bu kelime ilk kez kilisenin Hristiyan inancını benimseyenler üzerinde kurmuş olduğu otorite ve gücü ifade etmek üzere kullanıma girmiştir.

Karizmanın modern zamanlarda yeniden gündeme gelmesi ise büyük ölçüde Max Weber’in çalışmaları vesilesiyle olmuştur. Karizmayı bazı insanlarda doğuştan gelen bir özellik olarak olağanüstü nitelikler ya da sıra dışı yetenekler olarak tanımlayan Weber bu niteliğin o kişilerin doğasından kaynaklandığını ve çalışarak edinilemeyeceğini vurgular. Bu anlamda karizma son derece az sayıda kişiye bahşedildiğine inanılan özel bir ayrıcalıktır.

Karizmayla ilgili olarak çok özel insanlara bahşedilen olağanüstü bir nitelik olması kadar belirleyici olan diğer bir nitelik onun toplumdaki karşılığıyla ilgilidir. Toplumda karizmatik kişiliklere yönelik olarak çoğunlukla büyük bir hayranlık, inanç ve itaat gibi duygular oluşmaktadır.

Karizma her ne kadar doğal ve doğuştan bir yetenek olsa da modern zamanlarda onun kalabalıklar üzerindeki güçlü etkisi dikkatleri üzerine çekmesine yol açmıştır. Siyasi, ticari, sanatsal, kültürel ve benzeri alanlarda belirlenen amaçlara ulaşmak için rutin süreçlerin dışında karizmanın sağlayabileceği avantajdan yararlanmak istenmiştir. Bu da karizmanın ihtiyaçlar doğrultusunda yapay bir şekilde üretilebileceği anlayışına yol açmıştır.

Karizmanın yapay bir biçimde imal edilmesinde medya son derece işlevsel görülmüştür. Medyanın kitleler üzerindeki etkisi bu görüşün temel dayanak noktasıdır. Bu bağlamda üretilen yapay karizmayla; ortalama bir politikacı ‘güçlü bir lider’, sıradan bir şarkıcı ‘büyük sanatçı’, vasat bir entelektüel ‘dahi’ olarak lanse edilebilmektedir. Büyük ölçüde medyadaki görünürlük üzerinden sağlanan imajlarla oluşturulan bu algı, sahte bir karizma oluşturarak kalabalıkları manipüle etmenin işlevsel bir aracı haline gelmiştir.

**Anahtar Kelimeler:** Karizma, Medya, İnşa.

## MEDIATHIC CONSTRUCTION OF CHARİSMA

### ABSTRACT

The concept of charisma has a history that can be extended to the Ancient Greek period. This concept, which was used in a sense such as divine inspiration ability in the mentioned period, has a content such as gifts and donations. This word, which is also mentioned in the Bible, was used for the first time to express the authority and power that the church established over those who adopted the Christian faith.

The resurgence of charisma in modern times has been largely due to the work of Max Weber. Weber, who defines charisma as an innate feature in some people as extraordinary qualities or extraordinary abilities, emphasizes that this quality arises from the nature of those people and cannot be acquired by working. In this sense, charisma is a special privilege believed to be bestowed on an extremely small number of people.

Another characteristic that is as decisive as being an extraordinary quality bestowed on very special people in relation to charisma is its counterpart in society. In society, feelings and behaviors such as great admiration, belief and obedience usually occur towards charismatic personalities.

Although charisma is a natural and innate talent, its powerful influence on crowds in modern times has attracted attention. In order to achieve the goals determined in political, commercial, artistic, cultural and

similar fields, it was desired to take advantage of charisma outside of routine processes. This has led to the understanding that charisma can be produced artificially in line with needs.

Media has been seen as highly functional in the artificial fabrication of charisma. The influence of the media on the masses is the mainstay of this view. With the artificial charisma produced in this context; an average politician can be presented as a 'strong leader', an ordinary singer as a 'great artist', a mediocre intellectual as a 'genius'. This perception, which is largely created by images provided through media visibility, has become a functional tool to manipulate crowds by creating a false charisma.

**Keywords:** Charisma, Media, Construction.

## TÜRK KORKU SİNEMASINDA ANLATI ÖGESİ OLARAK DİNSEL İMGELERİN KULLANIMI

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### ÖZET

İnsanın tüm gizil korkularının somutlaştırıldığı korku sineması 1900lü yıllarda edebi metinlerin uyarlaması olarak ortaya çıkmıştır. Kendisinin ötesinde bir imgelemin olmadığı modern dünyada, bilinmeyenin gizemi ile yarattığı korkudan doğan çelişki, korku senaryolarının ilham kaynağı olmuştur. Doğaüstü konuların esrarlı karakterlerle anlatıldığı bu film türü, birçok mitsel ögeyi de barındırmaktadır.

Batının korku sineması mitlerin yanı sıra toplumsal tarihten beslenen edebi ürünlerin beyazperdeye yansımaları olarak şekillenmiştir. Korku temelli dini öğretiler ile ekonomik-sosyal yapıya yönelik eleştiriler veya gelecek kaygısı, korku senaryolarının temel dinamikleridir. Özellikle Kilise; cehennem, şeytan, lanet eksenli bir korkunun toplumsal bellekte işlenmesinde önemli bir etkidir. Büyücülük, cadılık gibi bahanelerle binlerce kişinin türlü işkencelere maruz bırakılması, birçok şehir efsanesini de beraberinde getirmiştir. Ortaçağın bu lanetli hikâyelerinin yanı sıra Aydınlanma çağında değişen hayatı anlamlandırma biçimi; yeni otoriteler, tanrılar, denetim mekanizmaları, dolayısıyla yeni bir korku dinamiği yaratmıştır. Rasyonel bir düzene tabi yaşam karşısında denetlenemeyenin verdiği kaygı, başına buyruk olanın yarattığı endişe veya metafizik anlamlandırmaların modern dünyada ikame edilememesi, gotik edebiyatın ve bir tür olarak korku sinemasının dayanak noktası olmuştur.

Batının doğayı anlama ve ona hükmetme çabalarının karşısında, doğunun yaşamı anlamlandırma biçimi daha çok ölümlerle ilişkilidir. Yaşam sonrası hayatın merkeze alındığı bu algılayış biçimi, hükmetme isteğinin de ölüm ve sonrasına kaymasına neden olmuştur. Bu nedenle doğu kültürünün korku öğeleri batıya nazaran daha mistik ve dinselidir. Ölüm sonrası bir hesap gününü vadeden inancın atfı yaptığı ceza, toplumsal bellekte yer alan bilinçaltı korkuların sebebidir. Bu bağlamda okunması gereken Türk korku sineması, dinsel imgelerin yeniden üretilmesi üzerine kuruludur. Dinsel temalı bu filmlerde olay örgüsü genellikle karakterlerin, doğaüstü, cisimsiz varlıklarla münasebetleri üzerine kuruludur. Bu çalışmada dinsel öğelerin bir korku aracı olarak Türk sinemasına yansımaları ele alınmıştır. Bu bağlamda IMDb puanı yüksek olan ilk 10 Türk korku filminin afişleri göstergebilimsel analizle incelenmiş, cin, ruh, iblis, muska, büyü, deccal, kıyamet gibi inançla ilgili öğelerin baskın temalar olduğu belirlenmiştir.

**Anahtar Kelimeler:** *sinema, korku sineması, dinsel imgeler*

### THE USE OF RELIGIOUS IMAGES AS A NARRATIVE FEATURE IN TURKISH HORROR CINEMA

#### ABSTRACT

Horror cinema, in which all the hidden fears of man are embodied, emerged as an adaptation of literary texts in the 1900s. In the modern world, where there is no imagination beyond itself, the contradiction arising from the mystery of the unknown and the fear it creates has been a source of inspiration for horror scenarios. This type of film, in which supernatural subjects are told with mysterious characters, also contains many mythical elements.

Western horror cinema has been shaped as a reflection of literary products fed from social history as well as myths. Fear-based religious teachings and criticism of the economic-social structure or concern for the future are the main dynamics of fear scenarios. Especially the Church; It is an important factor in the processing of a fear based on hell, devil and curse in social memory. The fact that thousands of people were subjected to various tortures under the pretexts of witchcraft and witchcraft brought along many urban legends. In addition to these cursed stories of the Middle Ages, the way of making sense of the changing life in the Age of Enlightenment; it has created new authorities, gods, control mechanisms, thus a new fear dynamic. The

anxiety of the uncontrollable in the face of a rationally ordered life, the anxiety created by the maverick, or the inability to substitute metaphysical interpretations in the modern world have been the mainstay of gothic literature and horror cinema as a genre.

In the face of the West's efforts to understand and dominate nature, the East's way of making sense of life is more related to death. This perception, in which life after life is centered, has caused the desire to rule to shift to death and after. For this reason, the horror elements of the eastern culture are more mystical and religious than the western ones. The punishment referred to by the belief that promises a day of reckoning after death is the cause of subconscious fears in the social memory. Turkish horror cinema, which should be read in this context, is based on the reproduction of religious images. In these religious-themed films, the plot is usually based on the characters' relations with supernatural, incorporeal beings. In this study, the reflection of religious elements on Turkish cinema as a horror tool is discussed. In this context, the posters of the top 10 Turkish horror movies with high IMDb scores were analyzed with semiotic analysis, and it was determined that belief-related items such as jinn, spirit, demon, amulet, magic, antichrist, doomsday were the dominant themes.

**Keywords:** *cinema, horror cinema, religious images*

## VİRAL REKLAMLARIN FİNANSAL PERFORMANSA ETKİSİ

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### ÖZET

İnternette virüs gibi yayılabilen ve kısa sürede dünya geneline ulaşabilen reklamlar “viral reklamlar” olarak ifade edilir. Bu tür reklamlar yüksek yayınlama maliyetli reklamlara kıyasla önemli ve etkili bir alternatif oluşturabilirler. Reklamlar marka bilinirliği, ürün tanıtımı gibi işlevleri nedeniyle bir firmanın finansal performansını hem dolaylı hem de doğrudan etkileyebilir nitekim mevcut araştırmalar buna yönelik bulguları ortaya koymaktadır. Reklamların pay getirileri üzerindeki etkilerine yönelik etkilerine yönelik kanıtlar bulunmasına karşın, pay piyasasının viral reklamlara ne ölçüde tepki verdiğine ilişkin bir çalışmaya rastlanmamıştır. Bu nedenle bu çalışmanın amacı viral olabilen Türk reklamlarının pay fiyatına etkilerini araştırılmasıdır.

Bu çalışmada kapsamında viral Türk reklamlarının tespiti için Marketing Türkiye, webtures, creatorden ve pazarlamasyon kaynaklarında yayınlanan “viral reklam” listeleri incelenmiş, Borsa İstanbul’da işlem gören firmalara ait ve resmi hesaplar aracılığı paylaşılmış 4 reklam tespit edilmiştir. Bu firmaların çeşitli olay pencereleri kullanılarak anormal getirileri analiz edilmiştir. Çalışma bulguları videoların resmi yayınlanma gününü takip eden ilk 3 günü pay senedi yatırımcılarının anlamlı ve güçlü bir şekilde tepki gösterdiğini ortaya koymaktadır.

Bu araştırma viral reklam-finansal performans ilişkisini ortaya koyarak yazına katkı sağladığı gibi uygulayıcılar için de anlamlı sonuçlar ortaya koymaktadır. Bununla birlikte çalışmanın birtakım kısıtları söz konusudur. En başarılı viral reklamların tespiti aşamasında objektif bir değerlendirme olması için kabul görmüş platformların listelerinden faydalanılmıştır. Altı yıllık bir zaman dilimi (ulaşılabilenin tamamı) için reklamların incelenmesine karşın araştırma kapsamında değerlendirilebilen reklam sayısı firma tarafından yüklenen videolara artık Youtube üzerinden ulaşılammış olması ve bazı firmaların halka açık olmamaları nedeniyle düşüktür. İlgili çalışma farklı objektif kriterler ile belirlenen daha büyük ölçekli gözlemler için test edilmeye açıktır. Bu çalışma sadece Türkiye için yapılmış olup başka ülkelerin araştırılması ile genişletilebilir.

**Anahtar Kelimeler:** *Viral reklam, pay fiyatı, Borsa İstanbul*

## THE IMPACT OF VIRAL ADVERTISING ON FINANCIAL PERFORMANCE

### ABSTRACT

Advertisements that can spread like a virus on the Internet and move around the globe rapidly are called "viral ads." These ads can be a substantial and effective alternative to traditional high-cost advertisements. As current research documents, advertising can affect a firm's financial performance either indirectly or directly due to its functions, such as creating brand awareness and promoting products. Although there is evidence related to the effects of advertising on share prices, to the best of our knowledge, no study investigates to which extent the stock market responds to viral ads. Therefore, this study aims to examine the effects of viral Turkish advertisements on the share price.

In order to detect viral Turkish ads, “viral ads” lists published in Marketing Turkey, webtures, creator, and marketing resources were examined. Four ads of firms traded on Borsa Istanbul, whose viral ads were accessed from the official accounts, were identified. The abnormal returns of these firms were calculated using various event windows. The study findings reveal that stock market investors reacted significantly and strongly in the first three days following the official release of the videos.



This research contributes to the literature by revealing the viral advertising-financial performance relationship and offers meaningful results also for practitioners. However, there are some limitations of the study. The lists of accepted platforms were used to make an objective assessment when obtaining the most successful viral ads. Despite examining ads for six years (all that can be reached), the sample of ads could be evaluated as small. One of the reasons for this is that the videos uploaded by the company are no longer available on Youtube, and the other reason is that some companies are not traded publicly. This study is open to testing for larger-scale observations by applying different objective criteria. Another limitation is that this study is conducted only for Turkish ads; further research could be expanded by examining other countries.

**Keywords:** *Viral advertising, stock price, Borsa İstanbul*

**STRATEJİK YÖNETİM ARACI OLARAK KURUMSAL SOSYAL SORUMLULUK**  
**CORPORATE SOCIAL RESPONSIBILITY AS A STRATEGIC MANAGEMENT TOOL**

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**ABSTRACT**

Bir kuruluş sadece kârdan daha fazlasıyla ilgilenmeli; çevredeki toplumun sosyal çıkarları ve refahı ile de ilgilenmelidir. Toplumun refahının her zaman korunmasını sağlamak için hükümet, iş sektöründe kurumsal sosyal sorumluluğa daha fazla önem vermektedir. İyi bir kurumsal sosyal sorumluluk, ancak stratejik yönetim ile birlikte mümkündür. Bir kavram olarak kurumsal sosyal sorumluluk (KSS), onlarca yıldır yönetim döngüsünde tartışma konusu olmuştur. Bununla birlikte, KSS, rekabet avantajı ve stratejik yönetimin üst yönetimin karar verme süreçlerine dahil edilmesi, dikkat çekmeye başlayan bir dizi yeni ittifak oluşturmaktadır. Makalenin amacı, KSS gündemlerinin zaman içinde nasıl değiştiğine dair içgörüler oluşturmak ve bugün nerede olduğunu daha iyi anlamaktır. İkinci amaç, günümüzde bir uygulama olarak KSS'nin iş-toplum dinamiklerini ve sonuçlarını daha iyi kavramaktır, bu nedenle Küçük ve orta ölçekli işletmelerde karşılaştırmalı bir vaka çalışmasını yürüttük. Keşfedici ve karşılaştırmalı bir vaka çalışması stratejisi benimseyen stratejik bir yönetim aracı olarak KSS, nitel bir araştırma tasarımı kullanılarak analiz edildi.

**Anahtar kelimeler:** Kurumsal Sosyal Sorumluluk, Stratejik Yönetim, Strateji.

## GUAR SAKIZI TOZU TAKVİYELİ POLYESTER KOMPOZİT ÜRETİMİ VE KARAKTERİZASYONU

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### ÖZET

Bu araştırmada guar sakızı tozu takviyeli polyester kompozit malzemeler üretilmektedir. Elde edilen kompozitin bazı fiziksel ve kimyasal özellikleri karakterize edilip değerlendirilmektedir. Ağırlıkça % 0, % 2, % 4, % 6 ve % 8 guar sakızı dolgu maddesi olarak ortoftalik doymamış polyester (UP) içerisine karıştırılmaktadır. 1000 rpm karıştırma hızında 5 dakika homojen bir karışım yapıldıktan sonra ağırlıkça % 1.4 metil etil keton peroksit (MEKP) ve ağırlıkça % 0.6 kobalt oktoat (Co Oc) karışıma ilave edilmektedir. Daha sonra elde edilen karışım 75 s ve 1000 rpm devirde karıştırılıp standart kalıplara dökülmekte ve üretilen kompozitin 1 gün kürlenmesi için beklenmektedir. Sentezlenen polyester esaslı kompozitin yoğunluğu, Shore D sertliği ve ısı iletkenlik katsayısı belirlenmektedir. Ayrıca kompozitin termal bozunma eğrilerinden Coats Redfern yöntemine göre aktivasyon enerjisi hesaplanmaktadır. Elde edilen sonuçlara göre karışımda guar sakızı tozu arttıkça kompozitin yoğunluğu azalmaktadır. Üretilen kompozitin Shore D sertliğinin dolgu maddesi (guar gam tozu) oranı arttıkça düştüğü tespit edilmektedir. Deneysel çalışmalarda ağırlıkça % 4 guar sakızı ilavesi optimum oran olarak bulunmuştur. Guar sakızı tozu takviyesi, polyester kompozitin ısı iletkenlik katsayısını artırmasına rağmen, ısı kararlılığını azaltmaktadır. Polyester kompozitin ısı bozunma eğrilerinde hesaplanan aktivasyon enerjilerinin dolgu maddesi ilavesiyle düştüğü görülmektedir.

**Anahtar Kelimeler:** Guar sakızı tozu, polyester kompozit, karakterizasyon

## GUAR GUM POWDER REINFORCED POLYESTER COMPOSITE PRODUCTION AND CHARACTERIZATION

### ABSTRACT

In this research, guar gum powder reinforced polyester composite materials are produced. Some physical and chemical properties of the obtained composite have been characterized and evaluated. 0 wt.%, 2 wt.%, 4 wt.%, 6 wt.%, and 8 wt.% guar gum is mixed into orthophthalic unsaturated polyester (UP) as filler. After obtaining a homogeneous mixture for 5 min at a mixing speed of 1000 rpm, 1.4 wt.% methyl ethyl ketone peroxide (MEKP) and 0.6 wt.% cobalt octoate (Co Oc) are added. Afterward, the mixture is mixed at 75 s and 1000 rpm, then poured into standard molds and the produced composite is waited for 1 day to cure. The density, Shore D hardness, and thermal conductivity coefficient of the synthesized polyester-based composite are determined. Besides, the activation energy is calculated from the thermal decomposition curves of the composite according to Coats Redfern method. According to the results obtained, as the guar gum powder rises in the composite, the density decreases. Guar gum supplementation reduces Shore D hardness of the polyester composite. It has been determined that Shore D hardness of the produced composite decreases as the filler (guar gum powder) ratio rises. In experimental studies, 4 wt.% guar gum supplementation is found as the optimum ratio. Although guar gum powder reinforcement increases the thermal conductivity coefficient of the polyester composite, it decreases its thermal stability. It is seen that the activation energies calculated in the thermal decomposition curves of the polyester composite decrease with the addition of filler.

**Keywords:** Guar gum powder, polyester composite, characterization

## PNÖMATİK SİSTEMLERDE VERİM ARTIRMA PARAMETRELERİNİN ANALİZİ VE OTOMOTİV SANAYİNDE UYGULANMASI

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### ÖZET

Pnömatik sistemler, sanayinin pek çok alanında kullanılmaktadır. Tez kapsamında; Otomotiv sanayinde pnömatik sistemlerin uygulanabilir tasarruf yöntemleri araştırılacaktır. Bu amaçla, basınçlı hava hatlarında kaçakların verimlilik üzerine etkileri ile merkez kompresör dairesinden gelen basıncın minimum kayıp ile üretim hatlarına gitmesi ve üretimin olmadığı dönemlerde hava basıncının düşürülerek kayıpların azaltılması sonucu enerji verimliliği ve kazançlar değerlendirilecektir. Göz önüne alınacak otomotiv tesisinde yapılan ölçümlere bağlı olarak ta somut iyileştirme değerleri belirlenecektir. Bu amaçla da Tesisin basınçlı hava hatlarında enerji etüdüne bağlı olarak, kaçak oranlarının (enerji verimliliğinin en düşük) ve ihtiyaç dışı enerji tüketim değerleri ve alınması gerekli önlemler belirlenecektir.

Otomotiv sanayinde pnömatik sistemlerin çalışma şartlarının iyileştirilerek, uygulanabilir enerji verimliliği potansiyellerini tespit etmek. Öncelikli hedef üretim tesislerinde kayıp en fazla olduğu bölümleri öngörmek ve sonrasında kayba yol açan teknik aksaklıkları ve iyileştirme noktalarını belirlemek, sonrasında aksiyonların alınıp faaliyetlerinin devreye alınmasını sağlamak ve ortaya çıkan enerji verimliliğini hesaplamak. Tesislerde üretimin olmadığı dönemlerde de kompresör dairesinden aynı basınçlı havanın hatlara verildiği bilinmektedir. Sonrasında oransal vana kullanılarak üretim dışı zamanlarda talebe göre kompresör dairesinin çıkış basıncının set değerlerini belirlemek. Bu iyileştirme daha az basınç ile (üretim dışı zamanlarda minimum kompresör basıncı kullanmak) kayıpların azalmasını sağlayacak ve enerji verimliliğini yükseltecektir.

Üretim birimlerinde basınçlı hava tüketim noktalarında ihtiyaç fazlası enerji tüketim değerlerinin belirlenmesi ve diğer üretim birimlerinden gelen basınç ve debi taleplerin de istenilen değerlerde sağlanması için öneriler geliştirmek.

Tesislerde enerji merkezi kompresör dairesi, basınçlı hava kolektörü bina hava çıkış hatları üzerindeki kontrol vanaları manuel kelebek vana olarak seçilmektedir. Basınç ve debi değişkenlik gösterdiğinden, üretimin olmadığı zamanlarda hava kaçakları devam etmekte ve enerji kayıpları yaşanmaktadır. Kurulum esnasında basınçlı hava hatları üzerine pnömatik oransal vana montajı öngörülmediğinden yaşanan sorunlar çalışma kapsamında belirlenecektir. Çalışma sonrasında yapılacak değerlendirmelere bağlı olarak ilgili birimler öncesinde (gövde-montaj-süspansiyon-boyahane ve pres bina hava çıkış hatları üzerine) pnömatik oransal kontrol vanalarının yerleştirilmesi değerlendirilecektir.

**Anahtar Kelimeler:** Enerji Verimliliği – Pnömatik Sistemler – Otomotiv Sanayi

### ANALYSIS OF EFFICIENCY INCREASING PARAMETERS IN PNEUMATIC SYSTEMS AND APPLICATION IN AUTOMOTIVE INDUSTRY

### ABSTRACT

Pneumatic systems are used in many areas of industry. Within the scope of the thesis; Applicable saving methods of pneumatic systems in the automotive industry will be investigated. For this purpose, energy efficiency and gains will be evaluated because of the effects of leaks in compressed air lines on efficiency, the pressure coming from the central compressor room to go to the production lines with minimum loss, and the reduction of losses by reducing the air pressure in the periods when there is no production. Depending on

the measurements made at the automotive facility to be considered, concrete improvement values will be determined. For this purpose, leakage rates (lowest energy efficiency) and unnecessary energy consumption values and necessary precautions will be determined in the pressurized air lines of the facility, depending on the energy audit.

To determine the applicable energy efficiency potentials by improving the working conditions of pneumatic systems in the automotive industry. The primary target is to predict the parts with the highest loss in production facilities, and then to identify the technical failures and improvement points that cause the loss, then to take actions and put the activities into use, and to calculate the resulting energy efficiency. It is known that the same compressed air is supplied to the lines from the compressor room during periods when there is no production at the facilities. Then, using a proportional valve to determine the set values of the outlet pressure of the compressor room according to the demand during non-production times. This improvement will reduce losses with less pressure (using minimum compressor pressure during non-production times) and increase energy efficiency.

Developing suggestions for determining the excess energy consumption values at the compressed air consumption points in the production units and meeting the pressure and flow demands from the other production units at the desired values.

Control valves on the energy center compressor room, compressed air collector and building air outlet lines are selected as manual butterfly valves in the facilities. Since the pressure and flow rate vary, air leaks continue, and energy losses are experienced when there is no production. Since the installation of pneumatic proportional valves on the compressed air lines is not foreseen during the installation, the problems will be determined within the scope of the study. Depending on the evaluations to be made after the study, the placement of pneumatic proportional control valves will be evaluated before the relevant units (on the body-assembly-suspension-paint shop and press building air outlet lines).

**Keywords:** Energy Efficiency - Pneumatic Systems - Automotive Industry

## DC DALGIÇ POMPA İÇEREN BİR FOTOVOLTAİK ENERJİ SİSTEMİ İLE TARIMSAL SULAMA İHTİYACININ KARŞILANMASINA YÖNELİK ÖRNEK BİR UYGULAMA

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### ÖZET

Günümüzde fotovoltaik enerji sistemleri, enerji ihtiyacının karşılanması için önemli bir rol oynamaktadır. Çatı ve arazi tipi fotovoltaik enerji sistemlerinin kurulumları ile yenilenebilir enerji sistemlerinin elektrik enerjisi üretimindeki payı gün geçtikçe artmaktadır. Bununla birlikte, kırsal alanlarda elektrik enerjisine ulaşımın sağlanamaması veya enerji iletim hattı kurulmasının maliyetinin yüksek olması sebebiyle tarımsal sulama sistemleri kurulmasında zorluklarla karşılaşmaktadır. Fotovoltaik enerji sistemleri, bu problemin çözümünde de etkin bir rol oynamaktadır. Tarımsal sulama amaçlı kurulan fotovoltaik sulama sistemlerinde genellikle bir fazlı asenkron motora sahip dalgıç pompalar veya üç fazlı asenkron motora sahip dalgıç pompalar kullanılmaktadır. Bununla birlikte, bu motorları sürmek için fotovoltaik enerji sistemine solar invertör cihazları eklenmektedir. Sisteme eklenen invertör cihazı, sistem maliyetini artırmaktadır ve bir miktar enerji kaybına sebep olmaktadır. Bu çalışmada, mevcut yaklaşımdan farklı olarak, fotovoltaik enerji sistemine fırçasız DC motorlu bir dalgıç pompa doğrudan bağlanarak su pompalayacak şekilde fotovoltaik enerji sistemi tasarımı yapılmıştır. Fırçasız DC dalgıç pompanın çalışma karakteristikleri verilmiştir. Fotovoltaik panellerin üretecekleri enerji miktarları hesaplanmıştır. Bunun için, fotovoltaik enerji sistemi kurulumu yapılacak olan lokasyonun günlük, aylık ve yıllık solar ışınım verileri incelenmiştir. Sonrasında, lokasyon bazlı olarak fotovoltaik enerji sisteminde kullanılacak olan güneş panellerinin yönelim açıları hesaplanmıştır. Sistemin ekonomik verimlilik analizi yapılmıştır. Tasarlanan sistem, Kütahya Altıntaş ilçesi Oysu Köyü'nde bulunan su kuyusuna kurularak testleri gerçekleştirilmiştir. Fırçasız DC dalgıç pompa, 30 metre derinliğindeki sondaj kuyusunda 19 metre derinliğe konumlandırılmıştır. Kurulan fotovoltaik sulama sistemi ile, yaz aylarında gün içerisinde saatte ortalama 3 ton su çekilebildiği izlenmiştir.

**Anahtar Kelimeler:** yenilenebilir enerji, fotovoltaik enerji, tarımsal sulama

### AN EXAMPLE APPLICATION TO MEET AGRICULTURAL IRRIGATION NEEDS WITH A PHOTOVOLTAIC ENERGY SYSTEM INCLUDING A DC SUBMERSIBLE PUMP

### ABSTRACT

Today, photovoltaic energy systems play an important role in meeting energy needs. The share of renewable energy systems in electrical energy production is increasing day by day with the installation of roof and land type photovoltaic energy systems. However, difficulties are encountered in the establishment of agricultural irrigation systems due to the inability to access electrical energy in rural areas or the high cost of establishing energy transmission lines. Photovoltaic energy systems also play an active role in solving this problem. In photovoltaic irrigation systems established for agricultural irrigation, submersible pumps with single-phase asynchronous motor or submersible pumps with a three-phase asynchronous motor are generally used. However, solar inverter devices are added to the photovoltaic energy system to drive these motors. The inverter device added to the system increases the system cost and causes some energy loss. In this study, unlike the current approach, a photovoltaic energy system has been designed to pump water by directly connecting a brushless DC motor submersible pump to the photovoltaic energy system. The operating characteristics of the brushless DC submersible pump are given. The amount of energy to be produced by the photovoltaic panels has been calculated. For this, the daily, monthly and annual solar radiation data of the location where the photovoltaic energy system will be installed were examined. Afterwards, the orientation angles of the solar panels to be used in the photovoltaic energy system were calculated on a location-based basis. The economic efficiency analysis of the system was made. The designed system was installed in the

water well located in the village of Oysu in Altintas district of Kutahya and the tests were carried out. The brushless DC submersible pump is located at a depth of 19 meters in a 30-meter deep borehole. With the installed photovoltaic irrigation system, it has been observed that an average of 3 tons of water can be drawn per hour during the day during the summer months.

**Keywords:** renewable energy, photovoltaic systems, agricultural irrigation

## KÜTAHYA ŞEHİRİ İÇİN ŞEBEKE BAĞLANTILI FOTOVOLTAİK ENERJİ SİSTEMLERİNİN EKONOMİK UYGULANABİLİRLİĞİNE YÖNELİK ÖRNEK BİR ANALİZ

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### ÖZET

Fotovoltaik enerji sistemleri, temiz enerji üretim süreçleri nedeniyle, fosil yakıtı dayalı enerji üretim sistemlerine karşı önemli bir alternatif enerji üretim sistemi olarak ön plana çıkmaktadır. Bununla birlikte, bir fotovoltaik enerji sisteminin kurulumundan önce net şekilde bir ekonomik fizibilite analizinin yapılması önem arz etmektedir. Fotovoltaik sistem kurulumu için yapılacak olan yatırımın geri dönüş süresi iyi hesaplanmalıdır. Bu çalışma, şebekeye bağlı bir fotovoltaik enerji sisteminin ekonomik fizibilite analizini içermektedir. Kurulumunun yapılması planlanan şebeke bağlantılı fotovoltaik enerji sisteminin Türkiye'de, Kütahya il merkezinin yanında kırsal bir alana konumlandırılması planlanmıştır. Kütahya ili, Ege Bölgesi'nin İç Batı Anadolu Bölümü'nde yer almaktadır. Kütahya bölgesi, kuzey ve batıdaki yüksek dağ sırtlarında doruğa ulaşan tarım arazileri ile geniş bir yamaç alanına sahiptir. Bu yamaçlardan güneye yönelimli olan bölgelerin fotovoltaik enerji üretimi için uygun olduğu öngörülmektedir. Önerilen sistemin, yaklaşık 3000 m<sup>2</sup>'lik bir alan oluşturulması planlanmıştır. Kurulması düşünülen sistemin DC tarafı santral kurulu gücü 150kWp olarak belirlenmiştir. Sistemin şebeke tarafı gücü 125kWe olarak belirlenmiştir. Fotovoltaik panel dizilerinin birbirlerini gölgelememesi için gerekli mesafe hesaplamaları yapılmıştır. Farklı güç değerlerindeki fotovoltaik paneller, sistem kurulumu maliyeti açısından incelenmiştir. Böylece, en ekonomik şekilde en fazla enerjinin üretilebilmesi için gerekli sistem hesaplamaları yapılmıştır. Sistemin toplam maliyeti belirlenmiş ve önerilen fotovoltaik enerji sisteminin yıllara göre aylık enerji üretimi güneş radyasyonu verilerine göre hesaplanmıştır. Sistemin toplam kârı yıllara göre hesaplanmıştır. Çalışmanın sonucunda, söz konusu fotovoltaik enerji sistemi yatırımının 5. yılının ortalarından itibaren kâr etmeye başlayacağı tespit edilmiştir.

**Anahtar Kelimeler:** yenilenebilir enerji, fotovoltaik enerji, şebeke bağlantılı fotovoltaik sistemler

### AN EXAMPLE ECONOMIC FEASIBILITY ANALYSIS ON THE GRID-CONNECTED PHOTOVOLTAIC ENERGY SYSTEMS: A CASE STUDY OF KUTAHYA CITY, TURKEY

### ABSTRACT

Photovoltaic energy systems stand out as an important alternative energy production system against fossil fuel-based energy production systems due to their clean energy production processes. However, it is important to conduct a clear economic feasibility analysis before installing a photovoltaic power system. The return period of the investment to be made for the installation of the photovoltaic system should be well calculated. This study includes the economic feasibility analysis of a grid-connected photovoltaic energy system. The grid-connected photovoltaic energy system, which is planned to be installed, is planned to be located in a rural area near the city center of Kutahya in Turkey. The province of Kutahya is located in the Inner West Anatolian Section of the Aegean Region. The Kutahya region has a wide slope area with agricultural lands culminating on high mountain ridges in the north and west. It is predicted that the regions oriented to the south from these slopes are suitable for photovoltaic energy production. The proposed system is planned to create an area of approximately 3000 m<sup>2</sup>. The installed power of the DC side of the system to be established has been determined as 150kWp. The grid side power of the system is determined as 125kWe. Necessary distance calculations were made so that the photovoltaic panel arrays do not shade each other. Photovoltaic panels with different power values are examined in terms of system installation cost. Thus, necessary system calculations were made in order to produce the most energy in the most economical way. The total cost of the system was determined and the monthly energy production of the proposed photovoltaic



energy system over the years was calculated according to the solar radiation data. The total profit of the system is calculated over the years. As a result of the study, it has been determined that the said photovoltaic energy system investment will start to make a profit as of the middle of its 5th year.

**Keywords:** renewable energy, photovoltaic systems, agricultural irrigation

## AISI 304 ÖSTENİTİK PASLANMAZ ÇELİK ÜZERİNE ELEKTROKİMYASAL SERAMİK KAPLAMANIN ARAŞTIRILMASI

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### ÖZET

Malzeme biliminin gün geçtikçe önemi artmakta ve bu konuda yapılan çalışmaların sayısı artmaktadır. Bu bağlamda malzemelerin özelliklerinin iyileştirilmesi, maliyet ve ömür açısından önemlidir. Özellikle malzemeler üzerine yapılan kaplamalar, malzemenin ömrünü uzatmak, mekanik özelliklerini iyileştirmek açısından son derece önemlidir. Bu tez çalışmasında elektrokimyasal kompozit kaplama ile malzemelerin özellikleri iyileştirilmesi öngörülmüş olup, malzemelerin fiziksel ve mekanik özelliklerinin artırılması hedeflenmiştir. Elektrokimyasal kaplama işlem kolaylığı, basitliği, ucuz olması, her parçaya uygulanabilir olması ve etkili bir yöntem olması nedeniyle adından sıklıkla bahsettirir. Elektrokimya kullanılarak yapılan kompozit kaplamalar ise günümüzde yaygın olarak kullanılmaktadır. Özellikle karbür tozlarının malzemelerin sertliğini arttırdığını ve malzemelerin yüzey özelliklerini iyileştirildiği bilinmektedir. Bu çalışmada farklı oranlarda hazırlanmış olan karbür tozlarından B<sub>4</sub>C, SiC ve ZrC tozlarının saf nikel ile birlikte oluşturulan çözeltileri kullanılmıştır. B<sub>4</sub>C yüksek sertliği, mekanik, tribolojik, elektronik, optik özelliklerinin yanı sıra yüksek nötron absorblama özelliği ile de dikkat çeken bir malzemedir. Düşük yoğunluğu, yüksek Young modülü, çok yüksek termal ve kimyasal kararlılığı vb. özellikleri olan B<sub>4</sub>C, elmas ve c-BN'den sonra bilinen en sert malzemedir. Bu özellikleriyle B<sub>4</sub>C ince filmler, kesici takımların, fren balatalarının, sabit disklerin ve çeşitli makine parçalarının kaplanması gibi mekanik, tribolojik uygulamalarda kullanılır. SiC, yalnızca elmas, kübik bor nitür ve bor karbür ile aşılabilir sertliğe sahip seramik bir malzemedir. Malzeme aşınmaya karşı dirençli ve tüm alkalilere ve asitlere kimyasal olarak inert ve aynı zamanda yüksek ısıya dayanıklıdır. Bu özellikler SiC tozunu aşırı çalışma koşullarında kullanılmak üzere üstün bir aşındırıcı ve seramik malzeme yapar. ZrC ise yüksek sertliğe, yüksek termal iletkenliğe, iyi oksidasyon direncine ve tokluğa sahiptir. Tekstil endüstrisinde naylon, elyaf ve sert alaşımli termostat tekstil yapımında kullanılır. Polimer nanokompozitler, seramik ve metal matris gibi kompozit malzemelerde de kullanılır.

Bu çalışmada seramik tozlar arasında sertliği en iyi olan bu üç farklı seramik tozunun AISI 304 paslanmaz çeliği üzerine kaplanması yapılmıştır. Elde edilen bu veriler ışığında makine kimya endüstrisinde nikel kaplı malzemelerin kullanım sıklığını göz önüne alarak bu malzemelerin tribolojik ve korozyon özelliklerinin iyileştirilmesi için farklı Derin ötektik çözücü kompozisyonları geliştirilerek elektrokimyasal kaplama yöntemi ile AISI 304 çeliği üzerin kompozit kaplamalar geliştirilmiştir. Aslında AISI 304 kendi başına korozyon dayanımı açısından üstün özelliklere sahiptir ancak elektrokimyasal kaplanması genellikle asidik çözeltiler üzerinde gerçekleştirilebilmektedir ve sertliği uygulama alanlarına göre artırılması için farklı kompozit kaplamalar gerektirmektedir. AISI 304 çeliğinin elektrokimyasal kaplama zorluğu göz önüne alındığında bu yüzey üzerinde elde edilebilecek kaplamalar yumuşak çelik gibi birçok farklı yüzeye uygulanabilecektir. Genel amaç olarak yeşil çözeltiler içinde kompozit nikel kaplamaların elektrokimyasal kaplama yöntemi ile gerçekleştirilmesi amaçlanmış olup konunun derinlemesine analizi tez boyunca farklı başlıklar altında tartışılmıştır. Bu çalışmada yapılan ölçümler ve sonuçlar doğrultusunda yapılan diğer kaplama çalışmalarıyla ve kaplamalarında kendi aralarında kıyaslanması yapılmıştır. Yapılan çalışmalarda karbür tozlarının 4 saatlik süre ile kaplanması yapıлып, hangi karbür tozunun daha iyi kaplama kalınlığına ulaştığı incelenmiştir. Yapılan SEM ve EDS analizlerinde karbür tozlarının homojen olarak dağılımları incelenmiştir. Yüksek sertlikleriyle bilinen bu üç farklı karbür tozunun AISI304 çeliği üzerinde ki kaplamalarında sertlik deneyleri yapılmış ve sonuçları hakkında yorumlar yapılmıştır. Son olarak saf AISI

304 ve karbür tozu kaplanmış numunelerin korozyona karşı dayanıklılık testleri yapıp sonuçları irdelenmiştir.

**Anahtar Kelimeler:** Elektrokimyasal kaplama, nikel kaplama, AISI 304

## INVESTIGATION OF ELECTROCHEMICAL COATING OF DIFFERENT CERAMIC PARTICLES ON AISI 304 AUSTENITIC STAINLESS STEEL

### ABSTRACT

The importance of materials science is increasing day by day and the number of studies conducted on this subject is increasing. In this context, improving the properties of materials is important in terms of cost and life. Especially coatings made on materials are extremely important in terms of prolonging the life of the material and improving its mechanical properties. In this thesis study, it is envisaged to improve the properties of materials with electrochemical composite coating, and it is aimed to increase the physical and mechanical properties of materials. Electrochemical coating is often mentioned by its name due to its ease of processing, simplicity, cheapness, applicability to every part and being an effective method. Composite coatings made using electrochemistry are widely used today. In particular, it is known that carbide powders increase the hardness of materials and improve the surface properties of materials. In this study, solutions of B<sub>4</sub>C, SiC and ZrC powders formed together with pure nickel from carbide powders prepared in different ratios were used. B<sub>4</sub>C is a material that attracts attention with its high hardness, mechanical, tribological, electronic, optical properties, as well as its high neutron absorption property. It has low density, high Young's modulus, very high thermal and chemical stability, etc. with its properties, B<sub>4</sub>C is the hardest known material after diamond and c-BN. With these properties, B<sub>4</sub>C thin films are used in mechanical and tribological applications such as the coating of cutting tools, brake pads, hard disks and various machine parts. SiC is a ceramic material with exceptional hardness, which is exceeded only by diamond, cubic boron nitride and boron carbide. The material is wear-resistant and chemically inert to all alkalis and acids, as well as resistant to high temperature. These properties make SiC powder a superior abrasive and ceramic material for use in extreme operating conditions. ZrC, on the other hand, has high hardness, high thermal conductivity, good oxidation resistance and toughness. In the textile industry, nylon, fiber and hard alloy thermostat are used in textile construction. Polymer nanocomposites are also used in composite materials such as ceramics and metal matrix. In this study, Decking of these three different ceramic powders with the best hardness among ceramic powders on AISI 304 stainless steel was performed. In the light of the data obtained and considering the frequency of use of the materials in the chemical industry, nickel plated mechanical, tribological and corrosion properties of deep eutectic solvent compositions of these materials for the improvement of different composite coatings on Aisi 304 steel with improved electrochemical plating method have been developed. Actually, AISI 304 has superior properties in terms of corrosion resistance on its own, but its electrochemical coating can usually be performed on acidic solutions and requires different composite coatings to increase its hardness according to the application areas. Considering the difficulty of electrochemical coating of AISI 304 steel, the coatings that can be obtained on this surface can be applied to many different surfaces such as mild steel. As a general goal, it was aimed to perform composite nickel coatings in green solutions by electrochemical coating method, and in-depth analysis of the subject was discussed under different headings throughout the dissertation.

In accordance with the measurements and results made in this study, comparisons were made with other coating studies and Decking among themselves. In the studies carried out, the coating of carbide powders was carried out for a period of 4 hours and it was examined which carbide powder reached the better coating thickness. In the SEM and EDS analyses performed, the homogeneous distribution of carbide powders was examined. Hardness experiments have been conducted on the coatings of these three different carbide powders, known for their high hardness, on AISI304 steel, and comments have been made on their results. Finally, corrosion resistance tests of pure AISI 304 and carbide powder coated samples were performed and the results were examined.

**Keywords:** Electrochemical coating, nickel plating, AISI 304

## TCSC-YAKIT HÜCRESİNİN GÜÇ SİSTEMLERİNDE STATİK GERİLİM KARARLILIĞI ÜZERİNDEKİ ETKİLERİ

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### ÖZET

Günümüzde güç sistemlerindeki taleplerden dolayı çalışma koşullarındaki değişimler kararlılık problemlerini ortaya çıkarmaktadır. Bu problemlerin en önemlilerinden birisi de gerilim kararlılığıdır. Bara gerilim çalışma sınır değerlerinde olması ve sistemin yüklenme parametre değerinin artırılması gerilim kararlılığının sağlanması açısından önemlidir. Gerilim kararlılığını iyileştirmek için güç elektroniği tabanlı kompanzasyon sistemlerine ihtiyaç duyulmaktadır. Bu çalışmada Esnek AC İletim Sistemi (FACTS) elemanlarından Tristör Kontrollü Seri Kompanzator (TCSC) kullanılarak sistemin gerilim kararlılığı analizi incelenmiştir. Hattın empedans kontrolünü sağlamak için kullanılan TCSC'nin gerilim kararlılığı için etkinliğini ve yüklenebilirliği arttırmak için enerji depolama elemanlarından yakıt hücresi ile birlikte kullanılabilirliği incelenmiştir. Bu çalışmada 9 baralı güç sisteminde TCSC ve yakıt hücresinin birlikte kullanılması ile statik gerilim kararlılığı analizi detaylı olarak incelenmiştir. Bu çalışma MATLAB tabanlı Güç Sistemleri Analizi Programı (PSAT)'da incelenmiştir. PSAT programında öncelikle empedans kontrolünde kullanılan 100 MVA gücündeki TCSC'nin yerleşim yeri yük akışına göre bara gerilimleri en düşük olan baralar arasındaki iletim hattı olarak belirlenmiştir. Yakıt hücresi ise generatör baralarından birisine bağlanmıştır. Yakıt hücresinde gücü 50 MVA olarak belirlenmiştir. Daha sonra sistemdeki analizlerde sürekli yük akışı metodu kullanılmıştır. Üç aşama halinde benzetim çalışması sonuçları elde edilmiştir ve yorumlanmıştır. İlk aşamada sistemde TCSC ve yakıt hücresi kullanılmadığı durumdaki sonuçlar, ikinci aşamada sistemde TCSC kullanıldığı durumdaki sonuçlar, üçüncü aşamada sistemde TCSC ve yakıt hücresinin kullanıldığı durumdaki sonuçlar karşılaştırılmıştır. Elde edilen sonuçlar neticesinde TCSC ve yakıt hücresinin 9 baralı sistemde kullanılması ile maksimum yüklenme parametre değerinin arttırdığı ve bara gerilim profillerini iyileştirdiği görülmüştür.

**Anahtar Kelimeler:** *TCSC, yakıt hücresi, statik gerilim kararlılığı, PSAT*

### EFFECTS OF TCSC-FUEL CELL ON STATIC VOLTAGE STABILITY IN POWER SYSTEMS

#### ABSTRACT

Today, changes in operating conditions due to demands in power systems cause stability problems. One of the most important of these problems is voltage stability. It is important for the bus voltage to be within the operating limit values and to increase the load parameter value of the system in order to ensure voltage stability. Power electronics-based compensation systems are needed to improve voltage stability. In this study, voltage stability analysis of the system was investigated by using the Thyristor Controlled Series Compensator (TCSC), which is one of the components of the Flexible AC Transmission System (FACTS). TCSC, which is used to provide impedance control of the line, can be used with a fuel cell, one of the energy storage elements, to increase the efficiency and loadability for voltage stability. In this study, static voltage stability analysis with the use of TCSC and fuel cell in 9 bus power system is examined in detail. This study was examined in the MATLAB-based Power Systems Analysis Program (PSAT). In the PSAT program, the location of the 100 MVA TCSC, which is primarily used in impedance control, is determined as the transmission line between the buses with the lowest bus voltages according to the load flow. The fuel cell is connected to one of the generator buses. The power of the fuel cell is determined as 50 MVA. Then, the continuous load flow method was used in the analysis of the system. The results of the simulation study in

three stages were obtained and interpreted. In the first stage, the results when TCSC and fuel cell are not used in the system, the results when TCSC is used in the system in the second stage, and the results when TCSC and fuel cell are used in the system in the third stage are compared. As a result of the obtained results, it has been seen that the use of TCSC and fuel cell in the 9 bus system increases the maximum load parameter value and improves the bus-voltage profiles.

**Keywords:** *TCSC, fuel cell, static voltage stability, PSAT*

## GÜÇ SİSTEMLERİNDE TÜRBİN YÖNETİCİ MODELLERİN SEKONDER GERİLİM KONTROLÜ ÜZERİNDEKİ ETKİLERİNİN İNCELENMESİ

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### ÖZET

Güç sistemleri geçici kararlılık durumlarından oldukça fazla etkilenmektedir. Geçici kararlılık durumlarına karşı çeşitli kontrol modelleri güç sistemlerinde yaygın olarak kullanılmaktadır. Bu kontrol modellerinin en önemlilerinden birisi sekonder gerilim kontrolüdür. Sekonder gerilim kontrolü merkezi alan kontrolü ve küme kontrolünden oluşmaktadır. Senkron makinalarda sekonder gerilim kontrolünün sağlanmasında Otomatik Gerilim Kontrolü (OGR) ve Güç Sistemi Kararlı Kılıcı (GSKK) modellerinin uygun olan modellerin tercih edilmesi geçici kararlılık durumları için önemlidir. Yapılan bu çalışmada sekonder gerilim kontrolü ile OGR ve GSKK modellerin yanı sıra Türbin Yönetici (TY) modeli kullanılmıştır. 2 farklı model olarak kullanılan TY modelin güç sistemi üzerindeki etkileri detaylı olarak incelenmiştir. Sekonder gerilim kontrolünde kullanılan merkezi alan kontrolü ve küme kontrolü için 14 numaralı bara pilot bara olarak belirlenmiştir. Analizi yapılan bu çalışma Güç Sistemleri Analizi Programı (PSAT) tarafından incelenmiştir. PSAT programında Uluslararası Elektrik Elektronik Mühendisliği (IEEE)'nin 14 baralı sistemi kullanılmıştır. Yapılan analizlerde bazı parametreler detaylı olarak incelenmiştir. Bu parametreler senkron generatörlerin açısal hızı, senkron generatörlerin bağlı olduğu bara gerilimleri ve senkron generatörün aktif-reaktif güç değerleridir. Yapılan karşılaştırmalarda farklı TY modellerin parametrelerdeki kararlılık süreleri ve salınım durumları detaylı bir şekilde incelenmiştir. Sekonder gerilim kontrolü, OGR ve GSKK modellerin farklı TY modelleri ile yapılan karşılaştırmalarda TY model 2'nin TY model 1'e göre daha iyi sonuçlar verdiği görülmüştür.

**Anahtar Kelimeler:** *Sekonder gerilim kontrolü, OGR, GSKK, farklı TY modelleri, PSAT*

### INVESTIGATION OF THE EFFECTS OF TURBINE GOVERNOR MODELS ON SECONDARY VOLTAGE CONTROL IN POWER SYSTEMS

#### ABSTRACT

Power systems are highly affected by transient stability states. Various control models against transient stability states are widely used in power systems. One of the most important of these control models is the secondary voltage control. Secondary voltage control consists of central area control and cluster control. It is important for transient stability situations to choose the suitable models of Automatic Voltage Regulator (AVR) and Power System Stabilizer (PSS) models in providing secondary voltage control in synchronous machines. In this study, the Turbine Governor (TG) model was used as well as the AVR and PSS models with secondary voltage control. The effects of the TG model, which is used as 2 different models, on the power system are examined in detail. Bus 14 for central area control and cluster control used in secondary voltage control is designated as the pilot bus. This analyzed study was examined by the Power Systems Analysis Program (PSAT). The 14-bus system of the International Electrical and Electronics Engineering (IEEE) was used in the PSAT program. In the analysis, some parameters were examined in detail. These parameters are the angular speed of the synchronous generators, the bus voltages to which the synchronous generators are connected, and the active-reactive power values of the synchronous generator. In the comparisons, the stability times and oscillation states of the different TG models in the parameters were examined in detail. In comparisons made with different TG models of secondary voltage control, AVR, and PSS models, it was seen that TG model 2 gave better results than TY model 1.

**Keywords:** *Secondary voltage control, AVR, PSS, different TG models, PSAT*

## FLOROKARBON KAUÇUK KARIŞIMINDA KOAJAN MİKTARININ REOLOJİK VE FİZİKSEL ÖZELLİKLERE ETKİSİNİN İNCELENMESİ

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### ÖZET

Kauçuk karışımları yüksek mekanik ve fiziksel özelliklere sahiptir. Ayrıca kolay proses edilebilir olması, hafif olması ve kimyasal dayanımları nedeniyle birçok sektörde tercih edilmektedir. Bu özelliklerin elde edilmesinde kauçuk polimeri tek başına yeterli değildir. Kullanılacakları proseslere göre karışım formülasyonunun özel olarak tasarlanması gerekmektedir. Bu tasarımın ana girdilerini genel olarak polimer, dolgu maddesi, diğer kimyasallar ve vulkanizasyon sistemi kimyasalları oluşturmaktadır. Polimer zincirleri arasındaki çapraz bağlar vulkanizasyon prosesinde oluşmaktadır. Çapraz bağların yoğunluğu kauçuk karışımı formülasyonunda kullanılan vulkanizasyon kimyasallarının miktarları ile değişebilmektedir.

Bu çalışmada peroksit vulkanizasyon sistemine sahip florokarbon kauçuk polimeri kullanılmıştır. Kauçuk karışım reçetesi içindeki diğer bileşenler sabit tutularak koajan miktarı 2 phr dan 10 phr a kadar artırılarak deneme karışımı üretilmiştir. Deneme karışımları açık mil prosesi ile üretilmiştir. Deneme karışımlarının vulkanizasyon özelliklerinin tespit edilmesi için rheometre analizi, proses edilebilirliğinin belirlenmesi için mooney viskozimetre analizi yapılmıştır. Fiziksel mekanik ve termal özelliklerin belirlenmesi için 2 mm kalınlığında standart test plakaları hazırlanmıştır. Bu plakalar üzerinden sertlik, kopma mukavemeti, kopma uzaması, yırtılma dayanımı, kalıcı deformasyon ve havada yaşlandırma sonrasındaki değişimler test edilmiştir. Tüm bu testler sonucunda florokarbon kauçuk karışımındaki optimum koajan miktarı tespit edilmiştir.

**Anahtar Kelimeler:** florokarbon elastomer, rheometre testi, kauçuk testleri

## INVESTIGATION OF THE EFFECT OF THE AMOUNT OF COAGENTS ON THE RHEOLOGICAL AND PHYSICAL PROPERTIES OF THE FLORROCARBON RUBBER COMPOUND

### ABSTRACT

Rubber compounds have high mechanical and physical properties. Also, it is preferred in many sectors due to its easy processability, light weight and chemical resistance. Rubber polymer is not enough with alone to achieve these properties. The compound of formulation should be specially designed according to the processes in which they will be used. The main inputs of this design are generally polymer, filler, other chemicals and vulcanization system chemicals. Cross-links between polymer chains are occurred in the vulcanization process. The density of the crosslinks can change with the amounts of vulcanization chemicals used in the rubber compound formulation.

In this study, fluorocarbon rubber polymer with peroxide vulcanization system was used. The other materials were kept constant in rubber compound formulation and the amount of coagent was increased from 2 phr to 10 phr and the trial compound was produced. Trial compounds were produced by the open mill process. Rheometer analysis was performed to determine the curing properties of the trial compounds, and Mooney viscometer analysis was performed to determine the processability. Standard test plates of 2 mm thickness were prepared for the determination of physical, mechanical and thermal properties. Hardness, tensile strength, elongation at break, tear strength, permanent deformation and changes after air aging were tested on

these plates. As a result of all these tests, the optimum amount of coagent in the fluorocarbon rubber compound was determined.

**Keywords:** fluorocarbon elastomer, rheometer test, rubber material tests



## DIN1.4534 PASLANMAZ ÇELİĞİNİN KURU VE MQL KESME ORTAMLARINDA FREZELENMESİNDE KESME KUVVETİ ANALİZİ

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### ÖZET

DIN1.4534 (PH13-8Mo) kalite paslanmaz çelik, yüksek çekme mukavemeti, kırılma tokluğu ve korozyon direnci kombinasyonunun gerekli olduğu uygulamalarda kullanılan martensitik yapıya sahip özel bir çeliktir. Diğer yandan, işlenebilirliği oldukça zor ve tecrübe isteyen malzemelerden birisi olan bu çeliğin işlenmesi hakkında literatürde sınırlı bilgi bulunmaktadır. Ayrıca, sürdürülebilir işleme açısından malzemelerin işlenmesinde tüketilen enerjinin ve dolayısıyla kesme kuvvetlerinin minimize edilmesi çok önemlidir. Bu bağlamda, PH13-8Mo kalite paslanmaz çeliğinin çevre dostu kesme rejimleri olan kuru ve minimum miktarda yağlama (MMY) ortamlarında frezeleme yöntemiyle işlenebilirliği araştırılmıştır. Yukarı frezeleme tekniği ile yapılan deneylerde kaplamalı karbür kesici takımlar kullanılmış olup, işleme sırasında oluşan kesme kuvvetleri ölçülmüş ve işleme parametrelerine göre kuvvet değişimleri analiz edilmiştir. Deneyler üç farklı kesme hızı (V), ilerleme hızı (f) ve sabit kesme derinliği seçilerek gerçekleştirilmiştir. KISTLER 9272 tipi piezoelektrik dinamometre ve ekipmanları ile ölçülen kesme kuvveti bileşenleri yardımıyla bileşke kuvvet (Fr) değerleri hesaplanmıştır. İşleme parametrelerinin Fr üzerindeki etkileri varyans analizi uygulanarak değerlendirilmiştir. Fr değerlerinin artan ilerleme hızına bağlı orantısız olarak arttığı görülmüştür. Diğer yandan, kesme hızının belirli değere kadar artmasıyla artan kesme sıcaklığının olumlu etkisi sonucunda kesme kuvvetlerinin nispeten azaldığı tespit edilmiştir. Değerlendirmeler neticesinde, minimum miktarda yağlama yönteminin, kuru ortamda işlemeye kıyasla işleme performansını önemli ölçüde iyileştirdiği ve kesme kuvvetlerinin ortalama %6.77 daha düşük çıktığı belirlenmiştir. Ayrıca, en düşük bileşke kuvvet 80 m/dak kesme hızı ve 0.04 mm/dev ilerleme hızında minimum miktarda yağlama ortamında elde edilmiştir.

**Anahtar Kelimeler:** *PH13-8 Mo, Frezeleme, Kesme Kuvveti*

## CUTTING FORCE ANALYSIS IN MILLING OF DIN 1.4534 STAINLESS STEEL IN DRY AND MQL CUTTING ENVIRONMENTS

### ABSTRACT

DIN1.4534 (PH13-8Mo) quality stainless steel is a special steel with a martensitic structure used in applications where a combination of high tensile strength, fracture toughness and corrosion resistance is required. On the other hand, there is limited information in the literature about the processing of this steel, which is one of the materials that is very difficult to process and requires experience. In addition, minimizing the energy consumed in the processing of materials and thus cutting forces is very important for sustainable processing. In this context, the machinability of PH13-8Mo grade stainless steel by milling in dry and minimum quantity lubrication (MQL) environments, which is an environmentally friendly cutting regime, was investigated. Coated carbide cutting tools were used in the experiments performed with the up milling technique, the cutting forces generated during the machining were measured and the force changes according to the machining parameters were analyzed. The experiments were carried out by choosing three different cutting speeds (V), feed rate (f) and constant cutting depth. The resultant force (Fr) values were calculated with the help of the cutting force components measured by KISTLER 9272 type piezoelectric dynamometer and equipment. The effects of processing parameters on Fr were evaluated by applying analysis of variance. It was observed that Fr values increased proportionally with increasing feed rate. On the other hand, it was

determined that as the cutting speed increased up to a certain value, the cutting forces decreased relatively as a result of the positive effect of the increasing cutting temperature. As a result of the evaluations, it was determined that the minimum amount of lubrication method significantly improved the machining performance compared to machining in dry conditions and the cutting forces were on average 6.77% lower. In addition, the lowest resultant force was obtained at a cutting speed of 80 m/min and a feed rate of 0.04 mm/rev in the minimum quantity lubrication.

**Keywords:** *PH13-8Mo, Milling, Cutting Force*

## TAGUCHI YÖNTEMİ ESASLI PH13-8Mo PASLANMAZ ÇELİĞİN FREZELENMESİNDE YÜZEY PÜRÜZLÜLÜĞÜ OPTİMİZASYONU

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### ÖZET

PH13-8Mo kalite paslanmaz çelik, yüksek mekanik dayanım ve yüksek korozyon direnci sayesinde uçak iniş takımı parçalarında, valf ve şaft parçalarında, petrokimyasal sıvılarla temas eden ve yük altında kalan millerde, nükleer santral millerinde sıklıkla kullanılmaktadır. Ancak, yüksek mekanik özellikler ve düşük ısı iletkenliği yüzünden işlenebilirliği zor bir malzeme olup, işlenmiş parçalarda istenilen yüzey kalite özelliklerine ulaşabilmek için kesme şartlarının optimizasyonu gereklidir. Bu bağlamda, PH13-8Mo kalite çeliğin sürdürülebilir kesme ortamlarında (kuru ve minimum miktarda yağlama MMY) işlenmesinde minimum yüzey pürüzlülüğü için Taguchi yöntemi esaslı optimizasyon metodolojisi uygulanmıştır. Üç farklı kesme hızı (V) ve ilerleme hızında (f) kaplamalı karbür kesici uçlar ile yapılan frezeleme deneylerinde oluşan yüzeylerden ortalama pürüzlülük yükseklikleri (Ra) ölçülmüştür. İşleme parametrelerinin Ra üzerindeki etkileri varyans analizi uygulanarak değerlendirilmiştir. Yüzey pürüzlülük değerleri artan ilerleme hızına göre belirli bir oranda artarken, kesme hızındaki artışlarda nispeten azaldığı görülmüştür. MMY yönteminde, kuru ortamda frezelemeye göre yüzey pürüzlülük değerlerinin ortalama %20 daha düşük ölçülmüştür. En düşük Ra değeri minimum miktarda yağlama kesme ortamında 60 m/dak kesme hızı ve 0.04 mm/dev ilerleme hızında 0.360 µm olarak ölçülmüştür. Varyans analizi sonucunda, Ra üzerinde en etkili faktör %45.52 ile ilerleme hızı olurken, MMY kesme ortamı %31.28 ile ikincil önemli faktör olarak belirlenmiştir. Kesme hızındaki artışın Ra üzerindeki etkisinin düşük olması (%5.42) frezeleme yönteminin kesikli kesme sürecinin yanı sıra MMY ortamının soğutma etkisine atfedilmiştir. Bu sonuçlar, PH13-8Mo paslanmaz çelik gibi malzemelerin işlenmesinde optimum yüzey pürüzlülüğüne ulaşmak için MMY kesme ortamının kullanılması gerektiğini göstermektedir.

**Anahtar Kelimeler:** *Frezeleme, Yüzey Pürüzlülüğü, Optimizasyon*

### SURFACE ROUGHNESS OPTIMIZATION IN MILLING OF PH13-8 Mo STAINLESS STEEL BASED ON THE TAGUCHI METHOD

### ABSTRACT

PH13-8Mo grade stainless steel is frequently used in aircraft landing gear parts, valve and shaft parts, axels that are in contact with petrochemical liquids and under load, and nuclear power plant shafts thanks to its high mechanical strength and excellent corrosion resistance. However, it is a difficult material to process due to its high mechanical properties and low thermal conductivity, and it is necessary to optimize the cutting conditions in order to achieve the desired surface quality properties on the machined parts. In this context, Taguchi method based optimization methodology was applied for minimum surface roughness in the machining of PH13-8Mo grade steel in sustainable cutting environments (dry and minimum quantity lubrication\_MQL). The mean roughness heights (Ra) were measured from the surfaces formed in the milling experiments performed with coated carbide inserts at three different cutting speeds and feed rates. The effects of processing parameters on Ra were evaluated by applying analysis of variance. It was observed that while the surface roughness values increased at a certain rate with increasing feed rate, they decreased relatively with the increase in cutting speed. In the MQL method, the surface roughness values were measured 20% lower on average compared to milling in dry conditions. The lowest Ra value was measured as 0.360 µm at a cutting speed of 60 m/min and a feed rate of 0.04 mm/rev in the minimum amount of

lubrication cutting medium. As a result of the analysis of variance, the most effective factor on Ra was the feed rate with 45.52%, while the MQL cutting environment was determined as the secondary important factor with 31.28%. The low effect of the increase in cutting speed on Ra (5.42%) was attributed to the cooling effect of the MQL environment as well as the interrupted cutting process of the milling method. These results show that MQL cutting environment should be used to achieve optimum surface roughness when machining materials such as PH13-8Mo stainless steel.

**Keywords:** *Milling, Surface Roughness, Optimization*

## DIYABETİK AYAK YARASI GELİŞEN HASTALARDA HİPERBARİK OKSİJEN TEDAVİSİ VE HEMŞİRENİN ROLÜ

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### ÖZET

Diyabete bağlı olarak gelişen kronik hiperglisemi ile ortaya çıkabilecek kronik komplikasyonlar arasında ampütasyonlara ve ayak ülserlerine yol açabilen diyabetik ayak yaraları önemli bir yer tutmaktadır. Bu çalışma, literatür incelemesi yoluyla diyabetik ayak yarası gelişen hastalarda hiperbarik oksijen tedavisinin etkinliğini göstermek ve hemşirenin rolünü belirlemek amacıyla yapılmıştır. Çalışmamızda kanıtların elde edilmesinde ve derlemenin teorik alt yapısının oluşturulmasında ulusal ve uluslararası orijinal çalışmalar, alana özgü kitaplar ve rehberler kullanılmıştır. Google scholar, PubMed, Scopus, Web of sciences, Ulakbim, CINAHL ve Turk Medline taranmıştır. Diyabetik ayak yaraları, hastaların yaşam kalitesini bozmakta, tedavi maliyetinin artmasına, alt ekstremitte ampütasyonlarına neden olmaktadır. Diyabetik ayağın tedavisi temel olarak tıbbi ve cerrahidir. Hiperbarik oksijen tedavisinin diyabetik ayak yarası olan hastalarda amputasyon oranını ve/veya ampütasyon seviyelerini düşürdüğü, hastalığın evresine bağlı olarak % 30-90 arasında değişen bir iyileşme sağladığı ve iyileşme süresini kısalttığı bildirilmiştir. Hemşireler HBOT ekibinin en önemli üyelerinden biridir ve hiperbarik oksijen tedavisi ünitesinde çalışan hemşirelerin, tedavinin etki mekanizması, fizyopatolojik etkileri, kontrendikasyonları, komplikasyonları ve yan etkileri konusunda yeterli bilgiye sahip olmaları gerekir. Yapılan çalışmalarda HBOT'nin diyabetik ayak yarası gelişen hastalarda tedaviye olumlu etkileri olduğu ve alt ekstremitenin amputasyon riskini azaltan bir destek tedavisi olduğu kanıtlanmıştır. Ayrıca hiperbarik hemşirelerinin bilgili ve deneyimli olması oldukça önemlidir. HBOT'da doğru hemşirelik bakımı verilmesi yaşam kalitesinde de etkilidir.

**Anahtar kelimeler:** diyabetik ayak, hiperbarik oksijen tedavisi, hemşirenin rolü

### HYPERBARIC OXYGEN THERAPY AND THE ROLE OF THE NURSE IN PATIENTS WITH DIABETIC FOOT WOUNDS

#### ABSTRACT

Diabetic foot wounds, which can lead to amputations and foot ulcers, have an important place among the chronic complications that may occur with chronic hyperglycemia due to diabetes. This study was conducted to demonstrate the effectiveness of hyperbaric oxygen therapy in patients with diabetic foot ulcers and to determine the role of the nurse through literature review. In our study, national and international original studies, field-specific books and guides were used in obtaining the evidence and creating the theoretical infrastructure of the compilation. Google scholar, PubMed, Scopus, Web of sciences, Ulakbim, CINAHL and Turk Medline were searched. Diabetic foot wounds impair the quality of life of patients, increase the cost of treatment, and cause lower extremity amputations. The treatment of diabetic foot is mainly medical and surgical. It has been reported that hyperbaric oxygen therapy reduces the amputation rate and/or amputation levels in patients with diabetic foot wounds, provides a recovery ranging between 30-90% depending on the stage of the disease, and shortens the recovery time. Nurses are one of the most important members of the HBOT team and nurses working in the hyperbaric oxygen therapy unit should have sufficient knowledge about the mechanism of action, physiopathological effects, contraindications, complications and side effects of the treatment. Studies have proven that HBOT has positive effects on treatment in patients with diabetic foot ulcers and is a supportive treatment that reduces the risk of amputation of the lower extremity. In addition, it is very important that hyperbaric nurses are knowledgeable and experienced. Providing the right nursing care in HBOT is also effective in the quality of life.

**Key words:** diabetic foot, hiperbaric oxygen therapy, role of nurse

## TEMPOROMANDİBULAR EKLEM RAHATSIZLIĞINDA EGZERSİZ VE MANUEL TEDAVİ YÖNTEMLERİNİN AĞIZ AÇIKLIĞI, ÇİĞNEME KALİTESİ, BASINÇ AĞRI EŞİĞİ VE PSİKOLOJİK DURUM ÜZERİNE ETKİLERİNİN KARŞILAŞTIRILMASI

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### ÖZET

**Amaç:** Bu çalışmanın amacı temporomandibular eklem rahatsızlığı (TMR) olan hastalarda egzersiz ve manuel tedavi yöntemlerinin ağız açıklığı, çiğneme kalitesi, basınç ağrı eşiği ve psikolojik durum üzerine etkilerinin karşılaştırılmasıdır.

**Yöntemler:** Çalışmaya kas kaynaklı TMR teşhisi almış 24 hasta dahil edildi. Hastalar Egzersiz Grubu (EG) ve Manuel Tedavi Grubu (MTG) olmak üzere rastgele iki gruba ayrıldı. Her iki gruba da hasta eğitimi ve altı haftalık egzersiz tedavisinden oluşan tedavi programı uygulandı. MTG grubuna bu tedavi programına ek olarak altı haftalık manuel tedavi yöntemleri uygulandı. Altı haftalık tedavi programlarının öncesinde ve sonrasında hastaların ağız açıklığı (cetvel ile), çiğneme kalitesi (görsel analog skala ile), basınç ağrı eşiği değerleri (algometrik ölçüm ile) ve psikolojik durumları (Hastane Anksiyete ve Depresyon Skalası ile) değerlendirildi.

**Bulgular:** Tedavi programları sonrasında her iki grubun da ağız açıklığı, çiğneme kalitesi, basınç ağrı eşiği değerleri ve psikolojik durumlarında anlamlı iyileşmeler gözlemlendi ( $p<0,001$ ). Ayrıca, değerlendirme parametrelerindeki bu iyileşmelerin MTG grubunda, EG grubuna kıyasla daha fazla olduğu tespit edildi ( $p<0,001$ ).

**Sonuçlar:** Kas kaynaklı TMR'li hastalarda hasta eğitimi ile birlikte uygulanan egzersiz tedavisi, ağız açıklığını ve çiğneme kalitesini arttırmada, kas ve eklem hassasiyetini azaltmada ve psikolojik durumu iyileştirmede etkili bir yöntemdir. Ek olarak, egzersiz tedavisiyle birlikte manuel tedavinin kombine uygulandığı tedavi programı bu parametrelerde daha fazla iyileşmeler sağlayabilir.

**Anahtar Kelimeler:** Temporomandibular eklem rahatsızlığı, tedavi, çiğneme kalitesi, psikolojik durum

### COMPARISON OF THE EFFECTS OF EXERCISE AND MANUAL THERAPY METHODS ON MOUTH OPENING, CHEWING QUALITY, PRESSURE PAIN THRESHOLD, AND PSYCHOLOGICAL STATUS IN TEMPOROMANDIBULAR DISORDER

#### ABSTRACT

**Aim:** The aim of this study was to compare the effects of exercise and manual therapy methods on mouth opening, chewing quality, pressure pain threshold, and psychological status in patients with temporomandibular disorder (TMD).

**Methods:** Twenty-four patients diagnosed with myogenous TMD were included in the study. The patients were randomly divided into two groups Exercise Group (EG) and Manual Therapy Group (MTG). A treatment program consisting of patient education and six-week exercise therapy was applied to both groups. In addition to this treatment program, six-week manual treatment methods were applied to the MTG group. Before and after the six-week treatment programs, the mouth opening (with a ruler), chewing quality (with a visual analog scale), pressure pain threshold values (with an algometric measurement), and psychological status (with the Hospital Anxiety and Depression Scale) of all patients were evaluated.

**Results:** After the treatment programs, significant improvements were observed in mouth opening, chewing quality, pressure pain threshold values, and psychological status of both groups ( $p<0.001$ ). In addition, these improvements in evaluation parameters were found to be higher in the MTG group compared to the EG group ( $p<0.001$ ).

**Conclusions:** Exercise therapy applied together with patient education is an effective method in increasing mouth opening and chewing quality, reducing muscle and joint tenderness, and improving psychological status in patients with myogenous TMD. In addition, a treatment program in which manual therapy is combined with exercise therapy may provide further improvements in these parameters.

**Keywords:** Temporomandibular disorder, therapy, chewing quality, psychological status

## İTFAYİECİLERİN MESLEKTE GEÇİRDİKLERİ AKTİF DÖNEM UZUNLUĞUNUN SOLUNUM FONKSİYONLARI VE MERDİVEN TIRMANMA PERFORMANSINA ETKİSİNİN İNCELENMESİ

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### ÖZET

**Amaçlar:** İtfaiyeciler zor koşullarda çalışan meslek gruplarıdır. Bu zor şartlar itfaiyecilerin beden ve ruh sağlıkları üzerinde birtakım olumsuzluklara yol açabilmektedir. Çalışmamızın amacı itfaiyecilerin meslekte geçirdikleri aktif dönem uzunluğunun solunum fonksiyonları ve merdiven tırmanma performansına etkisinin incelenmesi, olası meslek hastalıklarına ilişkin alınması gereken önlemler konusunda toplumsal farkındalık oluşturulmasıdır.

**Yöntemler:** Çalışma, gözlemsel kesitsel bir çalışmadır. Çalışmaya, yaşları 18 ile 64 arasında olan, en az iki yıldır aktif çalışan 26 itfaiyeci dahil edildi. Spirometre ile solunum fonksiyonları ve solunum kas gücü ölçümü gerçekleştirildi. 6 Dakika Yürüme Testi ile egzersiz kapasitesi değerlendirildi. Merdiven tırmanma performansının değerlendirmesinde ise Merdiven Tırmanma Testi uygulandı.

**Sonuçlar:** Çalışmamız sonucunda, mesleki deneyim süresi arttıkça solunum fonksiyon problemlerinin arttığı bulunmuştur. Ayrıca, meslekteki deneyim yılının fazla olmasının merdiven çıkma süresini uzattığı saptanmıştır.

**Anahtar Kelimeler:** Solunum fonksiyonları, mesleki maruziyet, merdiven çıkma



**Tablo 1.** Olguların demografik ve klinik özellikleri.

Parameter	Median (Min-Max)
<b>Demographic features</b>	
Age	38 (16-49)
Gender, n (%)	
Male	22 (84.6)
Female	4 (15.3)
BMI, kg/m <sup>2</sup>	26.5 (21.0-32.8)
6 MWD, M	585.58 (425-1440)
Stair-climb Time (s)	30.5070 (21.79-43.00)
<b>Lung Functions</b>	
FEV <sub>1</sub>	3.3850 (1.89-4.92)
FEV <sub>1</sub> %	94 (46-122)
FVC	4.6450 (3.29-5.86)
FVC %	97.50 (71-123)
FEV <sub>1</sub> /FVC	77 (42-88)
FEV <sub>1</sub> /FVC %	95 (41-106)
PEF	5.49 (1.56-8.94)
PEF %	62.50 (16-86)
<b>Respiratory muscle strength</b>	
MIP, cmH <sub>2</sub> O	126.50 (78-188)
MIP%	124.50 (73-172)
MIP, cmH <sub>2</sub> O	102 (68-159)
MIP%	75.50 (46-134)
Time in occupation, years	15 (2-26)

**Tablo 2.** Meslek Deneyim Yılı'nın 6DYT ve Merdiven Tırmanma Testi ile İlişkisi Korelasyon Tablosu

n=26 Meslek Deneyim Yılı	6 DYT Mesafesi		Merdiven Tırmanma Testi Süresi
	r		
		-0,196	,514 (**)
	p	0,337	0,007

\*\* Correlation is significant at the 0.01 level (2-tailed).

**Tablo 3.** Meslek Deneyim Yılı Solunum Fonksiyon Testi Korelasyon Tablosu

n=26		FEV <sub>1</sub> Mevcu t	FEV <sub>1</sub> Beklene n	FEV <sub>1</sub> Yüzd e	FVC Mevcu t	FVC Beklene n	FVC Yüzd e	FEV <sub>1</sub> /FV C Mevcut	FEV <sub>1</sub> /FV C Beklenen	FEV <sub>1</sub> /FV C Yüzde
Meslek Deneyim Yılı	r	-,111	-,323	,039	-,221	-,162	-,142	,116	-,869(**)	,094
	p	,591	,108	,849	,279	,429	,488	,574	,000	,650

n=26		PEF Mevcut	PEF Beklenen	PEF Yüzde
Meslek Deneyim Yılı	r	,116	-,083	,122
	p	,572	,687	,553

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

**Tablo 4.** Meslek Deneyim Yılı Ağız Basınç Ölçümü Korelasyon Tablosu

n=26		MIP Mevcut	MIP Beklenen	MIP Yüzde	MEP Mevcut	MEP Beklenen	MEP Yüzde
Meslek Deneyim Yılı	r	-,049	,028	-,087	-,013	,071	-,105
	p	,811	,892	,674	,951	,730	,609

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

## EXAMINING OF THE EFFECT OF ACTIVE WORKING PERIOD LENGTH OF FIREFIGHTERS ON RESPIRATORY FUNCTIONS AND STAIR CLIMBING PERFORMANCE

### ABSTRACT

**Objectives:** Firefighters are professional groups working in difficult conditions. These difficult conditions can cause some negative effects on the physical and mental health of firefighters. The aim of our study is to examine the effect of the active period of firefighters on respiratory functions and stair climbing performance, and to raise social awareness about the precautions to be taken regarding possible occupational diseases.

**Methods:** The study is an observational cross-sectional study. The study included 26 firefighters aged between 18 and 64 who had been active for at least two years. Pulmonary functions and respiratory muscle strength were measured with a spirometer. Exercise capacity was evaluated with the 6-Minute Walk Test. The Stair Climbing Test was used to evaluate the stair climbing performance.

**Results:** As a result of our study, it was found that as the duration of professional experience increased, respiratory function problems increased. In addition, it was determined that the longer the years of experience in the profession, the longer the stair climbing time.

**Keywords:** Respiratory functions, occupational exposure, stair climbing

**Table 1.** Demographic and clinical features of the cases.

Parameter	Median (Min-Max)
<b>Demographic features</b>	
Age	38 (16-49)
<b>Gender, n (%)</b>	
Male	22 (84.6)
Female	4 (15.3)
BMI, kg/m <sup>2</sup>	26.5 (21.0-32.8)
6 MWD, M	585.58 (425-1440)
Stair-climb Time (s)	30.5070 (21.79-43.00)
<b>Lung Functions</b>	
FEV <sub>1</sub>	3.3850 (1.89-4.92)
FEV <sub>1</sub> %	94 (46-122)
FVC	4.6450 (3.29-5.86)
FVC %	97.50 (71-123)
FEV <sub>1</sub> /FVC	77 (42-88)
FEV <sub>1</sub> /FVC %	95 (41-106)
PEF	5.49 (1.56-8.94)
PEF %	62.50 (16-86)
<b>Respiratory muscle strength</b>	
MIP, cmH <sub>2</sub> O	126.50 (78-188)
MIP%	124.50 (73-172)
MIP, cmH <sub>2</sub> O	102 (68-159)

<b>MIP%</b>	75.50 (46-134)
<b>Time in occupation, years</b>	15 (2-26)

**Table 2.** Correlation Table of the Relationship between the Professional Experience Period and the 6MWT and the Stair Climbing Test

<b>n=26</b>		<b>6 MWT Distance</b>	<b>Stair Climbing Test Time</b>
<b>Professional Experience Period</b>	r	-0,196	,514 (**)
	p	0,337	0,007

\*\* Correlation is significant at the 0.01 level (2-tailed).

**Table 3.** Professional Experience Period Pulmonary Function Test Correlation Table

<b>n=26</b>		<b>FEV1 Available</b>	<b>FEV1 Expected</b>	<b>FEV1 Percentage</b>	<b>FVC Available</b>	<b>FVC Expected</b>	<b>FVC Percentage</b>	<b>FEV1/FVC Available</b>	<b>FEV1/FVC Expected</b>	<b>FEV1/FVC Percentage</b>
<i>Professional Experience Period</i>	r	-,111	-,323	,039	-,221	-,162	-,142	,116	-,869(**)	,094
	p	,591	,108	,849	,279	,429	,488	,574	,000	,650

<b>n=26</b>		<b>PEF Available</b>	<b>PEF Expected</b>	<b>PEF Percentage</b>
<i>Professional Experience Period</i>	r	,116	-,083	,122
	p	,572	,687	,553

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

**Table 4.** Respiratory Muscle Strength Measurement Correlation Table for Professional Experience Period

<b>n=26</b>		<b>MIP Available</b>	<b>MIP Expected</b>	<b>MIP Percentage</b>	<b>MEP Available</b>	<b>MEP Expected</b>	<b>MEP Percentage</b>
<i>Professional Experience Period</i>	r	-,049	,028	-,087	-,013	,071	-,105
	p	,811	,892	,674	,951	,730	,609

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

## KRONİK AĞRISI OLAN BİREYLERDE, MİNDFULNESS UYGULAMASININ ETKİSİNİN İNCELENMESİ VE HEMŞİRENİN ROLÜ

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### ÖZET

Bu derleme, kronik ağrısı olan bireylerde mindfulness uygulamasının etkisini incelemek ve hemşirenin rolünü belirlemek amacıyla, literatür incelenmesi yoluyla yapılmıştır. Kronik ağrı biyopsikososyal açıdan bakıldığında, bireyin yaşamını, günlük aktivitelerini, fiziksel ve zihinsel iyilik halini, sosyal ilişkilerini ve iş hayatını etkileyen bir durumdur. Ağrının uzadıkça bağışıklık sistemini baskılamasına yol açabileceği bunun da fiziksel hasara sebebiyet verebileceği bilinmektedir. Fizyolojik olarak uzun süre kendini iyi hissedemeyen bir kişide depresyon, anksiyete ve onun getirisi olabilecek ilişkisel problemler hatta intihar bile söz konusu olabilmektedir. Kronik ağrı, daimi bir stres kaynağı olmaktadır. Kronik ağrı, bir stres kaynağı olarak kişilerin yaşamlarını gerek fiziksel gerek sosyal ve duygusal olarak etkilemektedir. Kronik ağrısı olan bireylerin, diğer bireylere oranla günlük yaşamda kaygı, stres ve depresyon düzeylerinin daha yüksek olduğu tespit edilmiştir. Yapılan araştırmalar, kronik ağrının ciddi fiziksel ve psikolojik etkileri olabildiğini göstermiştir. Kaygı, stres ve depresyon hastaların günlük yaşam kalitesini azaltmakta olup onları bu durumu azaltacak yöntemler, yollar bulmaya sevk etmiştir.

Mindfulness da bireyin bedenindeki tüm kaynakları ve duyuları kullanarak kalbi ve zihni ile farklı bir şekilde ve akıllıca dikkatini yönelterek bedenen ve duygusal olarak yaşanan tüm acıların azalmasını sağlayarak bireyin psikolojik iyilik hallerinde yükselme elde etmesini sağlayacak bir uygulamadır. Bu programı en iyi uygulayabilecek sağlık çalışanlarından biri de hemşirelerdir. Alanda çalışan hemşireler kronik ağrısı olan bireylere MBSR( Farkındalık Temelli Stres Azaltma Programı) programını uygulamak için ideal durumdadırlar. Bu nedenle uygulayıcı hemşirelerin hem kendilerine hem de hastalara faydalı olabilmek adına MBSR programının hem psikolojik hem de biyolojik etkilerini bilmeleri gerekmektedir. Bu çalışmada kanıtların elde edilmesinde ve derlemenin teorik alt yapısının oluşturulmasında ulusal ve uluslararası çalışmalar, alana özgü kitaplar ve rehberler kullanılmıştır. Google Akademik, Pubmed, Scopus, Web Of Sciens taranmıştır. Literatür taraması yapılırken zaman kısıtlamasına gidilmemiştir. Yapılan çalışmalar mindfulness uygulamasının kronik ağrısı olan hastalarda uygulanmasıyla birlikte, stres, kaygı, depresyon düzeylerinde düşme, iyilik hallerinde yükselme olduğu saptanmıştır.

Anahtar Kelimeler: mindfulness, kronik ağrı, kaygı–stres, hemşirenin rolü

### EXAMINATION OF THE EFFECT OF MINDFULNESS APPLICATION IN INDIVIDUALS WITH CHRONIC PAIN AND THE ROLE OF THE NURSE

#### ABSTRACT

This review was made through literature review in order to examine the effect of mindfulness practice in individuals with chronic pain and to determine the role of the nurse. From a biopsychosocial perspective, chronic pain is a condition that affects an individual's life, daily activities, physical and mental well-being, social relationships and work life. It is known that as the pain lasts, it can cause suppression of the immune system, which can cause physical damage. A person who does not feel well physiologically for a long time may experience depression, anxiety and relational problems that may result, even suicide. Chronic pain is a constant source of stress. Chronic pain, as a source of stress, affects people's lives both physically, socially and emotionally.

It has been determined that individuals with chronic pain have higher levels of anxiety, stress and depression in daily life compared to other individuals. Studies have shown that chronic pain can have serious physical and psychological effects. Anxiety, stress and depression reduce the quality of daily life of patients and have led them to find methods and ways to reduce this situation. Mindfulness is also a practice that will enable the individual to achieve an increase in their psychological well-being by using all the resources and senses in the body of the individual, by directing the heart and mind in a different and intelligent way, by reducing all the pain experienced physically and emotionally. One of the health professionals who can best implement this program is nurses. Nurses working in the field are in an ideal situation to apply the MBSR (Awareness Based Stress Reduction Program) program to individuals with chronic pain. For this reason, nurse practitioners need to know both the psychological and biological effects of the MBSR program in order to be beneficial to both themselves and the patients. In this study, national and international studies, field-specific books and guides were used in obtaining the evidence and creating the theoretical infrastructure of the compilation.

Google Scholar, Pubmed, Scopus, Web Of Sciences were scanned. No time limit was applied during the literature review. Studies have shown that with the application of mindfulness practice in patients with chronic pain, there is a decrease in stress, anxiety, depression levels and an increase in well-being.

**Keywords:** mindfulness, chronic pain, anxiety, stress, the role of the nurse

## BİLATERAL SENSÖRİNÖRAL İŞİTME KAYBINA BAĞLI KOKLEAR İMPLANTASYON YAPILAN OLGUNUN ROY UYUM MODELİNE GÖRE HEMŞİRELİK BAKIMI

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### ÖZET

Dünya genelinde kentleşmenin beraberinde getirdiği gürültü artışı işitme kayıpları yaygınlaşmıştır. Fiziopatolojik olarak işitme kayıpları iletim tipi, karma tip, sensörinöral tip kaynaklı olmak üzere üç grupta incelenir. Sensörinöral işitme kaybı dış tüy hücrelerinin hasarlanması sonucu düşük seslerin şiddetli algılanması, yüksek seslerin şiddetini algılama yetisinde bozulmayla karakterizedir. Sensörinöral işitme kaybı (SNİK) yaşayan bireylerde konuşma prozodisini yorumlamak, sesin geldiği yönü tayin etmek zorlaşır, hastaların psikolojik, duygusal ve sosyal iyilik hali azalır. SNİK ile birlikte sık görülen tinnitus ise sosyal izolasyona sebep olup hastalarda anksiyete ve depresyonu tetikler. Ayrıca işitme kaybı bozukluklarına çoğunlukla vestibüler disfonksiyon eşlik eder bu sebeple denge bozuklukları da görülebilir. Tüm bu etmenler sonucunda, işitme kaybı hastaların yaşam kalitesini azaltmaktadır. Koklear implant cerrahisi, sensörinöral işitme kaybı durumlarında işitmeyi düzeltmek için oldukça başarılı bir operasyondur. Cerrahi girişim sonrası uyum için uzun zamanlar gerekir ve hastalar bu süreçte birçok açıdan çeşitli sorunlar yaşar. Bu nedenle hastaların uyum sürecini kolaylaştırmak ve uyumlarının artırılması için hemşirelik teorisine göre yapılandırılmış hemşirelik bakımının uygulanması önemlidir. Hemşirelik teorilerinden biri olan Roy Uyum Modeli (RUM), çevre ve insan odak noktalarına çalışması ile hastaların uyumu arttırmada oldukça etkili olabilir. Bu çalışmada bilateral koklear implant uygulanan hastanın RUM'a göre hemşirelik bakım süreci incelenmiştir ve verilen bakımın koklear implantasyon cerrahisi geçiren hastaların uyumlanması için kullanabileceği sonucuna varılmıştır.

**Anahtar Kelimeler:** Koklear İmplantasyon, Roy Uyum Modeli, Hemşirelik Bakımı.

### NURSING CARE OF A CASE WITH COCHLEAR IMPLANTATION DUE TO BILATERAL SENSORINEURAL HEARING LOSS ACCORDING TO ROY ADAPTATION MODEL

#### ABSTRACT

Hearing loss has become widespread worldwide due to the increase in noise brought by urbanization. Physiopathologically, hearing losses are examined in three groups as conductive type, mixed type, and sensorineural type origin. Sensorineural hearing loss is characterized by severe perception of low sounds as a result of damage to the outer hair cells, and deterioration in the ability to perceive the intensity of loud sounds. In individuals with sensorineural hearing loss (SNHL), it becomes difficult to interpret the speech prosody and to determine the direction of the sound, and the psychological, emotional and social well-being of the patients decreases. Tinnitus, which is common with SNHL, causes social isolation and triggers anxiety and depression in patients. In addition, hearing loss disorders are often accompanied by vestibular dysfunction, so balance disorders can also be seen. As a result of all these factors, hearing loss reduces the quality of life of patients. Cochlear implant surgery is a very successful operation to restore hearing in cases of sensorineural hearing loss. Long time is required for adaptation after surgical intervention, and patients experience various problems in many respects during this process. For this reason, it is important to apply structured nursing care according to nursing theory in order to facilitate the adaptation process of patients and to increase their adaptation. Roy Adaptation Model (RUM), which is one of the nursing theories, can be very effective in increasing the compliance of patients with its study of environmental and human focal

points. In this study, the nursing care process of the patient with bilateral cochlear implants was examined according to RUM and it was concluded that the care provided could be used for the adaptation of patients who had undergone cochlear implantation surgery.

**Keywords:** Cochlear Implantation, Roy Adaptation Model, Nursing Care.

## MERLEY MİŞEL'İN BELİRSİZLİK KURAMINA GÖRE RAMSAY HUNT SENDROMLU HASTAYA UYGULANAN HEMŞİRELİK BAKIMI

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### ÖZET

Varicella-zoster virüsü (VZV), birincil suçiçeği enfeksiyonunu takiben spinal ve kranial sinir ganglionlarında ömür boyu varlığını sürdürür. Herhangi bir stresli durum, virüsün yeniden aktivasyonuna ve replikasyonuna neden olabilir. Bu durum daha sonra duyuşal sinir liflerinden ilgili gangliyonla ilişkili dermatoma doğru ilerler. Travmatik olmayan periferik fasiyal paralizleri arasında en sık nedenlerinden biri olan Ramsay Hunt sendromu, yedinci kranial sinirin genikulat gangliyonunun iltihaplanmasına neden olan VZV'ye bağı bir enfeksiyonun geç bir sonucudur. Ramsay Hunt sendromunun klinik özelliğı, yüz felci, otalji ve veziküller döküntüdür. Veziküller en sık kulakta görülür ancak etkilenen bölgenin dilinde, yanağında veya kafa derisinde de bulunabilir. Temel tanılama klinik öykü, bulguya dayanır. Tedavi etkinliğı net olarak kanıtlanmamış olmakla birlikte viral yükün replikasyonunu engellemek amacıyla antiviral ajanlar, antienflamatuvar etkileri nedeniyle kortikosteroidler kullanılır. Ayrıca ağrı yönetimi için; B vitamin kompleksleri, narkotikler ajanlar, analjezikler, karbamazepin ve kapsaisin grupları, trisiklik antidepresanlar gibi preparatlar da kullanılabilir. Ancak yüz felcinin kalıcı olma ihtimali tedaviye yönelik güçlü kanıtların olmaması, sürecin ağırlı olması sebebiyle hastalar belirsizlik yaşar. Bu nedenle hemşirelerin belirsizliğı nedenlerini tanılaması, gereksinime yönelik bilgilendirme yapması, belirsizliğı hasta üzerindeki olumsuz etkilerini azaltmak, hasta ve hasta yakınlarının süreci etkili yönetmesini sağlamak açısından önemlidir. Hemşire bakım verirken bakımı teorik bir çerçeveye dayandıran hemşirelik teorilerini kullanılabilir. Bu çalışmada Merley Mishel'in Belirsizlik Kuramına göre Ramsay Hunt Sendromlu hastaya hemşirelik girişimleri uygulanmış hasta ve hasta yakınlarının sürece etkin baş etme yöntemleri ile katılması, komplikasyonların azaltılması amaçlanmıştır. Hastaya verilen bakım sürecinde ağrı, anksiyete, korku, enfeksiyon riski, enfeksiyona sekonder hipertermi, deri doku bütünlüğünde bozulma riski, düşme riski, bilgi eksikliğı, aile içi süreçlerin devamlılığında bozulma, konstipasyon, teröpatik rejimi etkisiz yönetme riski tanıları konulmuş ve hemşirelik girişimleri uygulanmış hasta gereksinimine göre bilgi eksikliğı giderilmiş, hasta ve hasta yakınlarının sürece uygun baş etme yöntemleri ile katılması sağlanmıştır. Sonuç olarak Merley Mishel'in Belirsizlik Kuramının Ramsay Hunt sendromlu hastalarda, hastalık ve süreçle etkili baş etmeyi sağlayabileceğı söylenebilir.

**Anahtar Kelimeler:** Ramsay Hunt Sendromu, Merley Mishel'in Hastalıkta Belirsizlik Kuramı, Hemşirelik Bakımı.

### NURSING CARE APPLIED TO PATIENTS WITH RAMSAY HUNT SYNDROME ACCORDING TO MERLEY MISHEL'S THEORY OF UNCERTAINTY

#### ABSTRACT

Varicella-zoster virus (VZV) persists for life in spinal and cranial nerve ganglia following primary chickenpox infection. Any stressful situation can cause reactivation and replication of the virus. This condition then progresses from the sensory nerve fibers to the corresponding ganglion-associated dermatome. Ramsay Hunt syndrome, one of the most common causes of non-traumatic peripheral facial paralysis, is a late consequence of a VZV-related infection that causes inflammation of the geniculate ganglion of the seventh cranial nerve. The clinical features of Ramsay Hunt syndrome are facial palsy, otalgia and vesicular rash. Vesicles are most common in the ear, but may also be found on the tongue, cheek, or scalp of the affected area. The basic diagnosis is based on clinical history and finding. Although the efficacy of treatment has not been clearly proven, antiviral agents are used to prevent the replication of viral load, and corticosteroids are used due to their anti-inflammatory effects. Also for pain management;



Preparations such as B vitamin complexes, narcotic agents, analgesics, carbamazepine and capsaicin groups, tricyclic antidepressants can also be used. However, patients experience uncertainty due to the possibility of permanent facial paralysis, the lack of strong evidence for treatment, and the painful process. For this reason, it is important for nurses to determine the causes of uncertainty, to inform them about the need, to reduce the negative effects of uncertainty on the patient, and to enable patients and their relatives to manage the process effectively. Nursing theories can be used to base care on a theoretical framework while giving nursing care. In this study, according to Merley Mishel's Uncertainty Theory, it was aimed that the patients and their relatives who have undergone nursing interventions for Ramsay Hunt Syndrome, participate in the process with effective coping methods and reduce complications. During the care given to the patient, the diagnosis of pain, anxiety, fear, infection risk, hyperthermia secondary to infection, risk of deterioration of skin tissue integrity, risk of falling, lack of information, deterioration in the continuity of family processes, constipation, risk of ineffective management of the therapeutic regimen was made and the need for nursing interventions was applied. According to this, the lack of knowledge was eliminated, and patients and their relatives were ensured to participate in the process with appropriate coping methods. As a result, it can be said that Merley Mishel's Uncertainty Theory can provide effective coping with the disease and process in patients who underwent ostomy as a result of Ramsay Hunt syndrome.

**Keywords:** Ramsay Hunt Syndrome, Merley Mishel's Theory of Uncertainty in Disease, Nursing Care.

## OTİZMLİ ÇOCUĞA SAHİP EBEVEYNLERİN YAŞADIĞI PROBLEMLER VE BAKIM VERME YÜKÜ

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### ÖZET

**Amaç:** Otizm; iletişim, sosyal etkileşim ve stereotipik tekrarlayıcı davranışlardaki bozulmalar ile karakterize nörodavranışsal bozukluktur. Bu davranış bozuklukları otizmlili çocukların ebeveynlerinde strese ve bakım verme yükünün artmasına neden olur. Artan stres düzeyi; depresyonun artmasına ve öz-yeterliliğin azalmasına neden olmaktadır. Bu çalışmada otizmlili çocuğa sahip ebeveynlerin yaşadığı problemleri ve bakım yükü hakkındaki literatür bilgilerini derlemek amaçlandı.

**Yöntem:** PUBMED veri tabanında ve Google Scholar arama motorunda, "Autism" and "caregiver burden" ve "Problems of families of children with autism" şeklinde filtresiz, randomize kontrollü çalışma filtreleri ile son 5 yılda yayınlanan ilgili makaleler, Pedro veri tabanında "Autism" ve "Care burden" kelimeleri incelendi.

**Bulgular:** PUBMED veri tabanında filtresiz aramada; "Autism" and "caregiver burden" 61, son 5 yılda 38, randomize kontrollü çalışma filtrelemesinde 1 sonuç, "Problems of families of children with autism" için filtresiz 1,730, son 5 yılda 764, randomize kontrollü çalışma filtrelemesinde 35 sonuç bulundu. Google Scholar veri tabanında filtresiz aramada; "Autism" and "Caregiver burden" için 6,980, son 5 yıla ait 3,970 sonuç, "Problems of families of children with autism" için 666.000, son 5 yıla ait 17.700 sonuçla karşılaşıldı. Pedro veri tabanında "Autism" kelimesi için 68, "Care burden" için 303 sonuç bulundu.

**Sonuç:** Otizmlili çocukların ebeveynleri, diğer engelli çocukların ebeveynlerine göre daha yüksek düzeyde ebeveynlik stresi yaşamaktadır. Zayıf sosyal iletişim ve tekrarlayıcı davranışlar ebeveynlik stresini artırabilir. Artan stres, depresyon ve düşük öz-yeterliliğin ebeveynlerin çocukların davranışlarını yönetmede ve gelişimini desteklemekte olumsuz etkisi vardır. Literatürdeki çalışmalarda otizmlili çocukların ebeveynlerinin stres düzeyi ve bakım verme yükünün incelendiği çalışmalar mevcuttur.

**Anahtar Kelimeler:** Bakım veren yükü, Ebeveyn, Otizm

## THE PROBLEMS FACED BY PARENTS WITH A CHILD WITH AUTISM AND THE LOAD OF CARE-GIVING

### ABSTRACT

**Aim:** Autism; communication is a neurodevelopmental disorder characterized by social interaction and deterioration in stereotypic recurrent behaviors. These behavioral disorders cause stress and care burden of children with autism in their parents. Increased stress level; It causes an increase in depression and a decrease in self-efficacy. In this study, it was aimed to compile the problems of parents with autism and literature on the care burden of care.

**Method:** Related articles published in the last 5 years with unfiltered, randomized controlled study filters such as "Autism" and "caregiver burden" and "Problems of families of children with autism" in PUBMED

database and Google Scholar search engine, "Autism" in Pedro database and the words "Care burden" were examined.

**Results:** In the unfiltered search in the PUBMED database; "Autism" and "caregiver burden" 61, 38 results in last 5 years, 1 result in randomized controlled trial filtering, 1,730 unfiltered for "Problems of families of children with autism", 764 results in last 5 years, 35 results in randomized controlled trial filtering. Unfiltered search in Google Scholar database; We found 6,980, 3,970 results for the last 5 years for "Autism" and "Caregiver burden", 666,000 results for "Problems of families of children with autism", 17,700 results for the last 5 years. 68 results for "Autism" and 303 results for "Care burden" were found in the Pedro database.

**Conclusion:** Parents of children with autism experience higher levels of parenting stress than parents of children with other disabilities. Poor social communication and repetitive behaviors can increase parenting stress. Increased stress, depression and low self-efficacy have a negative effect on parents' management of children's behavior and support for their development. There are studies in the literature examining the stress level and caregiving burden of parents of children with autism.

**Keywords:** Autism, Caregiver burden, Parent

## COVID-19 ENFEKSİYONUNUN KOAGÜLASYON TESTLERİNİN İSTEMİ ÜZERİNE ETKİSİ

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### ÖZET

COVID-19 enfeksiyonu ilk olarak Aralık 2019'da Çin'in Wuhan kentinde ortaya çıkmıştır. Türkiye'de ilk vaka ise 11 Mart 2020'de görülmüştür. Hastalığın kesin teşhisi için PCR testi kullanılmıştır. Dünyada pandemiye neden olan COVID-19 enfeksiyonunda en yaygın olarak ateş, öksürük, yorgunluk, tat alma veya koku duyusunun kaybı görülmektedir. Ayrıca ciddi semptomları arasında en sık solunum güçlüğü ve yetmezliği görülmektedir. COVID-19, kardiyovasküler sistemi doğrudan veya dolaylı yollardan etkileyerek, hayatı tehdit eden kardiyak patolojilerin (akut koroner sendrom, miyokart hasarı, miyokardit, venöz tromboemboli, aritmi, vb.) tabloya eklenmesine neden olmaktadır.

Protrombin zamanı (PZ) ve international normalized ratio (İNR) testi, koagülasyonun isteminin ekstrinsik yolunun, aktive parsiyel tromboplastin zamanı (aPTT) ise koagülasyonun intrinsik yolunun değerlendirilmesinde kullanılmaktadır. D-dimer çapraz bağlı fibrinin en küçük yıkım ürünüdür. Koagülasyon ve fibrinolizin bir aktivasyonunu göstermesi nedeni ile trombotik aktivitenin indirekt ölçümünü gösteren bir biyobelirteçdir. Koagülasyon sisteminin herhangi bir sebeple aktive edilmesi ile çapraz bağın plazmin tarafından yıkılması neticesinde oluşmaktadır.

Kliniklerde, venöz tromboemboli (VTE) ve yaygın damar içi pıhtılaşma (YDP) tanısında ve takibinde, D-dimer kullanımı çok yaygın olan en değerli laboratuvar testi olarak kabul edilebilir. Derin ven trombozu (DVT) ve pulmoner embolizm (PE) genellikle olarak VTE şeklinde ifade edilen benzer klinik durumdur.

Özellikle serviste yatarak tedavi olan hastalarda hastalığın seyri ve tedavinin etkisini görebilmek için birçok laboratuvar tetkikleri istenmiştir. Bu çalışmadaki amacımız bu hastalardan istenen koagülasyon testlerinde yapılan istemleri araştırarak, COVID-19 enfeksiyonunun bu testlerdeki istemi üzerine etkisini ortaya çıkarmaktır.

Bu çalışmaya ait veriler, COVID-19 servislerinde yatan hastalara ait olup, hastane bilgi yönetimi sisteminden (HBYS) retrospektif olarak elde edilmiştir. Hastalara ait olan PT, INR, aPTT, D-dimer test sayıları elde edilmiştir. Çalışma, COVID-19'un ülkemizde ilk görüldüğü 11 Mart 2020 tarihinden önceki 14 aylık istemler ile bu tarihten sonraki 14 aylık istemler karşılaştırılmıştır. 11 Mart 2020 tarihinden önce yapılan istem sayıları PT 189.538, INR 189.429, aPTT 177.198, D-dimer 9.441 iken bu tarihten sonra PT 200.867, INR 200.742, aPTT 184.107, D-dimer 118.297 olup, artış oranları sırası ile (% 5.9, % 5.9, % 3.8, % 11.53) olarak saptanmıştır.

COVID-19 enfeksiyonu PT, INR, aPTT ve D-dimer test istem sayılarını arttırırken, özellikle D-dimer test sayısını yaklaşık 12 kat arttırmıştır.

**Anahtar Kelimeler:** COVID-19, PT, INR, aPTT, D-dimer, koagülasyon.

### THE EFFECT OF COVID-19 INFECTION ON THE REQUEST OF COAGULATION TESTS

#### ABSTRACT

The COVID-19 infection first appeared in December 2019 in Wuhan, China. The first case in Turkey was seen on March 11, 2020. PCR test was used for definitive diagnosis of the disease. Fever, cough, fatigue, loss of taste or smell are the most common causes of COVID-19 infection, which causes a pandemic in the world. In addition, the most common serious symptoms are respiratory distress and failure. COVID-19 affects the cardiovascular system directly or indirectly, causing life-threatening cardiac pathologies (acute coronary syndrome, myocardial damage, myocarditis, venous thromboembolism, arrhythmia, etc.) to be added to the picture.

Prothrombin time (PT) and international normalized ratio (INR) test are used to evaluate the extrinsic pathway of coagulation demand, and activated partial thromboplastin time (aPTT) is used to evaluate the intrinsic pathway of coagulation. D-dimer is the smallest degradation product of cross-linked fibrin. Since it shows an activation of coagulation and fibrinolysis, it is a biomarker showing indirect measurement of thrombotic activity. It occurs as a result of the activation of the coagulation system for any reason and the destruction of the crosslink by plasmin.

D-dimer use can be considered as the most common and most valuable laboratory test in clinics in the diagnosis and follow-up of venous thromboembolism (VTE) and disseminated intravascular coagulation (DIC). Deep vein thrombosis (DVT) and pulmonary embolism (PE) are similar clinical conditions, often referred to as VTE.

Many laboratory tests were requested in order to see the course of the disease and the effect of the treatment, especially in inpatients in the ward. Our aim in this study is to investigate the coagulation tests requested from these patients and to reveal the effect of COVID-19 infection on the request in these tests.

The data of this study belongs to patients in the COVID-19 services and obtained retrospectively from the hospital information management system (HIMS). PT, INR, APTT, D-dimer tests belonging to patients were obtained.

The study was compared with the 14-month requests before the date of 11 March 2020, when the COVID-19 was first seen in our country, and the 14-month claims after this date were compared. PT 189.538, INR 189.429, aPTT 177.198, D-dimer 9.441, PT 200.867, INR 200.742, APTT 184.107, D-dimer 118.297, D-dimer 118.297, respectively (5.9, 5.9 % , 3.8 % , 11.53 %). COVID-19 infection increased the number of PT, INR, aPTT and D-dimer test requirements, especially the D-dimer tests increased by about 12 times.

**Keywords:** Covid-19, PT, INT, aPTT, D-dimer, Coagulation.

## KANSER TEDAVİSİNDE FOTODİNAMİK TERAPİ: IŞIK ÇÖZÜM mü?

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### ÖZET

Kanser, metastaz yeteneğine sahip, anormal hücre büyümesini içeren heterojen ve kompleks bir grup hastalıktır. Kanser yüksek insidans değerine sahip, küresel ölçekte önde gelen ölüm nedenidir ve yıllık 10 milyon ölüm ile her 6 ölümün birinden sorumludur. Tanı ve tedavi yöntemlerinde ki gelişmelere rağmen, nüks ve metastaz hala ana ölüm nedenidir. Metastatik lezyonlar genellikle çok odaklı olup, geleneksel yöntemlerle tedaviye de daha dirençlidirler.

Kanser tedavisinde primer yöntem tümörün cerrahi rezeksiyonunu içerir. Cerrahi müdahale tümörün büyüklüğü ve bulunduğu yere bağlı olarak sınırlı uygulama alanına sahiptir. Ayrıca tekrar edilebilirliği ve radyoterapi sonrası uygulanması zordur. Kemoterapi ve radyoterapi sınırlı terapötik etki göstermeleri, tekrarlanırlıklarının ve diğer tedavi yöntemleri ile kombinasyonlarının sınırlı olması, tahmin edilemeyen çoklu yan etkilere sahip olmaları ve direnç gelişimine yol açmaları gibi handikaplar sergilerler. Kanser tedavisinde alternatif bir yol sunan fotodinamik terapi (FDT), diğer tedavi seçeneklerinden ödün vermediği, özellikle kemoterapi, radyoterapi ile karşılaştırıldığında yüksek sağkalım, düşük nüks ve metastaz, artan yaşam süreleri ile malign hastalıkların kontrolünde umut verici görünmektedir.

Fotodinamik terapi, toksik olmayan ve tercihen hedef dokuda da seçici olarak biriken fotoduyarlayıcı bir kimyasal ajanın, uygun dalgaboyunda ışınla aktive edilmesi ve reaktif oksijen türevleri üretimi ile lokal sitotoksik etki göstermesi ile işler.

FDT sağlıklı dokulara düşük toksite gösteren, daha sınırlı ve ılımlı yan etkiye sahip, ucuz ve güçlü bir tedavi yöntemidir. FDT ile ilaç direnci gelişmez ve asgari tedavi invazivliği, nadir seçici olmayan aktivasyon, yüksek hassasiyet ile gerçek zamanlı dozaj ayarlamasına olanak sunması gibi avantajlara da sahiptir.

Fotoduyarlayıcı (Fd), ışık ve oksijen ile FDT'nin üçlü sacayağını oluşturmaktadır.

Klinik olarak kullanımı onaylanan ilk Fd ajan Porfimer sodyum (Photofrin) bileşiğidir ve Kanada Sağlık Kurumu tarafından, 1993 yılında mesane kanseri tedavisi için onaylanmıştır. Halihazırda akciğer, glioblastoma, prostat, mide, rahim ağzı, baş ve boyun kanserleri gibi farklı kanser türlerinin tedavisinde klinikte kullanılan Photofrin, Foscan, Laserphyrin, Veteporfin ve Motexafin lutetium (LuTex) gibi çeşitli Fd bileşikler bulunmaktadır.

Kanserin FDT'ne yönelik çalışmalar toksik olmayan, kimyasal olarak kararlı, yüksek singlet oksijen verimine sahip, NIR alanında en fazla soğurum sergileyen, tümöre seçici ve vücuttan atılımı hızlı yeni Fd bileşiklerin sentezine, mevcut bileşiklerin farklı iyileştirmelerine ve FDT'nin diğer tedavi yöntemleri ile birleştirilmesine odaklıdır.

Bu çalışmada, FDT için geliştirilen yeni nesil Fd'lar ve FDT'de ki güncel gelişmeler anlatılmıştır.

**Anahtar Kelime:** Fotodinamik Terapi, Kanser, Fotoduyarlayıcı Ajan.

### PHOTODYNAMIC THERAPY IN CANCER TREATMENT: IS LIGHT THE SOLUTION?

### ABSTRACT

Cancer is a heterogeneous and complex group of diseases that include abnormal cell growth with the ability to metastasize. Cancer is the leading cause of death on a global scale with a high incidence and is responsible for 10 million deaths annually and one in every 6 deaths. Despite advances in diagnosis and treatment, recurrence and metastasis are still the main causes of death. Metastatic lesions are usually multifocal and more resistant to treatment with conventional methods.

The primary method of cancer treatment involves surgical resection of the tumor. Surgical intervention has limited application area depending on the size and location of the tumor. In addition, its reproducibility and application after radiotherapy are difficult. Chemotherapy and radiotherapy exhibit limited therapeutic efficacy, limited reproducibility and combination with other treatment modalities, multiple unpredictable side effects, and development of resistance. Photodynamic therapy (PDT), which offers an alternative way in cancer treatment, seems promising in the control of malignant diseases with its high survival, low recurrence and metastasis, increased survival, especially when compared to chemotherapy and radiotherapy, without compromising other treatment options.

Photodynamic therapy works by activating a non-toxic, and preferably selectively accumulating, photosensitizing (Ps) chemical agent in the target tissue by radiation at the appropriate wavelength and exerting a local cytotoxic effect with the production of reactive oxygen derivatives.

PDT is a cheap and powerful treatment method with low toxicity to healthy tissues, more limited and moderate side effects. Drug resistance does not develop with PDT, and it has advantages such as minimal treatment invasiveness, rare non-selective activation, and real-time dosage adjustment with high sensitivity.

The photosensitizer forms the triple trivet of PDT with light and oxygen.

The first clinically approved Ps agent, Porfimer sodium (Photofrin), was approved by the Health Canada for the treatment of bladder cancer in 1993. Currently, there are various Ps compounds such as Photofrin, Foscan, Laserphyrin, Veteporfin and Motexafin lutetium (LuTex) used in the clinic for the treatment of different cancer types such as lung, glioblastoma, prostate, stomach, cervical, head and neck cancers.

Studies on PDT of cancer lead to the synthesis of new non-toxic, chemically stable, high singlet oxygen yield, most absorbent in the NIR field, tumor-selective and rapid excretion from the body, different improvements of existing compounds and combining PDT with other treatment methods. is focused.

In this study, new generation FSs developed for PDT and current developments in PDT are discussed.

**Keywords:** Photodynamic Therapy, Cancer, Photosensitizing Agent.

## ORAL SKUAMÖZ HÜCRELİ KARSİNOM İÇİN FOTODİNAMİK TEDAVİ

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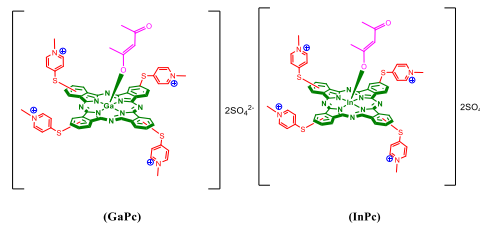
<sup>6</sup>Gebze Teknik Üniversitesi

### ÖZET

Baş ve boyun maligniteleri oral kavite, nazofarenks, orofarenks, larenks, hipofarenks, nazal kavite ve paranazal sinüslerden kaynaklanan, geniş bir heterojen hastalık yelpazesini kapsar. Yaklaşık %90'ı çok katlı skuamöz epitel hücrelerinden kaynaklanan skuamöz hücreli karsinomdur (HNSCC). HNSCC, GLOBOCAN 2020 yılı tahminlerine göre yıllık 932.000 yeni vaka ve 467.000 ölüm ile tüm kanserlerin %4,2'si ve tüm kanser ölümlerinin %3,9'unu oluşturarak en yaygın altıncı kanser türü olmaya ve toplum sağlığını tehdit etmeye devam etmektedir. Erken evre skuamöz karsinomlarında konvansiyonel yöntemlerle tedavide başarı şansı yüksek olmakla birlikte, hastalığın klinik teşhisi sıklıkla geç evrelere denk gelmektedir. Bu nedenle konvansiyel yöntemlerle tedavide 5 yıllık sağ kalım oranı düşüktür. Ayrıca farklı birçok yan etkinin de eşlik ettiği geleneksel tedavi süreci, hasta için yaşam kalitesi ve kozmetik açıdan da sıkıntılıdır. Geleneksel tedavi yöntemlerinin başarısız ve/veya yetersiz olduğu durumlarda yan etkisi az, hedefli, tekrarlanabilir, diğer tedavi yöntemleri ile kombine edilebilir, ucuz ve etkili tedavi yöntemlerinin geliştirilmesi bilimsel ilginin odağını oluşturur. Mevcut klinik uygulamalara da yansıyan başarısı ile fotodinamik terapi (PDT) umut verici alternatif bir kanser tedavi yöntemidir.

Fotodinamik terapi, oksijen varlığında ışığa duyarlılaştırıcı molekülün ışık kullanılarak aktive edilmesi ile lokal doku yıkımının başlatıldığı bir tedavi yöntemidir. PDT'nin başarılı bir şekilde uygulanması için moleküler oksijen, fotoduyarlılaştırıcı ajan ve uygun dalga boyunda ışık kaynağı gereklidir. Tek başına toksik olmayan, hedef hücre ve/veya dokuda tercihli biriken, suda çözünen ve vücuttan atılımı hızlı olan, yüksek singlet oksijen verimine sahip, fotokararlı, NIR bölgede absorpsiyon yapabilen ve düşük konsantrasyonlarda yüksek fotositotoksik etki gösteren yeni ışığa duyarlılaştırıcı moleküllerin sentezi, fotofiziksel ve fotokimyasal özelliklerinin araştırılması ve sitotoksitesinin belirlenmesi FDT için son derece önemlidir.

Yapılan bu çalışma ile suda çözünen, merkezde **galyum (III)** veya **indiyum (III)** metalleri içeren, 4-merkaptopiridin substitue tetra ftalosiyanın bileşiklerinin (Şekil 1) insan baş-boyun kanserlerinin fotodinamik terapisindeki etkinlikleri, insan dil skuamöz hücreli kanser hücre hattı (SCC-9, ATCC) ile normal fibroblast hücre hattı (L 929, ATCC) kültürü kullanılarak araştırılmıştır.



Şekil 1. Çalışmada kullanılan **Ga (III)** ve **In (III)** ftalosiyanın **Fs** bileşikleri

FDT amacıyla, toksik olmadığı belirlenmiş 62,5 ile 0,4  $\mu\text{M}$  arasında değişen **Fs** konsantrasyonlarında, 635 nm dalgaboyuna sahip lazer ışığı  $2,7 \text{ J/cm}^2$  olacak şekilde hücrelere uygulandı. **Fs** bileşiklerinin fotositotoksik değerleri XTT yöntemi kullanılarak spektroskopik olarak, IC50 hesaplanarak değerlendirildi.



**InFs** bileşiği için IC<sub>50</sub> değeri SCC-9 hücre hattında 1,4 µM, L-929 hücre hattında ise 1,6 µM olarak hesaplanmıştır. **GaFs** bileşiği için ise IC<sub>50</sub> değeri sırası ile 1,8 µM ve 3,4 µM olarak hesaplanmıştır. Elde edilen hücre kültürü bulgularına göre, **GaFs** bileşiklerinin kanser hücre hattına daha yüksek fotositotoksite sergilediği ve dil skuamöz hücreli karsinom tedavisinde önemli bir potansiyele sahip olduğu değerlendirildi.

**Anahtar kelimeler:** Oral Skuamöz Hücreli Karsinom, SCC-9, Fotodinamik Terapi, Ftalosiyenin

\***Teşekkür.** Çalışmalarda kullanılan **Fs** bileşikleri TÜBİTAK 1001 projesi (Proje No 118Z204) kapsamında sentezlenmiştir.

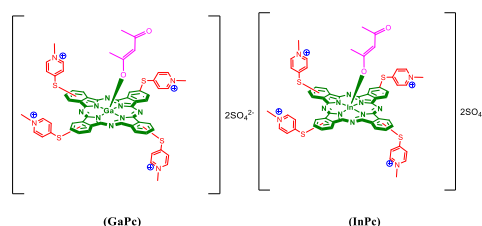
## PHOTODYNAMIC THERAPY FOR ORAL SQUAMOUS CELL CARCINOMA

### ABSTRACT

Head and neck malignancies encompass a wide spectrum of heterogeneous diseases originating from the oral cavity, nasopharynx, oropharynx, larynx, hypopharynx, nasal cavity, and paranasal sinuses. About 90% are squamous cell carcinoma (HNSCC) arising from stratified squamous epithelial cells. According to GLOBOCAN 2020 estimates, HNSCC continues to be the sixth most common cancer type and threatens public health, with 932,000 new cases and 467,000 deaths annually, accounting for 4.2% of all cancers and 3.9% of all cancer deaths. Although there is a high chance of success in treatment with conventional methods in early stage squamous carcinomas, the clinical diagnosis of the disease often coincides with the late stages. Therefore, the 5-year survival rate is low in treatment with conventional methods. In addition, the traditional treatment process, which is accompanied by many different side effects, is also problematic in terms of quality of life and cosmetics for the patient. In cases where traditional treatment methods are unsuccessful and/or inadequate, the development of targeted, repeatable, inexpensive and effective treatment methods that can be combined with other treatment methods is the focus of scientific interest. Photodynamic therapy (PDT) is a promising alternative cancer treatment method with its success reflected in current clinical applications.

Photodynamic therapy is a treatment method in which local tissue destruction is initiated by activating the photosensitizer molecule using light in the presence of oxygen. For successful application of PDT, molecular oxygen, photosensitizing agent and light source of appropriate wavelength are required. Synthesis of new photosensitizing molecules, which are non-toxic alone, preferentially accumulate in the target cell and/or tissue, are water-soluble and are rapidly eliminated from the body, have high singlet oxygen yield, are photostable, can absorb in the NIR region, and have high photocytotoxic effects at low concentrations, photophysical and photochemical investigation of its properties and determination of its cytotoxicity are extremely important for PDT.

In this study, the efficacy of 4-mercaptopyridine-substituted tetra phthalocyanine compounds (Figure 1), which are water-soluble, containing gallium (III) or indium (III) metals in the center, in the photodynamic therapy of human head and neck cancers, human tongue squamous cell cancer cell line (SCC- 9, ATCC) using culture of a normal fibroblast cell line (L 929, ATCC).



**Figure 1.** Ga (III) and In (III) phthalocyanine Pc compounds used in the study

For the purpose of PDT, laser light with a wavelength of 635 nm at **Pc** concentrations varying between 62.5 and 0.4  $\mu\text{M}$ , which was determined to be non-toxic, was applied to the cells at a rate of 2.7  $\text{J}/\text{cm}^2$ . Photocytotoxic values of **Fs** compounds were evaluated spectroscopically using XTT method and  $\text{IC}_{50}$  was calculated.

The  $\text{IC}_{50}$  value for the **InPc** compound was calculated as 1.4  $\mu\text{M}$  in the SCC-9 cell line and 1.6  $\mu\text{M}$  in the L-929 cell line. For the **GaPc** compound, the  $\text{IC}_{50}$  value was calculated as 1.8  $\mu\text{M}$  and 3.4  $\mu\text{M}$ , respectively. According to the obtained cell culture findings, it was evaluated that **GaPc** compounds exhibited higher photocytotoxicity to the cancer cell line and have an important potential in the treatment of tongue squamous cell carcinoma.

**Keywords:** Oral Squamous Cell Carcinoma, SCC-9, Photodynamic Therapy, Phthalocyanine

**Thanks.** The **Pc** compounds used in the studies were synthesized within the scope of TUBITAK 1001 project (Project No 118Z204).

## GİYİM EŞYALARININ İMALATINDA ÇALIŞANLARIN İŞ KAZALARI ve MESLEK HASTALIKLARI İSTATİSTİKLERİNİN DEĞERLENDİRİLMESİ

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### ÖZET

Tekstil ve hazır giyim sektörü istihdam artışı yüksek ve emek yoğun bir sektör olup, bu sektörde üretim imalatına katkı sağlayan çok sayıda çalışan bulunmaktadır. Günümüzde her alanda yaşanan hızlı değişim ile üretim ve rekabet artmakta, iş kazaları sonucu çalışanların sağlığına ve iş güvenliğine yönelik tehlikeler de çoğalmaktadır. Ülkemizde yaşanan iş kazaları sayısı bakımından tekstil ve hazır giyim sektörü iş kazası yoğunluğunun yüksek olduğu sektörler arasında yer almaktadır. İşyerlerinde meydana gelen iş kazaları maddi ve manevi kayıplara neden olmaktadır. Sektörde bir ürün üretilirken işlem süreçleri monotonudur. Çalışanların uzun süre tekrarlı bir şekilde çalışmalarından dolayı meslek hastalıkları ortaya çıkmaktadır. Özellikle gelişmiş ve gelişmekte olan ülkelerde iş kazaları ve meslek hastalıklarına yönelik alınan tedbirlerin artması yaşanan maddi ve manevi kayıpları azaltmaktadır.

Bu çalışmada Türkiye’de giyim eşyaları imalatında çalışanların iş kazaları ve meslek hastalıkları oranını 2017-2021 yılları arasında istatistiksel olarak analiz ederek buna yönelik çözüm önerisinde bulunmak amaçlanmıştır. Bunun için giyim eşyaları imalatında çalışanların iş sağlığı ve güvenliği (İSG) uygulamaları içerisinde yer alan iş kazaları ve meslek hastalıkları (İKMH) istatistiksel olarak incelenmiştir. İncelemede İş Sağlığı ve Güvenliğine İlişkin İşyeri Tehlike Sınıfları Tebliği (26.12.2012) ekinde (İşyeri Tehlike Sınıfları Listesi) yer alan altılı NACE kodu ile sınıflandırılan iş koluna ait tehlike sınıfları belirtilmiştir. Buna göre 5510 Sayılı Kanunun 4-1/a Maddesi Kapsamındaki Sigortalılardan İş Kazası Geçiren veya Meslek Hastalığına Tutulan Sigortalı Sayılarına yer verilmiştir. Sonuçta elde edilen verilerle çözüm önerileri sunulmuştur.

**Anahtar Kelimeler:** *İş kazaları, meslek hastalıkları, giyim eşyaları imalatı*

### EVALUATION OF OCCUPATIONAL ACCIDENTS AND OCCUPATIONAL DISEASES STATISTICS OF EMPLOYEES IN THE MANUFACTURING OF CLOTHING

### ABSTRACT

The textile and apparel sector is a labor-intensive sector with a high employment growth, and there are many employees who contribute to production in this sector. Today, with the rapid change in every field, production and competition are increasing, and the dangers to the health and safety of the employees increase as a result of work accidents. In terms of the number of occupational accidents in our country, the textile and apparel sector is among the sectors with a high occupational accident density. Occupational accidents in workplaces cause material and moral losses. Processing processes are monotonous when producing a product in the industry. Occupational diseases occur due to the repetitive work of employees for a long time. Especially in developed and developing countries, the increase in the measures taken for occupational accidents and occupational diseases reduces the material and moral losses experienced.

In this study, it is aimed to statistically analyze the rate of work accidents and occupational diseases of workers in the manufacture of clothing in Turkey between the years 2017-2021 and to propose solutions for

this. For this purpose, occupational accidents and occupational diseases (HRMD), which are included in the occupational health and safety (OHS) practices of the workers in the production of clothing, were statistically examined. In the review, the hazard classes belonging to the business line classified with the six-fold NACE code included in the annex (Workplace Hazard Classes List) of the Communiqué on Workplace Hazard Classes on Occupational Health and Safety (26.12.2012) are specified. Accordingly, the Insured Numbers of Insured Persons who had Work Accidents or Occupational Diseases within the scope of Article 4-1/a of Law No. 5510 are given. As a result, solution suggestions were presented with the obtained data.

**Keywords:** *Work accidents, occupational diseases, manufacture of clothing*

## KENT VE İNSAN İLİŞKİLERİNİN SERAMİK SANATI ÜZERİNDEN İNCELENMESİ

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### ÖZET

Kent, en basit tanımıyla nüfusun büyük bölümünün yaşadığı, siyasal, yönetsel ve ekonomik alanların hâkim olduğu bir yaşam alanıdır. Etimolojik olarak “kent”, “citta” “cite” ve “ciudad” (latince kökü “civitas”) sözcüğünden gelmektedir. Kentler ; içinde yaşadığı nüfusu hem bireysel hem de toplumsal olarak etkileyen değerler ve normlar sisteminin oluşturduğu yerleşim birimleridir. Kent kavramı ,fiziki bir mekân olmanın çok ötesindedir. Çünkü bu kavram, çok boyutlu bir çalışma alanıdır. Tarihsel sürece bakıldığında , kentler insanoğlunun yaşanmışlıklarına dair derin izler barındırmaktadır. Kentler, zaman içerisinde gelişerek metropollere dönüşmüş ve sanayi devrimi ile birlikte kendisini göstermiştir. Sanayi devrimi sonrasında Dünya’da kentleşme olgusu da hızlı bir şekilde gelişmiştir. Özellikle köylerden kentlere uzanan iç göç bunun en belirgin göstergesidir. Kentleşme, toplumun gelişmesini de sağlayan bir oluşum olarak insan davranış ilişkilerinde de şekillendirmektedir. Modernizm ile birlikte değişen kent planlaması anlayışı kişilerin çıkarları doğrultusunda biçimlenmiş, insanları daha küçük gruplar halinde çoğunlukla da yalnız kalmaya sürüklemiştir. Bireylerin kentlerin karmaşası ve sıkışmışlığı karşısında gösterdikleri düşünce ve davranışlar sanatçıların yapıtlarına da yansımıştır. Sanatın sorgulayıcı ve eleştirel yanı “kent” kavramının sanatın çeşitli dallarına da konu olmuştur. Kent, sürekli dinamik kalan bir yapıdır. Bu yönüyle sanatçılar için zengin bir konu içeriği oluşturmaktadır. Seramik sanatında kent kavramı 2 ve 3 boyutlu uygulamaların yanı sıra, resimsel ifadelerde de kullanılmaktadır. Tüm bunlardan hareketle , araştırma kapsamında kent konusu tüm yönleriyle ele alınmış, konuya ilişkin olarak yapıtlar ortaya koyan sanatçılar üzerinden ayrıntılı bir şekilde ortaya konulmaya çalışılmıştır.

**Anahtar Kelimeler:** *Kent, Kent ve İnsan, Kent, insan ve seramik.*

### EXAMINATION OF THE CITY AND HUMAN RELATIONS THROUGH CERAMIC ART

#### ABSTRACT

The city, in its simplest definition, is a living space where the majority of the population lives and where political, administrative and economic fields are dominant. Etymologically, it comes from the words "city", "citta" "cite" and "ciudad" (Latin root "civitas"). Cities ; They are settlements formed by the system of values and norms that affect the population in which they live, both individually and socially. The concept of the city is far beyond being a physical place. Because this concept is a multidimensional field of study. Looking at the historical process, cities contain deep traces of the experiences of human beings. Cities developed over time and turned into metropolises and showed themselves with the industrial revolution. After the industrial revolution, the phenomenon of urbanization in the world has also developed rapidly. Internal migration from villages to cities is the most obvious indicator of this. Urbanization, as a formation that also provides the development of society, also shapes human behavior relations. The understanding of urban planning, which has changed with modernism, has been shaped in line with the interests of the people and has led people to be alone in smaller groups. The thoughts and behaviors of individuals in the face of the confusion and congestion of cities are also reflected in the works of artists. The questioning and critical side of art has been the subject of the concept of "city" in various branches of art. The city is a constantly dynamic structure. In this respect, it creates a rich subject content for artists. The concept of the city in ceramic art is used in pictorial expressions as well as 2 and 3 dimensional applications. Based on all these, the subject of the city has been discussed in all its aspects within the scope of the research, and it has been tried to be revealed in detail through the artists who have produced works related to the subject.

**Keywords:** *City, City and People, City, People and Ceramic.*

## TEKSTİL VE MODA TASARIMI EĞİTİMİNDE SÜRDÜRÜLEBİLİRLİĞİN ÖNEMİ

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### ÖZET

Tekstil ve moda sektörünün çevreye verdiği olumsuz etkilere bakıldığında, birçok sektörü geride bırakarak ilk sıralarda olduğu görülür. Birleşmiş Milletler sürdürülebilir kalkınma amaçları ile çevre sorunları ve etkilerinin önlenmesine yönelik birçok konuya yer verilmiştir. Bunlardan bir tanesi de sürdürülebilirlik eğitimi ile bu kültüre sahip bireylerin yetiştirilmesidir. Kaynak tüketimi ve atık sorunları ile öne çıkan tekstil ve moda sektöründe üretim süreçlerinin sürdürülebilir olması, burada çalışan kişilerin bu bilinçle olaylara yaklaşımlarını gerektirir. Tekstil ve moda sektörü oldukça rekabetçi ve hızla büyüyen bir sektör olduğundan pazarda ayakta kalabilmesi için değişen sürece uyum sağlayarak sürdürülebilir tasarım ve üretim süreçleri ile devam etmesi gerekmektedir. Sektörün gelecekteki talepleri karşılayabilmesi için bu kültüre sahip, sektördeki sürdürülebilir yaklaşımlara hakim çalışanlara ihtiyacı olacaktır.

Yeni nesil tasarımcılardan beklenen çevreye zarar vermeyen uzun yıllar kullanılacak ürünler tasarlamalarıdır. Yeni nesil tasarımlarda gerekli olan sürdürülebilirlik bilincinin yerleşmesi tasarım eğitimine bunun dahil edilmesi ile mümkün olacaktır. Tekstil ve moda sektöründe üretimin ilk adımı olan tasarımın sürdürülebilir tasarım düşüncesi ile geliştirilmesi, malzeme seçiminden üretim basamaklarına ve son olarak kullanım ömrünü tamamlayan ürünlerin nasıl bertaraf edileceğinin en başta tasarlanarak oluşturulması, yeni bir bakış açısıdır. Bu bakış açısı tekstil ve moda tasarımı eğitimi içerisinde kazandırılmalıdır. Bu çalışmanın amacı, üniversitelerde tekstil ve moda tasarımı eğitiminde sürdürülebilirliğin nasıl ele alındığı ile ilgili çalışmaların incelenip konunun önemini ortaya koymaktır. Tekstil ve moda tasarımı eğitim süreçlerinde ele alınan sürdürülebilirlik uygulamaları, öğrencilerin oluşturdukları çalışmaların sürdürülebilirlik yaklaşımları incelenmiştir. Elde edilen bilgiler doğrultusunda bu bilincin eğitimde yerleştirilmesi ile ilgili öneriler sunulmuştur.

**Anahtar Kelimeler:** *Sürdürülebilirlik eğitimi, tasarımda sürdürülebilirlik, tekstil ve moda*

### THE IMPORTANCE OF SUSTAINABILITY IN TEXTILE AND FASHION DESIGN EDUCATION

#### ABSTRACT

When we look at the negative effects of the textile and fashion industry on the environment, it is seen that it is in the first place, leaving many sectors behind. Many issues regarding the prevention of environmental problems and their effects have been included in the United Nations sustainable development goals. One of them is to raise individuals with this culture through sustainability education. Sustainability of production processes in the textile and fashion industry, which stands out with resource consumption and waste problems, requires the people working here to approach the events with this awareness. Since the textile and fashion sector is a highly competitive and rapidly growing sector, it must adapt to the changing process and continue with sustainable design and production processes in order to survive in the market. In order for the industry to meet future demands, it will need employees who have this culture and who have a good command of sustainable approaches in the industry.

What is expected from new generation designers is to design products that do not harm the environment and can be used for many years. The establishment of sustainability awareness, which is necessary in new generation designs, will be possible by including it in design education. The development of design, which is the first step of production in the textile and fashion sector, with the idea of sustainable design, from material selection to production steps and finally how to dispose of products that have completed their useful life, is a new perspective. This perspective should be gained within textile and fashion design education. The aim of this study is to examine the studies on how sustainability is addressed in textile and fashion design education

in universities and to reveal the importance of the subject. Sustainability practices discussed in textile and fashion design education processes, and sustainability approaches of the studies created by the students were examined. In line with the information obtained, suggestions for the placement of this consciousness were presented.

**Keywords:** *Sustainability education, sustainability in design, textile and fashion*

## GELENEKSEL TARAKLI SİVİL MİMARİ ÖRNEKLERİNDE CEPHE ÖĞELERİNİN OLUŞUM ÖZELLİKLERİ

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### ÖZET

Bu çalışma, geleneksel taraklı sivil mimari örneklerinin cephe özellikleri ve mevcut durumları üzerine bir değerlendirme yapmayı amaçlamaktadır. Geleneksel Taraklı sivil mimari, Türkiye'nin çeşitli bölgelerinde bulunan ve tarihi geçmişi olan yapıları içermektedir. Bu yapılar, geçmişte kullanılan malzemeler ve teknikler nedeniyle özellikle cephelerinde belirgin özellikler taşımaktadır. Bu özelliklerin analizi yapılarak, mevcut durumları ile karşılaştırılması hedeflenmektedir. Geleneksel sivil mimari örnekleri, zamanla bölgelerdeki ustalar ve yapı sahipleri tarafından toplumun yaşam tarzına ve ortak inançlarına göre şekillendirilerek tasarlanmıştır. Bu yapıların cephe özellikleri, bir kentin tarihi kimliğinin oluşmasında önemli bir rol oynamaktadır. Mimari unsurların sosyal, kültürel, ekonomik ve estetik açılarından anlaşılmasına yönelik bilgiler sağlar. Yapılara ait cepheler, sosyokültürel özellikleriyle geçmiş yaşantının izlerini yansıtmaktadır. Yapıların cephelerindeki çıkmalar ve düz ve bütünsel olarak devam eden saçaklar, geleneksel mimarinin özgün dokusunu oluşturmaktadır. Bu çalışmada, yapılara ait cephe özellikleri günümüz durumlarıyla değerlendirilmiştir. Sakarya ilinde, sakin şehir örneğini temsil eden Taraklı ilçesi, dönemin yapılarıyla tanınan ve tarihi kent kimliğinin sürdürülmesine ışık olması için bir örnek alanı olarak seçilmiştir. Taraklı evlerinin cephe tipolojisi, cepheye yerleştirilen boşluklara göre kapılar ve pencereler ile cephe hareketliliğine göre balkonlu, cumbalı ve cumbasız olarak iki şekilde incelenmiştir. Osmanlı dönemi yapı kültürünü yansıtan ve özgün cephe özellikleriyle Taraklı ilçesini bütünleştiren yapılar, yerinde incelenerek değişim süreçleri tespit edilmeye çalışılmıştır. Alan çalışması sonucunda yapılar fotoğraflarla belgelenmiş ve günümüzdeki durumları değerlendirilmiştir. Yer ve iklim özelliklerine göre şekillenen geleneksel yapılar, özgün çözümler sunabilirler. Bu nedenle, yapı yönü, biçimi, cepheleri ve kullanılan malzemeler bütünsel olarak ele alınmalıdır. Tarihi yapılar, yaşam kültürünü yansıttığı için, kent kimliğini oluşturan öğeleri ve güncel durumları takip ederek özgün dokusunu korumalıdır. Taraklı'nın geleneksel mimarisi, ekonomik ve sosyal açıdan uygulanabilir olması için yapıların yeni işlevlerle sürdürülebilirliğinin sağlanması ve özgün niteliğinin korunması gerekmektedir. Bu şekilde Taraklı'nın mimari mirası gelecek kuşaklara aktarılabilir.

**Anahtar Kelimeler:** *Cephe Özelliği, Sivil Mimari, Taraklı.*

## FORMATION CHARACTERISTICS OF FACADE ELEMENTS IN TRADITIONAL TARAKLI CIVIL ARCHITECTURE EXAMPLES

### ABSTRACT

This study aims to evaluate the facade characteristics and current status of traditional comb-patterned civil architecture examples. Traditional comb-patterned civil architecture includes structures with historical background located in various regions of Turkey. These structures carry distinctive features, especially on their facades, due to the materials and techniques used in the past. This analyze these features and compare them with their current conditions. Traditional civil architectural examples were designed and shaped over time by local masters and building owners according to the community's way of life and common beliefs. The facade features of these buildings play an important role in shaping a city's historical identity. Information about architectural elements provides insight into their social, cultural, economic, and aesthetic aspects. The facades of buildings reflect traces of past life with their socio-cultural characteristics. The projections on the facades and the flat and continuous eaves constitute the unique texture of traditional architecture. In this study, the facade features of buildings have been evaluated in the context of their current conditions. Taraklı district, which represents the example of a calm city in Sakarya province, has been selected as a sample area to shed light on the sustainability of the historical city identity with its period



buildings. Taraklı houses' facade typology has been analyzed in two ways: according to the doors and windows placed according to the gaps on the facade and according to the balcony, bay window, and non-bay window facade mobility. The structures that reflect the Ottoman period building culture and integrate Taraklı district with their unique facade features have been examined on-site to identify change processes. As a result of the fieldwork, the structures have been documented with photographs and their current conditions have been evaluated. Traditional buildings shaped according to location and climate can offer unique solutions. Therefore, the building orientation, shape, facades, and materials used should be considered holistically. Historical buildings should preserve their unique texture by following the elements that make up the city identity and current conditions as they reflect the culture of life. Taraklı's traditional architecture needs to maintain the sustainability of the buildings with new functions and preserve their unique qualities to be economically and socially feasible. In this way, Taraklı's architectural heritage can be passed on to future generations.

**Keywords:** *Facade feature, civil architecture, Taraklı.*

## TOPKAPI SARAYI MÜZESİNİN PEYZAJ YAPI ÖĞELERİNDE KULLANILAN DOĞAL TAŞLAR VE BOZULMA DURUMLARI

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### ÖZET

Doğal taşlar, şekil ve işlev yönünden değişikliğe uğrayıp mimaride günümüze kadar gelen süre içerisinde önemli bir yer edinmiştir. Bulunduğu coğrafyanın bir mirası olarak kabul edilirler. İşlevselliği, estetikliği, yüksek dayanımı ve ekolojik özellikleri ile mimari ve peyzaj yapı öğelerinde kültürel mirasın şekillenmesine katkı sağlarlar. Peyzaj tasarımlarında kullanılan doğal taş, tasarım ilkeleri göz önünde bulundurularak uyum, zıtlık, birlik, denge, ölçek ve oran gibi faktörlere göre seçilmelidir. İç ve dış mekanlarda kullanılan doğal taş malzemeler dayanıklılığı, geçirgenliği ve estetik özellikleri nedeniyle peyzaj uygulamalarında önemli bir yere sahiptir. Farklı doğal taş çeşitlerinin kullanıldığı Topkapı Sarayı'nda peyzaj yapı öğeleri için doğal taş malzemeler yerinde incelenmiştir. Malzemelerde oluşan hasarlar tespit edilerek taşların mekanik ve ısı etkileri, atmosferik ve canlılara bağlı bozulma nedenleri araştırılmış ve fotoğraflarla belgelenmiştir. Peyzaj yapı öğeleri tasarımında doğal taşın teknik özelliklerine bağlı olarak uygun taş seçimi yapılması da önemlidir. Malzemede oluşan bozulmaların giderilmesi için çalışma aşamasında titiz davranılmalı ve uygun teknikler kullanılmalıdır. Onarım çalışmalarındaki temel ilkeler belirlendikten sonra estetik kararlar alınmalıdır. Sonuç olarak, doğal taşların peyzaj tasarımlarında kullanımı, sadece görsellik açısından değil, aynı zamanda sağladığı ekolojik faydalar göz önünde bulundurularak tercih edilmelidir. Özellikle, taşın doğal özellikleri sayesinde su geçirgenliği artırılabilir ve yağmur suyunun yüzeyden akışı azaltılabilir. Bu da doğal taşların çevresel açıdan sürdürülebilir bir seçim olduğunu göstermektedir. Doğal taşların peyzaj tasarımlarında kullanımının görsel ve estetik açıdan önemli olmasının yanı sıra doğru kullanımı, bakımı ve gerekli önlemlerin alınması gerekmektedir. Böylece çevrenin korunmasına ve insan sağlığına katkıda bulunabilirler.

**Anahtar Kelimeler:** *Doğal taş, Peyzaj yapı öğeleri, Bozulma.*

## NATURAL STONES USED IN THE LANDSCAPE BUILDING ITEMS OF THE TOPKAPI PALACE MUSEUM AND THEIR CORRUPTION CONDITIONS

### ABSTRACT

Natural stones have gained an important place in architecture due to their changes in shape and function until today. They are considered a legacy of the geography in which they are located. With their functionality, aesthetics, high durability, and ecological features, they contribute to the shaping of cultural heritage in architectural and landscape building elements. The natural stone used in landscape designs should be chosen according to factors such as harmony, contrast, unity, balance, scale, and proportion, taking into account the design principles. Natural stone materials used indoors and outdoors have an important place in landscape applications due to their durability, permeability, and aesthetic properties. In Topkapi Palace, where different types of natural stone were used, natural stone materials were examined in situ for landscaping elements. By determining the damages on the materials, the mechanical and heat effects of the stones, and the causes of atmospheric and living-related deterioration, they were investigated and documented with photographs. It is also important to choose the appropriate stone depending on the technical characteristics of the natural stone in the design of landscape building elements. In the process of working to eliminate the deterioration in the material, it should be treated with care and appropriate techniques should be used. After determining the basic principles in repair work, aesthetic decisions should be made. As a result, the use of natural stones in landscape designs should be preferred not only in terms of visuality, but also considering the ecological benefits they provide. In particular, thanks to the natural properties of the stone, water permeability can be increased and the flow of rainwater from the surface can be reduced. This shows that natural stones are an

environmentally sustainable choice. In addition to the visual and aesthetic importance of the use of natural stones in landscape designs, correct use, maintenance, and necessary precautions should be taken. Thus, they can contribute to environmental protection and human health.

**Keywords :** *Natural stone, Landscape elements, Deterioration.*

## EYLEM - MEKAN İLİŞKİSİNDE KONUT İÇ MEKAN ÇÖZÜMLEME YAKLAŞIMLARI

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### ÖZET

Günümüz yaşamı üretimin çeşitlendiği, yapay zekâ desteği ile seri üretim bantlarının hız kazandığı diğer taraftan hızlı, tüketim odaklı, dijitalleşmeye yönelik, sanat, toplum ilişkisi, kültürel unsurlar gibi diğer bağlam unsurlarının farklılaştığı bir süreç olarak kendisini hissettirmektedir. Alışılmış günlük rutine ait eylemler dahi değişmektedirler. Kültürel örüntüdeki komşuluk, mahremiyet, yeme-içme biçimleri de farklılaşmaktadır. Geleneksel Türk konutlarındaki işlevlere, günlük eylemlere bağlı olarak aslında yaşamın biçimlendirdiği mekanlar ve tefriş öğeleri bulunurken, günümüzdeki yaşam biçimi, aile yapısı, kullanıcı profilindeki değişiklikler nedeniyle tasarımcılar yeni arayışlar ve uyumlandırma içerisindedirler. Endüstrileşme ile kentlerde yaşamaya yönelen insanlar, bugünün küresel kültürü ile de farklı ihtiyaç, istek ve beklentilere yönelmektedirler. Aidiyet duygusunun karşılığı olan bağlı hissetme, sahiplenme/sahiplenildiğini hissetme, kabullenme, konforlu, huzurlu, rahat hissetme gibi kavramlara mekân ve iç mekân tasarımlarında cevap verebilmek için mimarlar, iç mimarlar ve diğer paydaş meslekler yeni dünya oluşumunda yeni çözümler üretmek zorundadırlar.

Kent, park, meydan, cadde, gibi kentsel ölçekten farklı işlevlere sahip yapı ve bina türlerine kadar tüm yapı çevre unsurlarında günümüz insanının değişen kimlik ve konumunun göz önünde bulundurulması gerekir. Bu değişimin içerisinde insana özel ve değişmeyen temel ihtiyaçların giderilmesi gerekliliği ile yeni ihtiyaçlara uyumlu mekanlar tasarlayabilmek konusu, bu çalışmanın sorunsalını oluşturmaktadır. Eylem - mekân ilişkisinin belirlenmesi sürecinde kentsel alan sınırlılığı, imar ve arazi koşulları, diğer katma değer oluşturan konum, iklim, yön gibi unsurlarla bir araya geldiğinde az alanda çok eylem gerçekleştirebilen olanaklarının aranması günümüz tasarımcısının sorumlulukları içerisinde önemli bir yer tutmaktadır. Çalışmada eylem-mekân ilişkisinde iç mekân tasarımlarına yaklaşım önerilerinin sunulması hedeflenmektedir.

**Anahtar kelimeler:** Mekân Tasarımı, Konut, İşlev.

### HOUSING INTERIOR ANALYSIS APPROACHES IN THE RELATIONSHIP OF ACTION - SPACE

#### ABSTRACT

Today's life makes itself felt as a process where production is diversified, mass production lines gain speed with the support of artificial intelligence, on the other hand, other context elements such as fast, consumption-oriented, digitalization, art, society relationship and cultural elements are differentiated. Even the actions of the usual daily routine are changing. Neighborhood, privacy, eating and drinking styles in the cultural pattern also differ. While there are spaces and furnishings that are shaped by life depending on the functions and daily activities in traditional Turkish houses, designers are in new searches and adaptations due to the changes in today's lifestyle, family structure and user profile. People who tend to live in cities with industrialization are also turning to different needs, wishes and expectations with today's global culture. Architects, interior architects and other stakeholder professions have to produce new solutions in the formation of a new world in order to respond to concepts such as feeling connected, owning/feeling owned, accepting, comfortable, peaceful and relaxing, which are the counterparts of the sense of belonging, in space and interior design.

The changing identity and position of today's people should be taken into account in all built environment elements, from urban scales such as cities, parks, squares, streets to structures and building types with different functions. In this change, the necessity of meeting human-specific and unchanging basic needs and the subject of designing spaces that are compatible with new needs constitute the problematic of this study. In the process of determining the action-space relationship, the search for opportunities to perform more action in less space, when combined with the limitations of urban space, zoning and land conditions, other added value-creating factors such as location, climate, and direction, has an important place among the responsibilities of today's designer. In the study, it is aimed to present suggestions for approaches to interior design in the action-space relationship.

**Keywords:** Space Design, Housing, Function.

## MİMARİ TASARIMDA SÜRDÜRÜLEBİLİRLİK VE KENGO KUMA MİMARLIĞI

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### ÖZET

Yapılaşma, dünya nüfusunun artması ve kentlerde yaşama eğiliminde olması, iş ve çalışma alanlarının değişmesi, yaşama dair faaliyetlerin başkalaşması gibi nedenlerle hızlanmaktadır. İnsanların beklentileri, ihtiyaçların ötesine geçmekte, ekonomik refah düzeyine bağlı olarak yenilik, farklılık istekleri artmaktadır. Yapılaşmayı etkileyen farklı girdilere cevap verebilmek için tasarımcılar ve inşaat sektörü arayış içinde olmuşlar ve farklı sunumları hayata geçirmişlerdir. Ancak bu arada gözden kaçırılan konuların başında doğaya verilen zarar olduğu fark edilmiş ve kullanılan enerji kaynakları, üretim yöntemleri, kullanılan malzemelere ve üretim sürecinde harcanan emeğin dahi sürdürülebilirlik bağlamında önemli olduğu ve hesabının yapılması gerekliliği konuşulmaya başlamıştır. Sürdürülebilirlik, yeşil tasarım, ekolojik olma, çevreye dost yaklaşımların farkındalığı ile başka arayışlara girilmesinin dünyanın geleceği açısından önemliliği fark edilmiştir.

Geleneksel yerleşimlerde o çevrede bulunduğu, kolaylıkla erişildiği ve aslında o topraklarla dost olan yerel/yöresel “doğal” ve sürdürülebilir/çevreci olan malzemelerin kullanımından neden vazgeçildiği de sorgulanmaya başlanmıştır. Günümüz teknolojisi tasarımcılara, üreticilere pek çok imkân sunmaktadır. Bu çeşitlilik içerisinde çalışmada ahşap malzemenin zayıf yönlerinin fark edilerek giderilme yollarının bilinmesi ve uygulanabilirliğinin yanısıra mukavemetlendirilmiş ahşap teknolojisi ile çevreyle dost malzeme bağlamında farklı tasarımlar yapabilmeyen mümkün olduğu bilinmelidir. Bu çalışmada ahşap malzeme kullanımını mimari tasarım ve inşaatında tekrar göz önüne çıkaran, yapı tasarım ve uygulamalarında yapılabileceklerin sonsuz seçeneği olduğunu fark ettiren ve bu yönüyle marka değer olan Japon Mimar Kengo Kuma'nın sürdürülebilir tasarımlarından söz edilecek, dünyanın gelecek nesillere sağlıklı yaşanabilir olarak bırakılması için bugünün önemine vurgu yapılacaktır.

**Anahtar Kelimeler:** Mimari Tasarım, Kengo Kuma, Sürdürülebilirlik

### SUSTAINABILITY IN ARCHITECTURAL DESIGN AND KENGO KUMA ARCHITECTURE

#### ABSTRACT

Urbanization is accelerating due to the increase in the world population and the tendency to live in cities, the change in business and working areas, and the differentiation of life-related activities. The expectations of the people go beyond the needs, and the desire for innovation and difference increases depending on the level of economic welfare. In order to respond to the different inputs affecting the construction, the designers and the construction industry have been in search and have implemented different presentations. However, in the meantime, it was realized that the most overlooked issue was the damage to the nature, and the energy sources used, production methods, materials used and the labor spent in the production process are important in the context of sustainability and the need to make an account has begun to be discussed. The importance of sustainability, green design, being ecological, awareness of environmentally friendly approaches and other pursuits for the future of the world has been realized.

It has also been questioned why in traditional settlements, the use of local/regional "natural" and sustainable/environmental materials, which are located in that environment, are easily accessible and actually friendly with that land, are abandoned. Today's technology offers many possibilities to designers and manufacturers. Within this diversity, it should be known that it is possible to realize the weak aspects of

wood material and to know the ways to eliminate them and to know the applicability, as well as to make different designs in the context of environmentally friendly materials with strengthened wood technology. In this study, the sustainable designs of Japanese Architect Kengo Kuma, who brought the use of wood materials into consideration in architectural design and construction, made him realize that there are endless options for what can be done in building design and applications, and is a brand value in this respect, will be mentioned. importance will be emphasized.

**Keywords:** Architectural Design, Kengo Kuma, Sustainability

## ASETİK ASİT ORTAMINDA YENİ 1,3,4-OKSADİAZEPİNLERİN SENTEZİ

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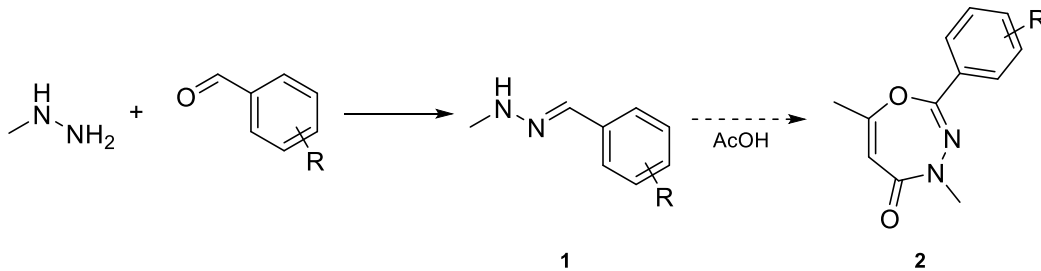
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## ÖZET

Benzodiazepinler birçok biyoaktif moleküllerin ve ilacın yapısında bulunan önemli bileşiklerdendir. Benzodiazepinlerin dikkate değer örnekleri arasında anksiyete bozukluklarının tedavisinde kullanılan Valium ve Ativan yer alır.<sup>1</sup> Ayrıca, benzodiazepinlerin geniş kapsamlı biyolojik aktiviteye sahip olduğu tespit edilmiştir. Bu bileşiklerin bazıları antibakteriyal özellik gösterirken bazıları da antagonist özellik göstermektedir.<sup>2</sup>

Benzene kondense oksadiazepin bileşikleri literatürde azda olsa bulunmasına rağmen basit yapılı yani herhangi bir halkalı yapıya kondense olmayan oksadiazepin bileşikleri literatürde bulunmamaktadır. Literatürde az da olsa bulunan bu oksadiazepin türevleri ise ya çok komplike metotlarla sentezlenmiştir ya da ara ürün olarak elde edilmiştir.

Oksadiazepinlerin önemli biyolojik aktiviteleri ve bu bileşiklerin sentezinde verimli ve uygulanabilir sentez metodunun eksiliğinden dolayı bu çalışmamızda 1,3,4-Oksadiazepinlerin sentezi için yeni ve uygulanabilir bir metot öneriyorum. Önerdiğim metot iki basamaktan oluşmaktadır. Birinci basamakta (*E*)-1-benziliden-2-metilhidrazon türevleri (**1**) sentezlendi. İkinci basamakta sentezlenen bu bileşikler asetik asit ortamında keten molekülüyle reaksiyona sokularak 1,3,4-Oksadiazepinlerin (**2**) sentezi gerçekleştirildi.



**Anahtar Kelimeler:** (*E*)-1-benziliden-2-metilhidrazon, asetik asit, 1,3,4-oksadiazepinler

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2. McDonald I.M.; Austin C.; Buck I.M.; Dunstone D.J.; Gaffen J.; Griffin E.; Harper E.A.; Hull R.A.D.; Kalindjian S.B.; Linney I.D.; Low C.M.R.; Patel D.; Pether M.J.; Raynor M.; Roberts S.P.; Shaxted M.E.; Spencer J.; Steel K.I.M.; Sykes D.A.; Wright P.T.; Xun W.; *J. Med. Chem.*, **2007**, 50, 4789.

## SYNTHESIS OF NOVEL 1,3,4-OXADIAZEPINES IN THE ACETIC ACID MEDIUM

## ABSTRACT

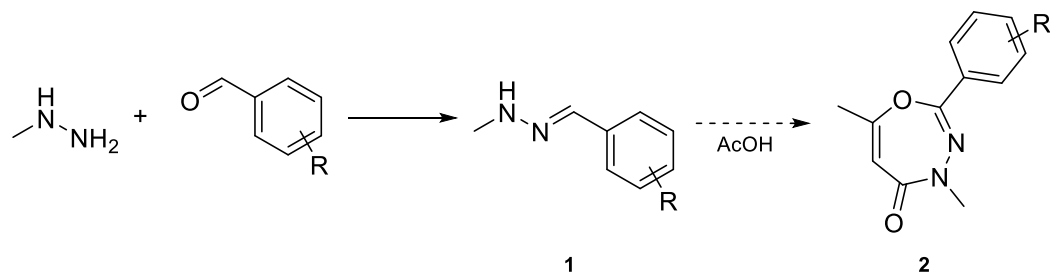
Benzodiazepines are important compounds in the structure of many bioactive molecules and drugs. Notable examples of benzodiazepines include Valium and Ativan, which are used in the treatment of anxiety disorders.<sup>1</sup> Furthermore, benzodiazepines have been found to have a wide range of biological activities. Some of these compounds show antibacterial properties, while others show antagonist properties.<sup>2</sup>

Although oxadiazepine compounds condensed to benzene are found in the literature, simple oxadiazepine compounds that are not condensed to any ring structure are not found in the literature. These oxadiazepine



derivatives, which are found in the literature, were either synthesized by very complicated methods or obtained as intermediates.

Due to the important biological activities of oxadiazepines and the lack of an efficient and applicable synthesis method for the synthesis of these compounds, in this study, I propose a new and applicable method for the synthesis of 1,3,4-Oxadiazepines. The proposed method consists of two steps. In the first step (*E*)-1-benzylidene-2-methyl hydrazone derivatives (**1**) were synthesized. In the second step, 1,3,4-Oxadiazepines (**2**) were synthesized by reacting these synthesized compounds with ketene molecules in an acetic acid medium.



**Keywords:** (*E*)-1-benzylidene-2-methylhydrazone, acetic acid, 1,3,4-oxadiazepines

#### References:

1. Leonard B.E.H., *Psychopharmacol. Clin. Exp.*, **1999**, 14, 125.
2. McDonald I.M.; Austin C.; Buck I.M.; Dunstone D.J.; Gaffen J.; Griffin E.; Harper E.A.; Hull R.A.D.; Kalindjian S.B.; Linney I.D.; Low C.M.R.; Patel D.; Pether M.J.; Raynor M.; Roberts S.P.; Shaxted M.E.; Spencer J.; Steel K.I.M.; Sykes D.A.; Wright P.T.; Xun W.; *J. Med. Chem.*, **2007**, 50, 4789.

## MİKROBİYAL PİGMENTLERİN ENDÜSTRİDEKİ DEĞERİ

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### ÖZET

Pigmentler çoğu çözücüde çözünemeyen renkli maddeler olup renklerini selektif absorpsiyon ve/veya görünür ışığın yansımaları sayesinde gösterirler. Pigmentler canlıların yaşamını sürdürmesinde önemli işlevlere sahiptir. Bitkilerin fotosentezinde görev alan klorofil ve insanları ultraviyole ışıktan koruyan melanin birer pigmenttir.

Pigment ve boyalar uzun zamandır renk verici özellikleri sebebiyle tekstil, kozmetik, ilaç, sanat ve gıda endüstrilerinde insanlık tarafından sık sık kullanılmıştır. Zamanla doğal pigmentlerin yerlerini sentetik pigmentler almıştır. Ancak günümüzde doğal ürünlere olan ilginin artması ve sentetik pigmentlerin toksik ve kanserojen etkilerinin görülmesi nedeniyle doğal pigmentlere yönelim başlamıştır. Sentetik pigmentlerin yerini alacak doğal ve kolay üretilebilen pigment arayışları gözleri mikroorganizmalara çevirmiştir. Mikroorganizmalardan elde edilen pigmentleri, mevsimsel koşullardan bağımsız fermentasyon tankları içerisinde üretilebilmesi, kısa süren büyüme döngüsü ve düşük üretim maliyeti nedeniyle bitkisel ve algal kaynaklı pigmentlere karşı avantaj sağlamaktadır. Biyoteknolojideki gen aktarımı gibi teknolojiler sayesinde mikrobiyal kaynaklı pigmentlerin endüstri standartlarında üretimi yapılabilir.

Mikrobiyal pigmentler sarı, kırmızı, yeşil gibi birçok farklı renkte olabilir. Çeşitli mikroorganizmalar tarafından üretilebilen bu pigmentler, mikroorganizmanın metabolizması sonucu oluşan renkli sekonder metabolitlerdir. Bu pigmentlerden bazılarının sitotoksik, antioksidan, antimikrobiyal, antimalaryal, antikanser, antitümör, antifouling özellik gösterdikleri de kanıtlanmış olup birçok endüstride kullanılmaktadır. Et, et ve balık yan ürünleri, peynir gibi gıdalarda renk verici olarak kullanılabilen carotenoidler o ürünleri daha göz alıcı olmasına neden olmaktadır. Çalışmada pigmentlerin insan için önemi, mikrobiyal pigmentler ve kaynakları araştırılmış, mikrobiyal pigmentlerin endüstride kullanımını açısından avantajları, dezavantajları ve geleceği tartışılmıştır.

**Anahtar Kelimeler:** Mikrobiyal pigment, Endüstri, Biyoteknoloji

## INDUSTRIAL VALUE OF MICROBIAL PIGMENTS

### ABSTRACT

Pigments are colored substances that are insoluble in most solvents and show their color by selective absorption and/or reflection of visible light. Pigments have important functions in the survival of living things. Chlorophyll, which takes part in the photosynthesis of plants, and melanin, which protects humans from ultraviolet light, are pigments.

Pigments and dyes have long been used by humanity in the textile, cosmetic, pharmaceutical, art and food industries for their coloring properties. Over time, natural pigments have been replaced by synthetic pigments. However, due to the increasing interest in natural products and the toxic and carcinogenic effects of synthetic pigments, the trend towards natural pigments has begun. The need for natural and easily produced pigments instead of synthetic pigments has turned the eyes to microorganisms. The fact that pigments obtained from microorganisms can be produced in fermentation tanks independent of seasonal conditions, provide an advantage over plant and algal pigments due to their short growth cycle and low production cost. Thanks to technologies such as gene transfer in biotechnology, microbial pigments can be produced in industry standards.

Microbial pigments can be in many different colors such as yellow, red, green. These pigments, which can be produced by various microorganisms, are colored secondary metabolites formed as a result of the metabolism of the microorganism. Some of these pigments have been proven to have cytotoxic, antioxidant, antimicrobial, antimalarial, anticancer, antitumor, antifouling properties and are used in many industries. Carotenoids, which can be used as a colorant in foods such as meat, meat and fish by-products, cheese, cause those products to be more eye-catching. In the study, the importance of pigments for human life was stated, microbial pigments and their sources were investigated, the advantages, disadvantages and future of microbial pigments in terms of use in industry were discussed.

**Keywords:** Microbial pigment, Industry, Biotechnology

## MARS ANALOĞU MAĞARALARIN ASTROBİYOLOJİK ARAŞTIRMALAR İÇİN ÖNEMİ

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### ÖZET

Mağaralar doğada karşılaştığımız jeolojik oluşumlardır. Ayrıca karanlık, düşük - sabit sıcaklık ve yüksek nem oranına sahip olduğundan benzersiz ortamlar olarak kabul edilirler. Dünyada aralarında mağaraların da bulunduğu yeraltı oluşumlarının çok değişmeyen fizikokimyasal koşulları ve zengin mineral kaynakları sayesinde mikrobiyal yaşam, karanlık ve soğuk ortamlarda aktivitelerini sürdürebilmektedir.

Dış çevre etkenlerinden uzak ve izole olan mağaraların neredeyse hepsinin kendine özgü koşulları vardır. Bu nedenle de yeni mikrobiyal türlerin araştırılması için önemli bir doğal alan oluştururlar. Mars Dünya'ya kıyasla ince bir atmosfer ve zayıf manyetik alana sahip olduğu için yüksek enerjili parçacıklar ve meteorit gibi dış etkenlere karşı korumasızdır. Mars yüzeyinde bulunan lav tüpleri açıklıkları ve mağaraya benzer oluşumlar uydu ve diğer gözlem teknikleri ile kayıtlara geçmiştir. Dış çevre koşullarından koruma sağlayan yeraltı oluşumları Dünya'da olduğu gibi Mars'da da mikrobiyal yaşam için korunaklı bir ortam sağlayabilir. Ayrıca, Mars analogu olarak kabul edilen bölgeler Dünya üzerinde astrobiyolojik çalışmaların yapılabilmesi için kullanılırlar. Yapılan bu çalışmalar yaşamın tanımına ve bulunabileceği koşullara dair önemli bilgiler sağlamaktadır. Eskiden yaşamın bulunmadığı düşünülen yerlerde modern analiz teknikleri sayesinde mikrobiyal yaşam olduğu görülmüş, bu durum canlılığa bakış açımızı değiştirmiş ve bu organizmaların bazılarının sahip olduğu benzersiz özelliklerin keşfedilmesiyle birçok biyoteknolojik atılım yapılmıştır. Çalışmada astrobiyoloji ve canlılığın tanımı, Dünya mağaralarında görülen mikrobiyal çeşitlilik ve Dünya'da bulunan Mars analogları değerlendirilmiştir. Dünya ve Mars mağaralarının astrobiyolojik açıdan önemi vurgulanmış ve insanlık için önemi tartışılmıştır.

**Anahtar Kelimeler:** Mağara, Mars, Astrobiyoloji

### THE IMPORTANCE OF MARS ANALOG CAVES FOR ASTROBIOLOGICAL RESEARCH

#### ABSTRACT

Caves are geological formations that we encounter in nature. They are also considered unique environments as they have darkness, low - constant temperature and high humidity. In Earth microbial life can continue its activities in dark and cold underground environments including caves, due to the unchanging physicochemical conditions and rich mineral resources.

Almost all of the caves, which are isolated and far from external environmental factors, have their own unique conditions. Therefore, they constitute an important natural area for the study of new microbial species. Since Mars has a thin atmosphere and a weak magnetic field compared to Earth, it is not protected against external factors such as high-energy particles and meteorites. Lava tube openings and cave-like formations on the surface of Mars have been recorded by satellite and other observation techniques. Subterranean formations that provide protection from external environmental influences can provide a sheltered environment for microbial life on Mars just like on Earth. In addition, regions considered as Mars analogs are used for astrobiological studies on Earth. These studies provide important information about the definition of life and the conditions in which it can be found. Thanks to modern analysis techniques, it has been seen that there is microbial life in places where it was thought that there was no life in the past, this has changed our view of life, and many biotechnological breakthroughs have been made with the discovery of the unique properties of some of these organisms. In the study, the definition of astrobiology and life, the microbial diversity seen in the Earth's caves and the Mars analogues on Earth were evaluated. The

astrobiological importance of Earth and Mars caves was emphasized and their importance for humanity was discussed.

**Keywords:** Cave, Mars, Astrobiology

## BÖCEKLERDE MİTOGENOM TRANSKRİPSİYONUN ARAŞTIRILMASI: EŞ ZAMANLI MONOSİSTRONİK BİRİMLERE DÖNÜŞME

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### ÖZET

Böcek mitogenom verisi son yıllarda hızla artış sergilemiş olsa da, bu mitogenomların transkripsiyonuna yönelik bilgilerimiz oldukça kısıtlıdır. Böceklerde mitokondriyal transkripyon sonrası ilkin RNA'ların polisistronik birimler halinde sentezlendiği varsayılmaktadır. Genellikle kararlı bir yapı sergileyip nad1/rnS, nad2/nad3, nad5/nad4l ve nad6/ctyb olmak üzere dört farklı mitokondriyal polisistronik ünitelerden oluşmaktadır. Bu polisistronik ünitelerin tRNA uzaklaştırma mekanizması ile monosistronik birimlere farklı zamanlarda dönüştükleri kabul edilmektedir. Ancak, bu süreç tam olarak bilinmemektedir. Bu çalışmada, gül filiz arısı *Syrista parreyssii* (Spinola, 1843) (Hymenoptera: Cephidae) türünde ampirik çalışmalara, derin RNA dizileme ve biyoinformatik yaklaşımlara başvurularak bu örüntü test edilmiştir. Gül filiz arısında ampirik olarak mitokondriyal polisistronik birimlerin saptanması amacıyla tasarlanan RNA tabanlı deneyler sonucunda, polisistronik birimlerin halkasallaştırılmamış olması ve mitokondriyal transkriptom verisinin (derin RNA-seq verisi) biyoinformatik analizleri sonucunda polisistronik transkriptlere rastlanmamış olması, sentez aşamasında eş zamanlı monosistronik birimlere dönüştüğü sonucuna işaret etmiştir. Bu bulgu, veri bankalarında yer alan diğer böcek SRA verilerinin işlenmesi sonucunda da desteklenmiştir. Eş zamanlı monosistronik birimlere dönüşme örüntüsü, veri setlerinde gözlenen poliadenillenme (ağır zincirde) ve politimillenme (hafif zincirde) mekanizmasının varlığı ile de desteklenmiştir.

**Anahtar Kelimeler:** *Mitokondriyal transkripsiyon, Insecta, Monosistronik üniteler*

**Teşekkürler:** Bu çalışma, Türkiye Bilimsel ve Teknolojik Araştırma Kurumu (TÜBİTAK) tarafından 117Z020 no.lu araştırma projesi ile desteklenmiştir.

### INVESTIGATION OF MITOGENOMIC TRANSCRIPTION IN INSECTS: SIMULTANEOUS CONVERSION INTO MONOCISTRONIC TRANSCRIPTION UNITS

### ABSTRACT

Although the number of insect mitogenome has grown rapidly in recent years, we still know very little about how these mitogenomes are transcribed. Mitochondrial transcription in insects is thought to be followed by the synthesis of RNAs as polycistronic units. It generally exhibits a stable pattern and comprises four distinct mitochondrial polycistronic units: nad1/rnS, nad2/nad3, nad5/nad4l, and nad6/ctyb. tRNA punctuation mechanism is thought to convert these polycistronic units into monocistronic units at different times. However, this process is not fully known. Here, this pattern was investigated using empirical studies, deep RNA sequencing and bioinformatics approaches in the rose-stem sawfly *Syrista parreyssii* (Spinola, 1843) (Hymenoptera: Cephidae). Circularization of polycistronic units failed in RNA-based experiments designed to empirically detect mitochondrial polycistronic units in the rose-stem sawfly, and bioinformatic analysis of mitochondrial transcriptome data (deep RNA-seq data) of this species did not identify any polycistronic transcripts. These are evidence that polycistronic units were simultaneously converted to monocistronic units during mRNA synthesis. This finding was supported by the processing of other insect SRA datasets in the databases. The pattern of simultaneous conversion to monocistronic units is also

supported by the occurrence of polyadenylation (in the heavy chain) and polythymination (in the light chain) mechanism observed in the datasets.

**Keywords:** *Mitochondrial Transcription, Insecta, Monocistronic units*

**Acknowledgements:** The study is supported by The Scientific and Technological Research Council of Turkey (TÜBİTAK) via a research project with grant number 117Z020.

## GÖVDE BORULU ISI DEĞİŞTİRİCİ ETKİNLİĞİNE CuO-TiO<sub>2</sub>/H<sub>2</sub>O HİBRİT NANOAKIŞKANININ ETKİSİNİN İNCELENMESİ

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### ÖZET

Gövde borulu ısı değiştiricileri makine, kimya, enerji üretim, gıda endüstrilerinde en yaygın olarak kullanılan ısı değiştiricisi sistemlerinden biridir. Bu sistemlerin geometrik boyutlarının küçültülmesi, daha az maliyetli ısı değiştiricilerinin tasarlanabilmesi ve enerji tasarruflu sistemlerin kurulabilmesi, ısı transfer katsayısı düşük olan geleneksel iş akışkanlarının yerine nanoakışkanlar ve hibrit nanoakışkanlar kullanılmasıyla mümkün olabilmektedir. Bu çalışmada, CuO-TiO<sub>2</sub>/H<sub>2</sub>O hibrit nanoakışkanının, nanoakışkan giriş sıcaklığı ve Reynolds sayısı parametre olarak kullanılarak gövde borulu ısı değiştiricisinde ısı transfer etkinliği sayısal olarak incelenmiştir. Çalışmada ANSYS Fluent Hesaplamalı Akışkanlar Dinamiği programı kullanılarak, oluşan ısı transferi sürekli şartlarda çözülmüştür. Gövde borulu ısı değiştiricisinde borulardan hibrit nanoakışkan ve gövde tarafından saf su karşıt akış düzeninde oluşturulmuştur. Hibrit nanoakışkanın ısı değiştiricisi etkinliğine etkisini incelemek amacıyla, laminer akış şartlarında (Re=500),  $\phi$ =%1,0 hacimsel konsantrasyonda nanoakışkanın giriş sıcaklığı (T=30, 40, 50, 60°C) kademeli olarak artırılmıştır. Sıcaklığın 30°C'den 60°C'ye artırılması ısı transfer etkinliğinde toplamda %14,6 artış sağlamıştır. Isı değiştiricisi etkinliğine Reynolds sayısının etkisini incelemek amacıyla; sabit nanoakışkan giriş sıcaklığında (T=40°C) Reynolds sayısı (Re=250, 500, 750, 1000) kademeli olarak artırılmıştır. Reynolds sayısının (Re=250-1000) aralığında artması ısı transfer etkinliğinde toplamda %15,3 azalmaya sebep olmuştur. Bu çalışmadan elde edilen sonuçlarla, ısı değiştiricilerinde hibrit nanoakışkanlar kullanarak daha yüksek ısı transfer performanslı sistemlerin tasarlanabileceği değerlendirilmiştir.

**Anahtar Kelimeler:** CuO-TiO<sub>2</sub>/H<sub>2</sub>O hibrit nanoakışkanı, Reynolds sayısı, ısı transfer etkinliği.

### INVESTIGATION OF THE EFFECT OF CuO-TiO<sub>2</sub>/H<sub>2</sub>O HYBRID NANOFLUID ON HEAT TRANSFER PERFORMANCE OF SHELL AND TUBE HEAT EXCHANGERS

#### ABSTRACT

Shell and tube heat exchangers are one of the most widely used heat exchanger systems in the machinery, chemical, power generation and food industries. Reducing the geometric dimensions of these systems, designing less costly heat exchangers and establishing energy-efficient systems are possible by using nanofluids and hybrid nanofluids instead of conventional work fluids with low heat transfer coefficient. In this study, the heat transfer effectiveness of CuO-TiO<sub>2</sub>/H<sub>2</sub>O hybrid nanofluid in a shell-and-tube heat exchanger was numerically investigated by using nanofluid inlet temperature and Reynolds number as parameters. In this study, heat transfer model was solved under steady-state conditions by using the ANSYS Fluent Computational Fluid Dynamics program. In the shell-and-tube heat exchanger, hybrid nanofluid in the tube side and distilled water in the shell side were determined in a counter-flow arrangement in the heat exchanger. In order to examine the effect of hybrid nanofluid on heat exchanger effectiveness, the inlet temperature of the hybrid nanofluid (T=30, 40, 50, 60°C) was gradually increased at  $\phi$ =1.0% volumetric concentration under laminar flow conditions (Re=500). Increasing the temperature from 30°C to 60°C provided a total 14.6% increase in heat transfer effectiveness. In order to examine the effect of the Reynolds number on the heat exchanger effectiveness; the Reynolds number (Re=250, 500, 750, 1000) was gradually increased at constant nanofluid inlet temperature (T=40°C). Increasing the Reynolds number in the range of (Re=250-1000) caused a total decrease of 15.3% in the heat transfer effectiveness., It has been evaluated that



with the results obtained from this study, heat transfer systems with higher effectiveness can be designed by using hybrid nanofluids in heat exchangers.

**Keywords:** CuO-TiO<sub>2</sub>/H<sub>2</sub>O hybrid nanofluid, Reynolds number, heat transfer effectiveness.

## CuO-TiO<sub>2</sub>/H<sub>2</sub>O HİBRİT NANOAKIŞKANININ TERMOFİZİKSEL ÖZELLİKLERİNİN ISI TRANSFER PERFORMANSINA ETKİSİNİN İNCELENMESİ

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### ÖZET

Nanoteknoloji; kimya, elektronik, makine, iklimlendirme ve benzeri birçok endüstride, enerji ve malzeme tasarrufuyla daha düşük maliyetli sistemlerin tasarımına önemli katkılar sağlamaktadır. Isı değiştiricilerinde nanoakışkanların kullanılmasıyla ısı transfer performansı artırılabilir. Hibrit nanoakışkanlar kullanılması ise tek tip nanoakışkana göre daha üstün ısı transfer performansı gösterebilmektedir. Bu çalışmada; CuO-TiO<sub>2</sub>/H<sub>2</sub>O hibrit nanoakışkanının, TiO<sub>2</sub>/H<sub>2</sub>O nanoakışkanına göre ısı transfer etkinliği nanoakışkan hacimsel oran ve nanoparçacık (25-35 nm) şekil faktörü (küresel, silindirik, platelate, kübik, blade (bıçak ağızı) şekilli) parametreleriyle sayısal olarak incelenmiştir. ANSYS Fluent Hesaplamalı Akışkanlar Dinamiği programında oluşturulan ısı değiştiricisi sayısal modeli, zamandan bağımsız olarak çözülmüştür. Oluşturulan gövde borulu ısı değiştiricisi boru kısmında nanoakışkan, gövde kısmında saf su karşıt akış düzeninde belirlenmiştir. Laminer şartlarda (Re=500) ve sabit nanoakışkan giriş sıcaklığında (T=40°C) TiO<sub>2</sub>/H<sub>2</sub>O nanoakışkanının hacimsel konsantrasyonu (φ=%0,5-1,0-1,5-2,0) aralığında kademeli olarak artırıldığında ısı değiştiricisi etkinliği %10,2 oranında artmıştır. CuO-TiO<sub>2</sub>/H<sub>2</sub>O hibrit nanoakışkanının kullanılması durumunda ise, ısı transfer etkinliği, her iki nanoparçacığın eşit hacimsel oranlarda katıldığı durumda (φ=%0,5-1,0-1,5-2,0) aralığında kademeli olarak artırılmıştır. Hibrit nanoakışkan kullanıldığı durumda, ısı değiştiricisi ısı transfer etkinliği toplamda %5,7 artış göstermiştir. Aynı akış karakteristiği ve aynı termofiziksel koşullarda φ=%1,0 hacimsel konsantrasyonlu hem TiO<sub>2</sub>/H<sub>2</sub>O nanoakışkanının hem de CuO-TiO<sub>2</sub>/H<sub>2</sub>O hibrit nanoakışkanının farklı nanoparçacık şekillerinin etkisi incelendiğinde; diğer şekillere göre küresel şekilli nanoparçacıklar daha yüksek ısı transfer performansı göstermiştir. CuO-TiO<sub>2</sub>/H<sub>2</sub>O hibrit nanoakışkanı TiO<sub>2</sub>/H<sub>2</sub>O nanoakışkanına göre (φ=%0,5-1,0-1,5-2,0) her hacimsel oran için daha yüksek ısı transfer performansı göstermiştir. Ayrıca hibrit nanoakışkanındaki CuO nanoparçacığının TiO<sub>2</sub> nanoparçacığına göre hacimsel oranı kademeli bir şekilde artırıldığında hibrit nanoakışkanının ısı transfer performansının %3,1 kadar daha yüksek olduğu belirlenmiştir. Bu çalışmadan elde edilen sonuçlarla gövde borulu ısı değiştiricilerinde hibrit nanoakışkanları kullanılarak verimi daha yüksek ısı transfer sistemleri tasarlanabileceği değerlendirilmiştir.

**Anahtar Kelimeler:** Hibrit nanoakışkan, şekil faktörü, ısı transferi.

### INVESTIGATION OF THE EFFECT OF THE THERMOPHYSICAL PROPERTIES OF CuO-TiO<sub>2</sub>/H<sub>2</sub>O HYBRID NANOFLUID ON HEAT TRANSFER PERFORMANCE

#### ABSTRACT

Nanotechnology makes significant contributions to the design of lower cost systems with energy and material savings in many industries such as chemistry, electronics, machinery, air conditioning and so on. Heat transfer performance can be increased by using nanofluids in heat exchangers. Utilizing hybrid nanofluids can show superior heat transfer performance compared to a mono type of nanofluids. In this study; the heat transfer effectiveness of CuO-TiO<sub>2</sub>/H<sub>2</sub>O hybrid nanofluid compared to TiO<sub>2</sub>/H<sub>2</sub>O nanofluid was numerically investigated with nanofluid volumetric ratio and nanoparticle (25-35 nm) shape factor (spherical, cylindrical, platelets, bricks, blade shaped) parameters. The numerical model of the heat exchanger created in the ANSYS Fluent Computational Fluid Dynamics program is solved assumption of steady-state. The hybrid nanofluid in the tube side and distilled water in the shell side were determined in

counter-flow arrangement in the shell and tube heat exchanger. When the volumetric concentration of  $\text{TiO}_2/\text{H}_2\text{O}$  nanofluid is gradually increased in the range ( $\varphi=0.5-1.0-1.5-2.0\%$ ) under laminar flow conditions ( $\text{Re}=500$ ) and at constant nanofluid inlet temperature ( $T=40^\circ\text{C}$ ), the heat exchanger effectiveness increased by 10.2%. In the case of utilizing  $\text{CuO-TiO}_2/\text{H}_2\text{O}$  hybrid nanofluid, the heat transfer effectiveness was gradually increased in the range ( $\varphi=0.5-1.0-1.5-2.0\%$ ) when both nanoparticle types were added in equal volumetric ratios. In the case of utilizing hybrid nanofluid, the heat transfer effectiveness of the heat exchanger increased by 5.7% in total. In the same flow characteristic and same thermophysical conditions, the effect of different nanoparticle shapes of both  $\text{TiO}_2/\text{H}_2\text{O}$  nanofluid and  $\text{CuO-TiO}_2/\text{H}_2\text{O}$  hybrid nanofluid with  $\varphi=1.0\%$  volume concentration; spherical shaped nanoparticles showed higher heat transfer performance than other shapes.  $\text{CuO-TiO}_2/\text{H}_2\text{O}$  hybrid nanofluid showed higher heat transfer performance for each volume concentration compared to  $\text{TiO}_2/\text{H}_2\text{O}$  nanofluid as per ( $\varphi=0.5-1.0-1.5-2.0\%$ ). Furthermore, it was determined that the heat transfer performance of the hybrid nanofluid was 3.1% higher when the volumetric ratio of the  $\text{CuO}$  nanoparticle in the hybrid nanofluid was gradually increased compared to the  $\text{TiO}_2$  nanoparticle. It is evaluated that with the results obtained from this study, higher effective heat transfer systems can be designed by using hybrid nanofluids in shell and tube heat exchangers.

**Keywords:** Hybrid nanofluid, shape factor, heat transfer.

## MONOLİT VE AKTİF KARBON DESTEKLİ PLATİN KATALİZÖRLERİN SULU FAZ REFORMLAMASININ KARŞILAŞTIRILMASI

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### ÖZET

Bu çalışmada glukoz çözeltisinin sulu faz reformlaması için monolit ve aktif karbon destekli metal katalizörleri hazırlanmıştır. Metalin desteklere (monolitik yapı ve aktif karbon) yüklenmesini uygulamak için emdirme yöntemi kullanılmış ve bu katalizörlerin glukoz çözeltisinin sulu faz reformlamasındaki performansı incelenmiştir. Gazlaştırma sonucunda iki destek materyali için benzer gaz bileşimleri gözlenmiştir. Sonuçlar, monolitik silika yapısındaki katalizörün hidrojen oluşturma performansının (22%), aktif karbon katalizöründen (40%) daha düşük olduğunu göstermiştir. Aktif karbon destekli katalizör en iyi performansı göstermiştir. Biyokütle (Pinus Brutia Ten) hidrolizatın gazlaştırılmasında da en etkili katalizör olan aktif karbon destekli platin katalizörü kullanılmıştır. Biyokütle hidrolizatının gaz bileşimi H<sub>2</sub> (41.7%), CO (0.7%), CO<sub>2</sub> (51.6%) ve CH<sub>4</sub> (6.0%) gazlarından oluşmuştur.

**Anahtar Kelimeler:** *Hidrojen, monolit, aktif karbon*

## COMPARISON OF MONOLITH AND ACTIVATED CARBON SUPPORTED PLATINUM CATALYSTS ON AQUEOUS PHASE REFORMING

### ABSTRACT

Monolith and activated carbon supported metal catalysts were prepared for aqueous phase reforming of glucose solution in this work. The impregnation method was used to apply the loading of the metal to the supports (monolithic structure and active carbon) and the performance of these catalysts in aqueous phase reforming of glucose solution has been investigated. Similar gas compositions were produced for the two support materials as a result of the gasification. The results showed that the hydrogen formation performance of the catalyst in the monolithic silica structure (22%) was lower than that of the activated carbon catalyst (40%). The activated carbon supported catalyst showed the best performance. The most effective catalyst activated carbon supported platinum was also used in gasification of biomass (Pinus Brutia Ten) hydrolysate. The gas composition of biomass hydrolysate composed of H<sub>2</sub> (41.7%), CO (0.7%), CO<sub>2</sub> (51.6%) and CH<sub>4</sub> (6.0%) gases.

**Keywords:** *Hydrogen, monolith, activated carbon*

## TIG ISITMA İLE NiAl TOZUNUN HAZIRLANMASI

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## ÖZET

Nikel alüminit intermetalığı, yüksek mukavemet, düşük yoğunluk, üstün oksidasyon direncine ve yüksek erime sıcaklığına sahip önemli bir yüksek sıcaklık malzemesidir. Nikel alüminit intermetalığın bu özelliklerinden dolayı havacılık, otomotiv ve endüstriyel sektör başta olmak üzere kullanılmaktadır. Bu çalışmada nikel ve alüminyum element tozları ve termal seyreltici olarak hacimce %40 magnezyum oksit (MgO) tozu kullanılarak nikel alüminit (NiAl) tozu elde edilmiştir. Adyabatik sıcaklıklar HSC Chemistry yazılımı ile % 0-60 hacimce MgO aralığında hesaplanmıştır. Ni+Al+MgO toz karışımı steraik asit ile yağlanmış kalıba alınarak 50 MPa'lık basınç uygulanmıştır. Ni+Al+MgO toz karışımı ile elde edilen pelet, Ni ve Al partikülleri arasındaki reaksiyonun gerçekleşmesi ve NiAl tozunu oluşturması için akan argon gazı altında tungsten inert gaz (TIG) meşalesi ile ısıtılmıştır. Tungsten inert gaz meşalesi ile ısıtıldıktan sonra parça havanda ezilerek toz haline getirilmiş ve termal seyreltici olan MgO'nun HCl asit çözeltisinde ile çözündürme işlemi için manyetik karıştırıcı ile yaklaşık 2 saat boyunca karıştırılmıştır. Elde edilen karışım 5 dakika 5000 devirde santrifüj ile ayrılmıştır. Bu yolla oluşturulan toz karışım 1 gün boyunca 85 °C'de etüvde kurularak NiAl tozu üretilmiştir. XRD analizleri saf NiAl fazı tozunun elde edildiğini ortaya koymuştur. Hazırlanan NiAl toz partikülleri stereo mikroskopta incelenmiştir. Parçacık boyutunun öğütme süresine bağlı olduğu görülmüştür. Havanda 10 dakika ezme sonucunda elde edilen NiAl tozunun 10-50 mikrometre parçacık boyut aralığında olduğu görülmüştür.

**Anahtar Kelimeler:** *NiAl tozu, TIG ısıtma Termal seyreltici*

## NiAl POWDER PREPARED BY TIG HEATING

## ABSTRACT

NiAl is a key high temperature material with high strength, low density, having superior oxidation resistance and high melting temperature. Due to these properties of NiAl intermetallic, it is used in aviation, automotive and industrial sectors. In this study, Nickel aluminide (NiAl) powder was obtained by using nickel and aluminum element powders and 40% by volume magnesium oxide (MgO) powder as thermal diluent. Adiabatic temperatures were calculated with the HSC Chemistry software in 0-60 vol. % MgO range. In the range of 0-60% MgO, Ni+Al+MgO powder mixture was taken into the mold lubricated with steraic acid and a pressure of 50 MPa was applied.

The pellet obtained with Ni+Al+MgO powder mixture was heated with a tungsten inert gas (TIG) torch under flowing argon gas for the reaction between Ni and Al particles to take place and to form NiAl powder. After heating with TIG torch, the part was crushed into powder and mixed with a magnetic stirrer for about 2 hours, for the dissolution of the thermal diluent MgO, in HCl acid solution. The resulting mixture was separated by centrifugation at 5000 rpm for 5 minutes. NiAl powder was produced by drying the powder mixture formed in this way in an oven at 85 °C for 1 day. XRD analyses revealed that phase pure NiAl powder was obtained. Prepared NiAl powder particles were examined by stereo microscopy. Particle size was seen to be dependent on the grinding duration. The obtained NiAl powder after 10 minutes grinding in mortar and pestle was seen to be in 10-50 micrometer particle size range.

**Keywords:** *NiAl powder, TIG heating, Thermal diluent*

## BOŞLUK OLUŞTURUCU NaCl İLE, %60 ORANINDA, 150-300 MİKROMETRE GÖZENEKLERE SAHİP NiAl PARÇALARIN OLUŞUMU

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### ÖZET

Bu çalışmada, gözenekli nikel alüminid intermetalikleri hacim yanma sentezi (VCS) yöntemi ile üretilmiştir. Başlangıç tozları olarak nikel ve alüminyum tozları kullanılmıştır. Önceden oluşturulmuş Nikel alüminit tozu, reaktan karışımına termal seyreltici olarak ilave edilmiştir. Eklenen önceden oluşturulmuş NiAl tozu hacimce %30 oranındadır. Bu şekilde peletlerin şekli korunmuştur. Boşluk oluşturucu olarak 150-300 mikrometre büyüklüğünde NaCl partikülleri kullanılmıştır. Ni ve Al toz karışımında hacimce %60 NaCl kullanılarak gözenekli NiAl intermetalikleri oluşturulmuştur. Nikel ve alüminyum tozları , hacimce önceden oluşturulmuş NiAl ve NaCl ile hazırlanan numunelerin üretimi için, 10 mm çaplı silindirik çelik kalıp kullanılmış ve soğuk presle 100 MPa basınç uygulanmıştır. Ham pelet oluşturulduktan sonra hacimce %60 oranında eklenen NaCl boşluk oluşturucu partiküllerin uzaklaştırılması için yaklaşık bir gün boyunca suda bekletilmiş ve 65 °C'lik bir sıcaklıkta etüv fırında kurutulmuştur. Daha sonra ham pelet bir fırında reaksiyona sokulmuştur. Ni+Al toz karışımlarının 750 °C'de argon atmosferinde hacim yanma sentezi reaksiyonu ile gözenekli NiAl parçaları elde edilmiştir. 150-300 mikron boyutlu, hacimce %60 NaCl boşluk oluşturucu ile oluşturulan gözenekli parçaların mekanik özellikleri, basma testleri ve mikrosertlik ölçümleri ile incelenmiştir. Elde edilen gözenekli NiAl parçalar 600, 1200 ve 3000 grit zımpara ile zımparalanmıştır. Numunelerin mikro ve makro yapıları stereo, optik mikroskop ile analiz edilmiştir. %60 NaCl ve %30 seyreltici NiAl ilavesi ile elde edilen ürünlerin ortalama basma dayanımı değeri 32,1±1,9 MPa olarak bulunmuştur.

**Anahtar Kelimeler:** *NiAl, Hacim yanma sentezi, Boşluk oluşturucu*

### NiAl PARTS HAVING 60 %, 150-300 MICROMETER PORES FORMED BY NaCl SPACER

### ABSTRACT

In this study, porous nickel aluminate intermetallics were produced by volume combustion synthesis (VCS) method. Nickel and aluminum powders were used as initial powders. Preformed NiAl powder was added to the reactant mixture as thermal diluent. The preformed NiAl powder added is 30 vol. %. In this way, the shape of the pellets is preserved. 150-300 micrometer sized NaCl particles were used as spacer. Porous NiAl intermetallics were formed by using 60 % NaCl by volume in Ni and Al powder mixture. A 10 mm diameter cylindrical steel mold was used and 100 MPa pressure was applied to the samples prepared with nickel-aluminum powders, preformed NiAl and NaCl. After forming the green pellet, the samples produced with 60 vol.% NaCl ratio were kept in water for about one day in order to remove the NaCl spacer particles and dried in an oven at a temperature of 65 °C. Then, the green pellet was reacted in a furnace. Porous NiAl parts were obtained by volume combustion synthesis reaction of Ni+Al powder mixtures at 750 °C in argon atmosphere. The mechanical properties of the porous materials having pore sizes in 150-300 microns range, which were obtained by using 60 vol.% NaCl spacer particles, were investigated by compression tests and microhardness measurements. The porous NiAl parts obtained were sanded with 600, 1200 and 3000 grit sandpaper. Micro and macro structure of the parts were analyzed by stereo optical microscopy. The mean compressive strength value of the products obtained with the addition of 60% NaCl and 30% diluent NiAl was 32.1±1.9.

**Keywords:** *NiAl powder, Volume combustion synthesis, Space holder*

## KÜME ANALİZİNE DAYALI YEREL ARMUT GENOTİPLERİNİN MORFOLOJİK BİYOÇEŞİTLİLİĞİ

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### ÖZET

Türkiye meyve tür, çeşit ve form zenginliği bakımından önemli gen kaynaklarına sahip olmasına rağmen, yapılan ıslah araştırmaları yeterli değildir. Bu çalışma önemli meyve gen kaynakları bölgelerinden biri olan Karadeniz bölgesinde yer alan Trabzon ili Çaykara ilçesindeki yerel armut genotiplerinin morfolojik biyoçeşitliliğinin belirlenmesi amacıyla yürütülmüştür. Yöre coğrafyasına dağılmış bir alanda toplam 169 genotipten alınan meyve ve yaprak örnekleri alınmıştır. Meyvenin 24 kantitatif (meyve ağırlığı, meyve çapı, meyve boyu, şekil indeksi, meyve hacmi, meyve yoğunluğu, meyve eti sertliği, meyve sapı uzunluğu, meyve sapı kalınlığı, çiçek çukuru genişliği, çiçek çukuru derinliği, çekirdek evi genişliği, çekirdek evi boyu, çekirdek sayısı, çekirdek ağırlığı, toplam suda çözünür kuru maddeler, pH, titredilebilir asitlik, kabuk ve et  $L^*$ ,  $a^*$ ,  $b^*$  renk değerleri) ve 6 kalitatif (sululuk, tat, aroma, et yapısı, yeme kalitesi, dış kalite) özelliği ile yaprağın 4 kantitatif (yaprak genişliği, yaprak boyu, yaprak sapı boyu, yaprak sapı kalınlığı) özelliği için küme analizi yapılmıştır. Küme analizi sonucunda, genotipler arasında, meyve ve yaprak özellikleri için 13 küme oluşmuştur. Sırasıyla, 78, 77 ve 84, 15 ve 54 nolu genotipler meyve kantitatif özellikler bakımından diğerlerinden oldukça farklı bulunmuştur. Meyve kalitatif özellikleri bakımından 31 ve 156 nolu genotipler diğerlerinden oldukça farklı, 149 ile 158 nolu ve 165 ile 125 nolu genotipler de birbirleriyle yüksek seviyede benzer bulunmuştur. Yaprak özellikleri bakımından 50 ve 108 nolu genotipler diğerlerinden oldukça farklı, 42-90, 33-104 ve 132-152 nolu genotipler de birbirleriyle yüksek seviyede benzer bulunmuştur. Bu araştırma, Çaykara ilçesi armut genetik kaynaklarının zengin biyoçeşitlilik gösterdiğini ve ticari amaçlı ıslah programlarında, mevcut çeşitlerin ıslahında veya yeni çeşitlerin elde edilmesinde faydalı germplazma olabileceğini göstermiştir.

**Anahtar Kelimeler:** *Pyrus communis*, Varyasyon, Islah

### MORPHOLOGICAL BIODIVERSITY OF LOCAL PEAR GENOTYPES BASED ON CLUSTER ANALYZE

### ABSTRACT

Although Turkey has important gene resources in terms of fruit species, variety and form richness, the breeding researches are not sufficient. This study was carried out to determine the morphological biodiversity of local pear genotypes in Çaykara district of Trabzon province in the Black Sea region (Türkiye), which is one of the important fruit gene resources regions. Fruit and leaf samples were taken from a total of 169 genotypes in an area scattered throughout the region. Cluster analysis was performed for 24 quantitative (fruit weight, fruit diameter, fruit length, shape index, fruit volume, fruit density, fruit firmness, fruit stalk length, fruit stalk thickness, flower bowl width, flower bowl depth, seed bowl width, seed bowl length, number of seeds, weight of seeds, total water-soluble dry matter, pH, titratable acidity, skin and flesh  $L^*$ ,  $a^*$ ,  $b^*$  color values) and 6 qualitative (juiciness, taste, aroma, flesh texture, eating quality, appearance quality) traits of fruit and 4 quantitative (leaf width, leaf length, petiole length, petiole thickness) traits of the leaf. As a result of cluster analysis, 13 clusters were formed for fruit and leaf traits among genotypes. Genotypes 78, 77 and 84, 15 and 54, respectively, were found to be quite different from the others in terms of fruit quantitative traits. In terms of fruit qualitative traits, genotypes 31 and 156 were quite different from the others, and genotypes 149 and 158 and 165 and 125 were found to be highly similar to each other. In terms of leaf traits, genotypes 50 and 108 were quite different from the others, and genotypes 42-90, 33-104 and 132-152 were found to be highly similar to each other. This research has shown that the pear genetic resources of Çaykara district show rich biodiversity and could be useful germplasm in breeding programs for

commercial use, to improve existing varieties or to use to obtain new varieties.

**Keywords:** *Pyrus communis*, Variation, Breeding



## BAZI KEKİK TÜRLERİNİN BİYOAKTİF BİLEŞENLERİ VE SAĞLIĞA ETKİLERİ

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### ÖZET

İnsan hayatında bitkiler önemli bir yer tutmaktadır. Çünkü bitkiler, hem oksijenin hem besin maddelerinin bir kısmının üretimini gerçekleştirirler. Ayrıca çok eski zamanlardan beri aroma, tat, koku verici olarak baharat şeklinde yemeklere katılmakta ve özellikle hastalıkların tedavisinde ilaç olarak kullanılmaktadırlar.

Kekik (*Thymus*), Lamiaceae ailesine ait, kendine özgü kokusu olan bir bitkidir. Şifalı bir bitki olarak bilinmektedir. Kekik türleri, rahatlatıcı etki gösterdiklerinden dolayı çay olarak; sindirimi kolaylaştırıcı etkilerinden dolayı da yemeklerde çeşni ve baharat olarak kullanılmaktadır. Oksidatif stresi ve dengesizlikleri kontrol etmeye, bağışıklığı geliştirmeye katkıda bulunurlar, antimikotik aktivite gösterdiklerinden dolayı aflatoksin üretimini inhibe ederler. Antioksidan ve antimikrobiyal etki ile gıdaların acılaşmasını ve bozulmasını önleyerek raf ömürlerini uzatırlar. Çeşitli hastalıklara karşı kas gevşetici, kramp çözücü, sindirim sistemi uyarıcı, iştah açıcı, hafızayı kuvvetlendirici, diş ağrısı giderici, romatizma ve damar sertliğini giderici, sivilce iyileştirici, saç canlandırıcı, balgam söktürücü, kilo verdirici, bakteri önleyici, üst solunum yolu iltihabı ve öksürük önleyici olarak kullanılmaktadırlar. Kekiklerden elde edilen uçucu yağlar, antiseptik, antifungal, antiparaziter, antibakteriyal etki gösterirler.

Kekik, biyoaktif bileşik olarak özellikle fenolik bileşik sınıfında olan karvakrol ve timol içerir. Bunların yanında p-simen,  $\alpha$ -terpinen, simol, borneol, karyofilen, mirsen, limonen, kamfen, linalol, sabinen, karen gibi bileşikler de içerir. Kekiğin ana bileşenlerinden olan karvakrol, antioksidan, antiinflamatuvar, antibakteriyel, antifungal etkiye sahiptir. Kaşıntı ve alerji önleyici, böcek öldürücü olarak kullanılır. Sindirim düzenleyici etkisinden dolayı gıdalara katılır. Timol bileşiği, yara iyileştirici, antiinflamatuvar, antifungal, antibakteriyel, antioksidan, antikanser, immünmodülatör, sindirim düzenleyici, güçlü antimikrobiyal ve antagonist etki gösterir. Cilt tedavisinde kullanılmak üzere kozmetik sanayisinde kullanılır. Sivrisinek kovucu ve larvaları üzerinde toksik etkisi vardır.

**Anahtar Kelimeler:** Kekik, Biyoaktif İçerik, Sağlık, Fenolik Bileşik

### BIOACTIVE COMPONENTS OF SOME THYME (THYMUS) SPECIES AND THEIR EFFECTS ON HEALTH

#### ABSTRACT

Plant shave an important place in human life. Because plants carry out the production of both oxygen and some nutrients. In addition, they have been added to foods in the form of spices as aroma, taste and odorant since ancient times, and they have been used as medicine, especially in the treatment of diseases.

Thyme (*Thymus*) is an herb belonging to the Lamiaceae family, with a distinctive odor. It is known as a medicinal plant. Thyme species are used as tea because they have a relaxing effect; It is used as a condiment and spice in meals due to its digestive effects. They contribute to the control of oxidative stress and imbalances, improve immunity and inhibit aflatoxin production due to their antimycotic activity. They extend the shelf life of foods by preventing them from becoming rancid and spoiled by their antioxidant and antimicrobial effects. Muscle relaxant, cramp solver, digestive system stimulant, appetite stimulant, memory enhancer, toothache reliever, rheumatism and arteriosclerosis relief, acne healer, hair revitalizer, expectorant, weight loss, anti bacterial, upper respiratory tract inflammation and cough against various diseases, used as a

preventative. Essential oils obtained from thyme show antiseptic, antifungal, antiparasitic, and antibacterial effects.

Thyme contains carvacrol and thymol as bioactive compounds, especially in the phenolic compound class. In addition to these, it also contains such as p-cymene,  $\alpha$ -terpinene, cimol, borneol, caryophyllene, myrcene, limonene, camphene, linalool, sabinene, karen. Carvacrol, one of the main components of tyhme, has antioxidant, antiinflammatory, antibacterial, and antifungal effects. It is used as an antiitch and antiallergy, insecticide. It is added to foods due to its digestive regulating effect. Thymol compound shows wound healing, antiinflammatory, antifungal, antibacterial, antioxidant, anticancer, immunomodulatory, digestive regulator, strong antimicrobial, and antagonist effects. It is used in the cosmetic industry for use in skin treatment. It has a toxic effect on mosquito repellent and its larvae.

**Keywords:** Thymus, Bioactive Content, Health, Phenolic Compound

## KİVİNİN FARKLI MEYVE OLUMU DÖNEMLERİNDE FİZİKOKİMYASAL ÖZELLİKLERİN DEĞİŞİMİ

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### ÖZET

Bu çalışma ‘Hayward’ kivişinin taze ve kuru meyvelerindeki bazı fizikokimyasal özelliklerin değişimini belirlemek amacıyla yürütülmüştür. Araştırma materyali Ordu Üniversitesi Ziraat Fakültesi Bahçe Bitkileri Bölümünün araştırma ve uygulama arazisinden 2022 yılında temin edilmiştir. Meyveler suda çözünür kuru madde oranlarına göre 3 farklı tarihte hasat edilmiştir. Fizikokimyasal analizler 1. hasat (SÇKM %5-5.5), 2. hasat (SÇKM %6-6.5) ve 3. hasat (SÇKM %7-7.5) dönemi örnekleri ile 2. ve 3. hasat dönemi meyvelerin yeme olumundaki örneklerinde olmak üzere toplam 5 grupta yapılmıştır. Varyans analizi taze kivi meyvelerinin suda çözünür kuru madde ve titre edilebilir asitlik (sitrik asit) değerlerinin, kuru meyvelerin ise sadece suda çözünür kuru madde oranının meyve olumlarına göre önemli düzeyde değiştiğini ortaya koymuştur. C vitamini değişimi taze ve kuru meyvelerde önemsiz bulunmuştur. Taze ve kuru meyvelerde en yüksek suda çözünür kuru madde 2. hasat yeme olumu meyvelerinde, taze meyvelerde en yüksek titre edilebilir asitlik 1. hasat dışındaki meyvelerde belirlenmiştir. Diğer taraftan, nem ve toplam kuru madde oranları da meyve olumundan farklı düzeyde etkilenmiştir. Taze ve kuru meyvelerde 2. ve 3. hasat yeme olumu meyvelerinin nem oranları diğerlerinden daha düşükken, toplam kuru madde oranları daha yüksek bulunmuştur. Korelasyon analizi taze meyvelerin suda çözünür kuru madde oranının toplam kuru madde (0.810) ve kuru meyvelerin suda çözünür kuru madde oranıyla (0.717) pozitif, nem oranı ile (-0.810) negatif ilişkili olduğunu ortaya koymuştur. Kuru meyvelerin suda çözünür kuru madde oranı toplam kuru madde oranı ile (0.760) pozitif, nem oranı ile (-0.760) negatif ve toplam kuru madde oranının da nem oranı ile (-1.000) negatif ilişkili olduğu belirlenmiştir.

**Anahtar Kelimeler:** ‘Hayward’, Taze meyve, Kurutulmuş meyve

## CHANGE OF PHYSICOCHEMICAL TRAITS OF KIWIFRUIT IN DIFFERENT FRUIT MATURITY

### ABSTRACT

This study was carried out to determine the changes in some physicochemical traits of fresh and dried fruits of 'Hayward' kiwifruit. The research material was obtained from the research and practice land of Ordu University Faculty of Agriculture, Department of Horticulture in 2022. Fruits were harvested on 3 different dates according to their water-soluble dry matter contents (TSS). Physicochemical analyzes were performed in the 5 sample groups that they were consisted of the 1st harvest (TSS, 5-5.5%), 2nd harvest (TSS, 6-6.5%), 3rd harvest (TSS, 7-7.5%), and in the eating maturity samples of the 2nd and 3rd harvest periods. Analysis of variance revealed that the water-soluble dry matter and titratable acidity (citric acid) values of fresh kiwifruits, while the ratio of only water-soluble dry matter of dried fruits changed significantly according to fruit maturity periods. Vitamin C variation was found to be insignificant in fresh and dried fruits. In fresh and dried fruits, the highest water-soluble dry matter was determined in the fruits of the 2nd harvest, the highest titratable acidity in fresh fruits was determined in the fruits other than the 1st harvest. On the other hand, moisture and total dry matter ratios were also affected differently by fruit maturity periods. In fresh and dried fruits, the moisture ratios of the 2nd and 3rd harvest fruits were lower than the others, while the total dry matter ratios were higher. Correlation analysis revealed that the water-soluble dry matter ratio of fresh fruits was positively correlated with total dry matter (0.810) and the water-soluble dry matter ratio of

dried fruits (0.717) and negatively correlated with moisture ratio (-0.810). It was determined that the water-soluble dry matter ratio of dried fruits was positively correlated to the total dry matter ratio (0.760), negatively correlated to the moisture ratio (-0.760), and the total dry matter ratio was negatively correlated to the moisture ratio (-1.000).

**Keywords:** 'Hayward', Fresh fruit, Dried fruit

## ARI EKMEĞİNİN BİYOAKTİF FENOLİK İÇERİĞİ

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### ÖZET

Arı ürünleri son zamanlarda çok fazla farkındalık oluşturarak hem bilimsel araştırmalarda hem de ticari faaliyetlerde ilgi odağı olmaktadır. Arı ekmeği özet olarak, polenlerin laktik asit ile fermantasyona uğramış haline denir. Bal, polen ve arıların tükürük bezlerinin salgıları ile oluşmaktadır. Arı ekmeği diğer bir tabir ile perga, arı ürünleri arasında eskiden fazla bilinmezken günümüzde ise çok daha fazla bilinir olmuştur. Bu bilinirliğin temel nedenleri arasında ise arı ekmeğinin içeriğindeki biyoaktif bileşenlerin varlığı ve gösterdiği etkiler gelmektedir. Arı ekmeği temel olarak polenin fermante hali olmasına rağmen arı poleninden daha fazla biyolojik aktivite göstermektedir. Bunun temel nedeni ise fermantasyon sürecinde polenlerin hücre duvarlarının yıkılmasıdır. Bu nedenle insan organizmasını güçlendirerek vitamin, mineral, protein ve besin ihtiyacını karşılayabilmektedir. 300'den fazla bileşen içeriği tespit edilen arı ekmeğinin, temel olarak içeriğinde karbohidratlar, enzimler, peptitler, aminoasitler, vitaminler, proteinler, lipitler, yağ asitleri ve sekonder metabolitler bulunur.

Kıymetli bir arı ürünü olan arı ekmeğinin biyolojik aktivitelerinin temelinde sekonder metabolitler olan fenolik bileşikler gelmektedir. Fenolik bileşikler içeriğinde birçok farklı bileşik sınıfını bulunduran fenol molekülü bağlı bileşiklerdir. Polifenoller antioksidan aktivitelerin öncü sebepleridir bu nedenle birçok hastalığın tedavisinde rol oynar. Bu amaçla birçok bilimsel araştırma yapılmaktadır. Yapılan araştırmalar sonucunda arı ekmeğinde tespit edilen bazı fenolik bileşikler şunlardır: kuersetin, kaempferol, mirisetin, isorhamnetin, p-kumarik asit, krisin, apigenin, kafeik asit, rosmarinik asit, mirisetin, luteolin, naringin ve rutin. Bu derlemede son çalışmalar ile arı ekmeğinde tespit edilen fenolik bileşikler ve bunların biyolojik aktiviteleri değerlendirilmiştir.

**Anahtar Kelimeler:** Arı Ekmeği, Perga, Biyoaktif İçerik, Fenolik Bileşen

### BIOACTIVE PHENOLIC CONTENT OF BEE BREAD

#### ABSTRACT

Bee products have recently become the focus of attention in both scientific research and commercial activities by creating a lot of awareness. In summary, bee bread is called pollen fermented with lactic acid. Honey is produced by pollen and the secretions of the salivary glands of bees. Bee bread, in other words perga, was not known among bee products in the past, but today it has become much more known. Among the main reasons for this awareness are the presence of bioactive components in the content of bee bread and the effects it shows. Although bee bread is basically a fermented form of pollen, it shows more biological activity than bee pollen. The main reason for this is the destruction of the cell walls of pollen during the fermentation process. For this reason, it can meet the need for vitamins, minerals, protein and nutrients by strengthening the human organism. Bee bread, which has more than 300 component content, mainly contains carbohydrates, enzymes, peptides, amino acids, vitamins, proteins, lipids, fatty acids and secondary metabolites.

The biological activities of bee bread, which is a valuable bee product, are based on phenolic compounds, which are secondary metabolites. Phenolic compounds are phenol molecule bound compounds that contain many different compound classes. Polyphenols are the leading causes of antioxidant activities, therefore they play a role in the treatment of many diseases. For this purpose, many scientific studies are carried out. As a

result of the researches, some phenolic compounds detected in bee bread are: quercetin, kaempferol, myricetin, isorhamnetin p-coumaric acid, chrysin, apigenin, caffeic acid, rosmarinic acid, luteolin, naringin, and rutin. In this review, phenolic compounds detected in bee bread with recent studies and their biological activities were evaluated.

**Keywords:** Bee Bread, Perga, Bioactive Content, Phenolic Ingredient

## A POPULAR FRUIT IN IMPROVEMENT OF HEALTH: ARONIA

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### ABSTRACT

Chokeberries are a member of the *Rosaceae* family and a berry whose color varies between red, purple and black depending on the species. Aronia basically contains four different species: *A. arbutifolia*, *A. melanocarpa*, *A. prunifolia*, and *A. mitschurinii*. Aronia is one of the popular fruit species around the world due to its yield per unit area and its health benefits. The species grown in our country is *A. melanocarpa*. Aronia can be consumed as fresh or dried fruit as well as in fruit juice, fruit juice concentrate, extract, jam or fermented product. It is suggested that Aronia, which cannot be included in the diet due to its sour and bitter taste, may be easier to consume as fruit juice or extract. Aronia has many positive effects on health thanks to various bioactive components such as fiber, vitamins, minerals and high amounts of polyphenolic compounds. The most distinctive feature of aronia fruit is that it provides positive contributions to health in relation to the high amount of polyphenols it contains. Polyphenols, especially anthocyanins and procyanidins, form the main group of bioactive components in Aronia and contribute greatly to the antioxidant property of the plant. The mechanism of action of polyphenols in aronia is an active area of research. Aronia, whose cultivation in our country is supported by the Ministry of Agriculture and Forestry as of 2021, has high antioxidant capacity and has positive effects on health. In the literature, there are studies showing that aronia has positive contributions in reducing the risk of diabetes, cardiovascular diseases, ulcerative colitis and neurodegenerative diseases. Although it is stated that this possible contribution may be through the improvement of inflammation, oxidative stress and microbiota parameters, the mechanisms are not clear. In particular, the number of studies examining the effects of Aronia on humans is insufficient. It is thought that studies in this field will contribute positively to the literature.

**Keywords:** Aronia, polyphenols, antioxidant, health

## SAĞLIĞIN GELİŞTİRİLMESİNDE POPÜLER BİR MEYVE: ARONYA

### ÖZET

Aronya (chokeberries), *Rosaceae* familyasının bir üyesi olup rengi türe bağlı olarak kırmızı, mor ve siyah arasında değişen üzüksü bir meyvedir. Aronya temelde *A. arbutifolia*, *A. melanocarpa*, *A. prunifolia*, ve *A. mitschurinii* olmak üzere dört farklı tür içerir. Ülkemizde yetiştirilen tür ise *A. melanocarpa*'dır Aronya gerek birim alandaki getirisi gerekse sağlık açısından sahip olduğu yararlarından dolayı dünya çapında popüler meyve türlerinden biridir. Aronya taze ya da kuru meyve olarak tüketilebileceği gibi meyve suyu, meyve suyu konsantresi, ekstrakt, reçel veya fermente ürün içerisinde de tüketilebilmektedir. Ekşi ve buruk tadı nedeniyle diyetle fazla yer alamayan aronyanın meyve suyu veya ekstrakt olarak tüketiminin daha kolay olabileceği öne sürülmektedir. Aronya içerdiği posa, vitaminler, mineraller ve yüksek miktardaki polifenolik bileşikler gibi çeşitli biyoaktif bileşenler sayesinde sağlık üzerinde pek çok olumlu etkiye sahiptir Aronya meyvesinin en belirgin özelliği içerdiği yüksek polifenol miktarı ile ilişkili olarak sağlık için olumlu katkılar sağlıyor olmasıdır. Polifenoller, özellikle antosiyaninler ve prosiyanidinler, aronyada bulunan biyoaktif bileşenlerin ana grubunu oluşturarak bitkinin antioksidan özelliğine büyük katkı sağlamaktadır. Aronyada bulunan polifenollerin etki mekanizmaları aktif bir araştırma alanıdır. Ülkemizdeki yetiştiriciliği 2021 yılı

itibariyle Tarım ve Orman Bakanlığı tarafından desteklenen ve içerdği fenolik bileşikler sayesinde yüksek antioksidan kapasiteye sahip olan aronyanın sağlık üzerine olumlu etkileri bulunmaktadır. Literatürde aronyanın özellikle diyabet, kardiyovasküler hastalıklar, ülseratif kolit ve nörodejeneratif hastalıkların riskinin azaltılmasında olumlu katkılarının olduğunu gösteren çalışmalar bulunmaktadır. Bu olası katkının inflamasyon, oksidatif stres ve mikrobiyota parametrelerinin iyileşmesi aracılığıyla olabileceği belirtilse de mekanizmalar net değildir. Özellikle aronyanın etkilerini insanlar üzerinde inceleyen çalışmaların sayısı yetersizdir. Bu alanda yapılacak çalışmaların literatüre olumlu katkı sağlayacağı düşünülmektedir.

**Anahtar kelimeler:** Aronya, polifenoller, antioksidan, sağlık



## ***Solanum melongala* L. Ve *Cucurbita pepo* L. TÜRLERİNE AİT ATA TOHUMLARININ İN VİTRO STERİLİZASYON OPTİMİZASYONU VE ÇİMLENMENİN SAĞLANMASI**

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### **ÖZET**

Ata tohumlar binlerce yıldır değişen ekolojik koşullara adapte olarak günümüze kadar gelmeyi başarmıştır. Ancak her tohumun bu şartlara karşı koyamaması ve tek tip kusursuz tohumların yaygınlaşması sebebiyle, çeşitlilik giderek azalmaktadır. Çünkü hazır tohumlardan, birim alanda daha fazla ürün elde edilmektedir. Bu sebeple, çiftçilerin her hasat sonrası bir sonraki sene için sakladığı ata tohumlar, çeşitliliğin devamı için koruma altına alınmalı ve bu tohumlara sahip çıkılmalıdır. Zira bu tohumlar hem biyoçeşitliliği artırmakta hem de besin bileşenleri bakımından daha zengin bir içeriğe sahip olmaktadır.

Bitki doku kültürü, in vitroda klon bitki, embriyo ve bitki ürünlerinin (sekonder metabolitler) hızlı, bol ve sağlıklı şekilde üretilmesini sağlayan bir yöntemdir. Bu yöntemin en büyük avantajlarından biri zaman ve çevre şartlarına bağlı olmaksızın üretim yapılabilmesidir. Böylece ata tohumların doku kültürüyle üretilmesi mevsime bağlı olmaksızın steril bitki çoğaltımı için büyük bir avantaj sağlayacaktır.

*Solanum melongala* L. ve *Cucurbita pepo* L. türüne ait ata tohumlar da 30 sn etanol muamelesinin ardından 1-2 damla Tween-20 içeren %50'lik sodyum hipoklorit solüsyonunda 15 dk bekletilip 3 defa steril saf sudan geçirilerek yüzey sterilizasyonuna tabi tutuldu ve sterilizasyon işleminin ardından in vitro ortamda bitki büyüme düzenleyicisi içermeyen 30 gr/l sükröz, 4,4 gr/l Murashige and Skoog bazal ortam ve jelleştirici olarak 8 gr/l plant agar içeren pH'sı 5.7-5.8'e ayarlanarak 121 °C'de 20 dk otoklavda sterilize edilen MS besi ortamına ekilerek çimlenme ortamına alındı. Yapılan tüm in vitro çalışmalar 24±2 °C'de %70-%80 nem içeren iklimlendirme odasına transfer edildi ve bekletildi. Çimlenme süreleri yaklaşık olarak 30-45 gün arasındadır.

**Anahtar Kelimeler:** *Solanum melongala* L., *Cucurbita pepo* L., Murashige Skoog, in vitro

### **IN VITRO STERILIZATION OPTIMIZATION AND ENSURANCE OF HEIRLOOM SEEDS OF *Solanum melongala* L. and *Cucurbita pepo* L. SPECIES**

### **ABSTRACT**

Heirloom seeds have survived to the present day by adapting to changing ecological conditions for thousands of years. However, due to the fact that not every seed can withstand these conditions and the spread of uniform perfect seeds, the diversity is gradually decreasing. Because more products are obtained per unit area from ready-made seeds. For this reason, the heirloom seeds that farmers save for the next year after each harvest should be protected and protected for the continuation of diversity. Because these seeds both increase biodiversity and have a richer content in terms of nutritional components.

Plant tissue culture is a method that enables rapid, abundant and healthy production of clone plants, embryos and plant products (secondary metabolites) in vitro. One of the biggest advantages of this method is that it can be produced regardless of time and environmental conditions.

Heirloom seeds of *Solanum melongala* L. and *Cucurbita pepo* L. species were subjected to surface sterilization after 30 seconds of ethanol treatment, kept in 50% sodium hypochlorite solution containing 1-2 drops of Tween-20 for 15 minutes, passed through sterile distilled water 3 times, and sterilized. followed by 30 g/l sucrose without plant growth regulator in vitro, 4.4 g/l Murashige and Skoog basal medium and 8 g/l

plant agar as gelling agent by adjusting the pH to 5.7-5.8 for 20 min at 121°C. It was planted in autoclave sterilized MS medium and taken into germination medium.

All in vitro studies were transferred to an air-conditioning room with 70%-80% humidity at 24±2 °C and kept. Germination times are approximately 30-45 days.

**Keywords:** *Solanum melongala* L., *Cucurbita pepo* L., Murashige Skoog, in vitro

## ÇİMLENDİRME ORTAMLARININ FASULYEDE ÇİMLENMEYE ETKİLERİ

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### ÖZET

Günümüzde dengeli ve yeterli beslenme sorunu birçok ülkede milyonlarca insan için gerekli olan protein ağırlıklı besin maddelerine erişememesi nedeniyle devam etmektedir. Özellikle gelişmekte olan ülkelerde insan beslenmesinde günlük protein açığının karşılanması geleceğin güvenli gıdaları arasında fabaceae familyasına dahil olan yemeklik baklagil türlerinden karşılanmaya çalışılmaktadır. Yemeklik baklagil türleri arasında, dünya genelinde en fazla ekim alanına sahip olan baklagil cinsi kuru fasulyedir. Fasulye başta protein olmak üzere, karbohidrat, A, B, D vitaminleri ve fosfor, demir, kalsiyum, potasyum gibi mineral ihtiyacının karşılanmasında önemli bir alternatif besin kaynağı olarak insanların protein ihtiyacını karşılamada önemli bir kaynak oluşturmaktadır. Tohum çimlenmesi, bir bitkinin yaşam döngüsündeki en önemli aşamadır. Fasulye yetiştiriciliğinde üniform ve eksiksiz bir şekilde çimlenip çıkış yapamama önemli sorunlardan birisidir. Uluslararası kurallara uyularak test edilmiş olsalar da yüksek çimlenme yeteneğindeki tohum grupları; çıkış ve performanslarında önemli ölçüde farklılık gösterebilmektedir. Bu çalışma ile sıcaklık ve nem faktörlerinin kontrol edildiği topraksız ve topraklı koşullarda fasulye tohumlarının çimlenme ve çıkış gücünün belirlenmesi amaçlanmıştır. Uluslararası Tohum Test Birliği (International Seed Testing Association-ISTA)'nin belirlediği çimlendirme testi yöntemine göre çimlendirmeye bırakılan fasulye tohumları topraksız koşullarda topraklı koşullara göre sağlıklı çimlenememişlerdir. Topraksız ortamda çimlenme sorunu gösteren tohumların, topraklı ortamda %100 çimlenme ve çıkış yaptığı gözlenmiştir. Bu durum petri kapları ortamlarında yapılan çimlendirme testlerinin arazi koşullarındaki çimlenme durumunu temsil etmediğini ortaya koymaktadır. Bu nedenle çimlendirme testlerinin tohum gruplarında çimlenme durumlarının belirlenmesinde, topraksız ortam testlerinin yetersiz olduğunu hem topraklı hem topraksız çimlendirme testlerinin yapılmasının daha sağlıklı veriler elde edilmesi için gerekli olduğunu göstermektedir.

**Anahtar Kelimeler:** Fasulye, çimlenme, çimlenme testleri

### EFFECTS OF GERMINATION ENVIRONMENTS ON BEAN GERMINATION

#### ABSTRACT

The problem of balanced and adequate nutrition continues due to the inability of millions of people in many countries to access protein-based nutrients. In developing countries, food legumes belonging to Fabaceae family, have especially been used to meet the daily protein deficit in human nutrition. Among the food legumes, dry beans have the biggest planting area in the world. Beans constitute an important source in meeting the protein needs of people as an important alternative food source in meeting the needs of primarily protein, carbohydrates, vitamins A, B, D and minerals such as phosphorus, iron, calcium and potassium. Seed germination is the most important stage in a plant's life cycle. One of the most important problems in bean cultivation is the inability to germinate in a uniform and complete manner. In this study, it was aimed to determine the germination and emergence of bean seeds in soil and soilless conditions where temperature and humidity factors are controlled. Bean seeds left to germinate according to the germination test method determined by the International Seed Testing Association (ISTA) could not germinate properly in soilless conditions compared to soil conditions. It has been observed that the seeds showing germination problem in soilless medium have 100% germination and emergence in soil medium. This situation reveals that the germination tests performed in petri dishes environments do not represent the germination status in field conditions. For this reason, soilless environment tests are insufficient in determining the germination status of germination tests in seed groups, and it is necessary to perform both soil and soilless germination tests to obtain healthier data.

**Key words:** Dry bean, germination, germination tests

## YUMUŞAK KAPSÜL ENKAPSÜLASYONUNDA JELATİN HARİCİ ALTERNATİFLERİN KULLANIMININ DEĞERLENDİRİLMESİ

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### ÖZET

Yumuşak kapsüller çözünürlüğü az olan bileşikler için çok sık kullanılan iyi bir katı oral dozaj formudur ve söz konusu bileşiklerin biyoyararlılığı, ışığa ve oksijene karşı korunmasını sağlamaktadır. Yumuşak kapsül kabuğunda en fazla kullanılan bileşen jelatindir. Ancak dini yasaklar ve vegan tüketim gibi kısıtlamalar nedeniyle jelatine muadil hayvansal olmayan kaynaklar kullanılarak bitkisel yumuşak kapsüller üretilmeye başlanmıştır. Bitkisel yumuşak kapsüllerde jelatin yerine hidroksi propil metilselüloz (HPMC), kitosan, modifiye nişasta, aljinat, İrlanda yosunu gibi bileşenler kullanılmaktadır. Bitkisel yumuşak kapsüller de jelatin yumuşak kapsüller gibi dolgu maddesinin kokusunu ve tadını maskelemek gibi avantajlara sahiptir. Ancak bitkisel yumuşak kapsüller jelatin yumuşak kapsüllerle kıyaslandıklarında daha maliyeti yüksek bir üretim sürecine sahiptir ve jelatin yumuşak kapsül kabuğuna göre bitkisel yumuşak kapsül yapısının yeterince sağlam olmadığı düşünülmektedir. Bitkisel yumuşak kapsüllerinin kullanım alanları genel anlamda gıda takviyeleri, kozmetik endüstrisinde güzellik takviyeleri, diyet kısıtlamasına sahip hastalar için oral dozaj formu şeklinde sıralanabilir. Vegan insanların sayısının artması, dini kısıtlamalar nedeniyle jelatin içeren ürün kullanmak istemeyen kişilerin var olması gibi sebeplerle bitkisel yumuşak kapsüllerin pazar payı giderek artmaktadır.

Bu derlemede enkapsülasyon kapsamında yumuşak kapsüller, üretim süreçleri, içerikleri, bitkisel yumuşak kapsüller, pazar payları ve jelatin yumuşak kapsüller ve bitkisel yumuşak kapsüllerin karşılaştırılması hakkında bilgiler sunulmuştur.

**Anahtar kelimeler:** bitkisel yumuşak kapsüller, jelatin, jelatinsiz yumuşak kapsüller

### EVALUATION OF THE USE OF NON-JELATIN ALTERNATIVES AT SOFT CAPSULE ENCAPSULATION

### ABSTRACT

Soft capsules are a good solid oral dosage form, often used for insoluble compounds, and the bioavailability of said compounds protects against light and oxygen. The most commonly used ingredient in the soft capsule shell is gelatin. However, due to restrictions such as religious prohibitions and vegan consumption, plant soft capsules have started to be produced using non-animal sources equivalent to gelatin. In soft plant-based capsules, components such as hydroxypropyl methylcellulose (HPMC), chitosan, modified starch, alginate, and carrageenan are used instead of gelatin. Plant-based soft capsules also have the advantage of masking the odor and taste of the filler, like soft gelatin capsules. However, plant-based soft capsules have a more costly production process than soft gelatin capsules, and it is thought that the plant-based soft capsule structure is not strong enough compared to the gelatin soft capsule shell. Usage areas of plant-based soft capsules can be listed as food supplements in general, beauty supplements in the cosmetic industry, and oral dosage forms for patients with dietary restrictions. The market share of plant-based soft capsules is gradually increasing due to the number of vegan people and people who do not want to use gelatin products due to religious restrictions. In this review, information about soft capsules, production processes, contents, plant-based soft

capsules, market shares and a comparison of soft gelatin capsules and plant-based soft capsules are presented.

**Keywords:** plant-based soft capsules, gelatine, non-gelatine soft capsules

## ***Solanum lycopersicum* L. ve *Capsicum annuum* L.'YE AİT ATA TOHUMLARININ ÇİMLENMESİ SONUCU ELDE EDİLEN HİPOKOTİLLERDEN İN VİTRO KALLUS ELDESİ**

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### **ÖZET**

Hem besleyici hem de kimyasal madde içerikleri (protein, şeker, vitamin, antioksidan) ile renk, koku, tat gibi özellikleri bakımından diğer hibrit türlere göre daha üstün kalitede olan ata tohumların in vitro kültürü, yüksek değere sahip ticari türlerin, virüs içermeyen hastaliksız bitkilerin klonal çoğaltım ve birçok biyoteknolojik uygulamada başarılı bir şekilde kullanılabilir. Bitki doku kültürü metodu kitlesel çoğaltım, bitki rejenerasyonu ve genetik olarak tek tip bitkiler geliştirmek için önemlidir. Tohumdan başlayarak farklı eksplantlardan (hipokotiller, yapraklar, kök kesitler, pedikül, yaprak sapları) in vitro çoğaltım sağlanabilir.

*Solanum lycopersicum* L. ve *Capsicum annuum* L. türüne ait ata tohumlar, 30 sn etanol muamelesinin ardından %50'lik sodyum hipoklorit solüsyonunda 15 dk bekletilip 3 defa steril saf sudan geçirilerek yüzey sterilizasyonuna tabi tutuldu ve in vitro ekim için hazır hale getirildi. Tohumlar, sterilizasyon işleminin ardından in vitro ortamda bitki büyüme düzenleyicisi içermeyen 30 gr/l sükröz, 4,4 gr/l Murashige and Skoog (MS) bazal ortam ve jelleştirici olarak 8 gr/l plant agar içeren pH'sı 5.7-5.8'e ayarlanıp 121 °C'de 20 dk otoklavda sterilize edilen MS besi ortamına ekilerek sırasıyla 23 gün ve 45 gün süresince çimlendirildi. Ardından çimlenen tohumlardan elde edilen hipokotil parçaları ikinci aşama olan belli konsantrasyon ve kombinasyonlarda (oksin/sitokinin) bitki büyüme düzenleyicisi içeren kallus ortamı (MS bazal ortamı + 0,5 mg/l IAA + 3,5 mg/l BAP)'na aktarıldı ve yapılan tüm in vitro çalışmalar 24±2 °C'de %70-%80 nem içeren iklimlendirme odasına transfer edildi. 21-30 gün sonunda kallus oluşumları gözlemlendi.

**Anahtar Kelimeler:** *Solanum lycopersicum* L., *Capsicum annuum* L., Murashige and Skoog

### **OBTAINING IN VITRO CALLUS FROM HYPOCOTILES OBTAINED BY THE ANCESTRAL SEEDS OF *Solanum lycopersicum* L. and *Capsicum annuum* L.**

#### **ABSTRACT**

In vitro culture of heirloom seeds, which are of superior quality compared to other hybrid species in terms of both nutritive and chemical content (protein, sugar, vitamin, antioxidant) and features such as color, smell, taste, clonal culture of high-value commercial species, virus-free disease-free plants. It can be used successfully in multiplication and many biotechnological applications. The plant tissue culture method is important for mass propagation, plant regeneration, and for developing genetically uniform plants. In vitro propagation can be achieved from different explants (hypocotyls, leaves, root sections, pedicle, petioles) starting from seed.

Heirloom seeds of *Solanum lycopersicum* L. and *Capsicum annuum* L. species were subjected to surface sterilization after 30 seconds of ethanol treatment, kept in 50% sodium hypochlorite solution for 15 minutes, passed through sterile distilled water 3 times and made ready for in vitro cultivation. After the sterilization process, the seeds are adjusted to pH 5.7-5.8 containing 30 g/l sucrose without plant growth regulator, 4.4 g/l Murashige and Skoog (MS) basal medium and 8 g/l plant agar as gelling agent in vitro. They were planted in MS medium that was sterilized in an autoclave at 121 °C for 20 minutes and germinated for 23 days and 45 days, respectively.

Then, hypocotyl fragments obtained from germinated seeds were transferred to callus medium (MS basal medium + 0,5 mg/l IAA + 3,5 mg/l BAP) containing plant growth regulator at certain concentrations and

combinations (auxin/cytokinin), which is the second stage, and All in vitro studies were transferred to an air-conditioning room with 70%-80% humidity at  $24\pm 2$  °C. Callus formations were observed at the end of 21-30 days

**Keywords:** *Solanum lycopersicum* L., *Capsicum annuum* L., Murashige and Skoog

## KENEVİR TOHUMUNUN SÜRÜLEBİLİR GIDA FORMLARINDA DEĞERLENDİRİLMESİ

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### ÖZET

Yaşam şartlarının değişmesi ile birlikte tüketim alışkanlıklarında önemli değişiklikler meydana gelmiştir. Günlük alınması gereken enerji ve besin miktarının karşılanmasında pratik ve besin içeriği yüksek gıdalara olan talep bu doğrultuda önemli bir artış göstermiştir. Bu sebeple günün her saati tüketilebilen, çeşitli formlarda ve çeşitli içeriklerde üretilebilen sürülebilir ürünlere ilgi oldukça artmıştır. Türkiye, konumu ve iklim şartları dolayısıyla tarımsal ürün çeşitliliğinin fazla olduğu bir ülkedir. Bu ürünlerin içerisinde de kuruyemiş büyük bir paya sahiptir. Çeşit zenginliğinden kaynaklı olarak farklı formlarda kuruyemiş içerikli ürünler üretilmektedir. Sürülebilir olan formlarının enerji, vitamin ve mineral açısından zengin olmasıyla birlikte istenilen içerikte ve doğal içerikli olarak üretilebilmesi bu gıdaların popülerliğini arttırmıştır. Aynı zamanda özel beslenme ihtiyacı olan bireylerin (yaşlılar, çocuklar, engelliler, çölyak hastaları, alerjen rahatsızlığı olan bireyler vb.) ihtiyaç duydukları besin değerlerine göre çeşitlendirebilecekleri esnek bir formülasyona sahiptir. Sporcu beslenmesinde de son dönemlerde oldukça yaygın olarak kullanılmaktadır. Tüm bunlara alternatif olarak kenevir tohumundan elde edilen sürülebilir ürünlerin kuruyemiş esaslı sürülebilir ürünlere nazaran alerjen etkisinin olmaması bu alanda değerlendirilebileceğini göstermektedir. Son yıllarda ülkemizde de ekim alanı ve miktarı giderek artan *Cannabis sativa L.* cinsi endüstriyel kenevir tohumu yüksek besin içeriğine sahip protein, lipid, karbonhidrat ve çözünmeyen lif kaynağı olarak son dönemlerde dikkat çekici bir ürün haline gelmiştir. Bunun yanı sıra enerji değeri ve fosfor, potasyum, sodyum, magnezyum, kükürt, kalsiyum, demir ve çinko bakımından da oldukça zengindir. Besinsel içeriği böylesine zengin olan bir tohumdan üretilecek sürülebilir ürünün insan beslenmesine katkı sağlayacağı düşünülmektedir.

**Anahtar Kelimeler:** Sürülebilir gıda, kenevir, kenevir tohumu

### EVALUATION OF HEMP SEEDS IN SPREADABLE FOOD FORMS

#### ABSTRACT

With the change in living conditions, significant changes have occurred in consumption habits. In this direction, the demand for practical and nutrient-rich foods has increased significantly in meeting the amount of energy and nutrients that should be taken daily. For this reason, the interest in spreadable products that can be consumed at any time and produced in various forms and contents has increased considerably. Türkiye has various agricultural products due to its location and climatic conditions. Nuts have a significant share in these products. Due to the richness of the variety, products containing nuts in different forms are produced. The fact that the spreadable forms are rich in energy, vitamins and minerals and can be produced with the desired and natural content has increased the popularity of these foods. At the same time, it has a flexible formulation that individuals with special nutritional needs (elderly, children, disabled, celiac patients, individuals with allergen disorders, etc.) can diversify according to the nutritional values they need. It has been widely used in sports nutrition in recent years. As an alternative to all these, the fact that the spreads obtained from hemp seeds do not have an allergen effect compared to the nut-based spreads shows that they can be evaluated in this field. *Cannabis sativa L.* type industrial hemp seeds, whose cultivation area and amount have been increasing in our country in recent years, have become a remarkable product as a source of protein, lipid, carbohydrate and insoluble fiber with high nutritional content. In addition, it is rich in



energy value and phosphorus, potassium, sodium, magnesium, sulfur, calcium, iron and zinc. The spreadable product produced from seed with such rich nutritional content is thought to contribute to human nutrition.

**Keywords:** Spreadable foods, hemp, hemp seed

**THE RELATIONSHIP BETWEEN USING LEARNING EXPERIENCE PLATFORM (LXP) AS HOMEWORK and STUDENTS' FAIL/PASS STATUS IN UNIVERSITY ENGLISH PREPARATORY CLASSROOMS**

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**ABSTRACT**

**Objectives:** Instructors use different methods to reach students' interest in languages in foreign language classrooms. LXP is a platform that focuses on the customer's needs, allowing users to select their own learning from a wide range of personalized material. The aim of this study is to investigate the relationship between LXPs usage as an assignment and learners' Fail/Pass status in university English preparatory classrooms in which English is taught as a second language.

**Methods:** The researchers used secondary data collected from "Voxy" which offers a learning experience platform driven by artificial intelligence to personalize the learning process. A quantitative correlational model was used as the research method. For data analysis, the researchers used t-test, correlation, and regression analysis to investigate the effect of doing homework on LXP on learners' fail/pass grades.

**Results:** The study found that doing homework on LXP significantly affects students' fail/pass situation in university preparatory classrooms. In addition, there is a strong correlation between homework grades and final achievement grades ( $r=.525$ ,  $p < .01$ ). Regression analysis indicates that doing homework explains 27.6% of the final achievement grade.

**Conclusions:** The use of Voxy as homework has a significant effect on students' fail/pass status. This can be the results of the percentage of homework the institution evaluates and the assessment measurements. Although the weight of the homework grade is 15% for the final grading, it was found that doing homework explained two times greater than that value. Therefore, homework is crucial for final achievement in English preparatory classes.

**Keywords:** Artificial Intelligence for Learning, Foreign Language Learning, Learning Experience Platforms, Second Language Learning, Second Language Teaching

## ÇOCUK GELİŞİMCİ ADAYLARININ ÇEVREYE YÖNELİK DAVRANIŞLARININ İNCELENMESİ

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### Özet

Eğitimin her boyutunda olduğu gibi çevreye yönelik farkındalığının oluşturulmasında eğitimciden kaynaklanan unsurlar oldukça önemlidir. Çünkü eğitim sisteminde belirlenmiş olan hedefler-kazanımlar doğrultusunda öğrencilerde istenilen yönde ve başarılı şekilde davranışlar oluşturulabilmektedir. Bu bağlamda çevreye karşı bilinçli, ekolojik dengenin farkında olan, sürdürülebilir kalkınmayı ön plana alan bireyler yetiştirebilmek için çocuk gelişimcilerin bu bilince sahip olmaları gerekmektedir. Bu düşünceden hareketle araştırmada çocuk gelişimci adaylarının çevreye yönelik davranışlarının incelenmesi amaçlanmıştır. Araştırmada betimsel araştırma yöntemi tarama modeli kullanılmıştır. Araştırmanın çalışma grubunu çocuk gelişimi bölümünde öğrenim gören üniversite öğrencileri oluşturmaktadır. Araştırmada veri toplama aracı olarak 'Kişisel Bilgi Formu' ve 'Çevre Davranışı Ölçeği' kullanılmış olup, veriler google form aracılığıyla toplanmaktadır. Elde edilen verilerin normallik dağılımları incelendikten sonra normal dağılım gösteren veriler için bağımsız gruplar t testi, tek yönlü varyans analizi (ANOVA) kullanılacak olup normal dağılım göstermeyen veriler için Mann-Whitney U ve Kruskal Wallis H testi uygulanacaktır. Veri toplama süreci devam etmektedir. Toplanan veriler SPSS programı ile analiz edilecektir. Araştırma sonucunda çocuk gelişimci adaylarının çevreye yönelik davranışları hakkında önerilerde bulunulacaktır.

**Anahtar Kelimeler:** Çocuk gelişimi, çevre davranışı, ekoloji

## EXAMINATION OF THE ENVIRONMENTAL BEHAVIORS OF CHILD DEVELOPMENT CANDIDATES

### Abstract

As in all aspects of education, the factors arising from the educator are very important in creating awareness about the environment. Because, in line with the goals and achievements determined in the education system, behaviors can be formed in the desired direction and successfully in the students. In this context, in order to raise individuals who are environmentally conscious, aware of the ecological balance, and prioritize sustainable development, child development professionals need to have this awareness. Based on this idea, it was aimed to examine the environmental behaviors of child development candidates in this study. In the research, descriptive research method scanning model was used. The study group of the research consists of university students studying in the child development department. In the research, 'Personal Information Form' and 'Environmental Behavior Scale' were used as data collection tools, and the data is collected via google form. After examining the normality distribution of the data obtained, independent groups t-test and one-way analysis of variance (ANOVA) will be used for data with normal distribution, and Mann-Whitney U and Kruskal Wallis H tests will be applied for data that do not show normal distribution. The data

collection process continues. The collected data will be analyzed with the SPSS program. As a result of the research, suggestions will be made about the environmental behavior of child development candidates.

**Keywords:** Child development, environmental behavior, ecology

## FUTBOL'DA 17-19 YAŞ SPORCULARDA FONKSİYONEL HAREKET ANALİZİ (FMS) SKORLARININ PATLAYICI KUVVET VE 30M SPRINT İLE İLİŞKİSİ (KOCAELİ İLİ ÖRNEĞİ)

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### ÖZET

Bu çalışmanın amacı FMS(Fonksiyonel Hareket Analizi) skorlarının, patlayıcı kuvvet ve sprint ile arasındaki ilişkiyi tespit etmektir. Çalışma neticesinde FMS skorları ile patlayıcı güç ilişkisi incelendiğinde Durarak uzun atlama testinin, Deep Squat hareketi ile ( $r = 0,890^{**}$ ) ( $p < 0,00^{**}$ ) kuvvetli, Hurdle step( $r=0,366^*$ ), Push up( $r=207^*$ ) hareketleri ile zayıf pozitif ilişkiye rastlanmıştır. In line Lunge, Shoulder Mobility, Active leg raise, Rotary Stability ile uzun atlama testinde anlamlı bir ilişki gözlenmemiştir.

FMS skorları ile 30m sprint ilişkisi incelendiğinde 30m sprint testinin Deep Squat hareketi ( $r=-0,653^{**}$ ) ( $p < 0,00^{**}$ ) güçlü, Hurdle step( $r=-0,281^*$ ), In line Lunge( $r=-0,327^*$ ) hareketleri ile zayıf pozitif ilişkiye rastlanmıştır. Shoulder Mobility, Active Straight Leg Raise, Push Up, Rotary Stability ile 30m Sprint Testinde anlamlı bir ilişki gözlemlenmemiştir.

FMS Testinin fonksiyonel paterninde bulunan üç hareketin tamamı ve parametrelerinin doğrudan fonksiyonel egzersizlerle geliştirilebilen ve müsabık sporculardaki en önemli biyomotorik özelliklerden biri olan Patlayıcı Güç ve sprint özelliği ile anlamlı ilişkisi olması bu çalışmanın en kuvvetli hipotezlerindedir. Bu çalışma sonrası elde edilen veriler bu hipotezi doğrulamaktadır.

**Anahtar kelimeler:** Fms, Sürat, Patlayıcı kuvvet, Eklem hareketliliği, Mobilizasyon, Stabilizasyon

## THE RELATIONSHIP OF FUNCTIONAL MOTION ANALYSIS (FMS) SCORES WITH EXPLOSIVE FORCE AND 30M SPRINT IN ATHLETES AGED 17-19 IN FOOTBALL (KOCAELİ PROVINCE EXAMPLE)

### ABSTRACT

The aim of this study was to determine the relationship between FMS (Functional Movement Analysis) scores, explosive force and sprint. As a result of the study, when the relationship between FMS scores and explosive power was examined, the standing long jump test was found to be strong with Deep Squat movement ( $r = 0.890^{**}$ ) ( $p < 0.00^{**}$ ), Hurdle step( $r=0.366^*$ ), Push up( $r= 207^*$ ) movements were found to be weakly positive. No significant relationship was observed in the long jump test with In line Lunge, Shoulder Mobility, Active leg raise, Rotary Stability.1

When the relationship between FMS scores and 30m sprint is examined, Deep Squat movement of 30m sprint test ( $r=-0.653^{**}$ ) ( $p < 0.00^{**}$ ) is strong, Hurdle step( $r=-0.281^*$ ), In line Lunge( $r=-0.327^*$ ) weak positive relationship was found with movements. No significant relationship was observed in the 30m Sprint Test with Shoulder Mobility, Active Straight Leg Raise, Push Up, Rotary Stability.

It is one of the strongest hypotheses of this study that all three movements and their parameters in the functional pattern of the FMS Test have a significant relationship with the Explosive Power and sprint feature, which can be developed directly with functional exercises and which are one of the most important biomotoric features in competitive athletes. The data obtained after this study confirms this hypothesis.

**Keywords:** Fms, Speed, Explosive force, Joint mobility, Mobilization, Stabilization

## EĞİTİM YÖNETİMİ ALANINDA SOSYAL İNOVASYON ALGISI: ELAZIĞ İL ÖRNEĞİ

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### ÖZET

Araştırmanın temel amacı, okul yöneticilerinin ve öğretmenlerin sosyal inovasyon kavramı hakkındaki bilgi, birikim ve yapılan uygulamalarının incelenmesi ile kavrama olan bakış açılarının ve yaklaşımlarının değerlendirilmesidir. Nitel nitelikte olan bu çalışmada olgubilim (fenomenoloji) deseni kullanılmıştır. Araştırmanın çalışma grubunu Elazığ ilinde bulunan ilk ve orta dereceli okul ve kurumlarında görev yapan yönetici ve öğretmenler oluşturmaktadır. Her eğitim kurumundan 2 öğretmen ve 1 yönetici olmak üzere toplam 10 eğitim kurumundan gönüllülük esasına göre katılımcılar seçilmiştir. Çalışma grubunun belirlenmesinde olasılık temelli örnekleme yöntemlerinden biri olan amaçlı örnekleme yöntemi kullanılmıştır.

Araştırmada veri toplama aracı olarak 10 adet açık uçlu sorudan oluşan yarı yapılandırılmış görüşme formu kullanılmıştır. Görüşme formu hazırlanırken kapsamlı bir literatür çalışması yapılmış ve sorular belirlenmiştir. Literatür çalışması sonrasında hazırlanan sorular üç alan uzmanı ve bir öğretmen tarafından kapsam, içerik ve anlaşılabilirlik bakımından incelenerek gerekli düzenlemeler yapılmıştır. Araştırmada gönüllü olan yönetici ve öğretmenlere, hazırlanan görüşme formundaki sorular yönlendirilmiştir ve cevaplar ses kaydı aracılığı ile toplanmıştır. Araştırmada toplanan veriler, içerik analizi yöntemi ile analiz edilmiştir.

Çalışmanın sonucunda, yöneticilere ve öğretmenlere görüşme öncesinde sosyal inovasyon kavramı açıklanmasına rağmen vermiş oldukları cevaplara bakıldığında hazırbulunuşluk düzeylerinin yeterli olmadığı görülmüştür. Görüşmeye katılan yöneticilerin ve öğretmenlerin sosyal inovasyon kavramı ile girişimcilik, yenilikçilik ve inovasyon kavramlarını birbirine karıştırdıkları, genellikle sosyal inovasyonu okul içi veya okul dışı yeni bir proje yapmak, yeni bir ürün ortaya koymak veya herhangi bir sosyal faaliyette bulunmak olarak algıladıkları tespit edilmiştir.

**Anahtar Kelimeler:** *Eğitim Yönetimi, Sosyal İnovasyon, İnovasyon*

## SOCIAL INNOVATION PERCEPTION IN EDUCATIONAL ADMINISTRATION: THE CASE OF ELAZIG PROVINCE

### ABSTRACT

The main purpose of the research is to evaluate the knowledge, experience and practices of school administrators and teachers about the concept of social innovation and to evaluate their perspectives and approaches to the concept. In this qualitative study, the phenomenology design was used. The study group of the research consists of administrators and teachers working in primary and secondary schools and institutions in the province of Elazığ. Participants were selected on a voluntary basis from a total of 10 educational institutions, including 2 teachers and 1 administrator from each educational institution. Purposive sampling method, which is one of the probability-based sampling methods, was used to determine the study group.

A semi-structured interview form consisting of 10 open-ended questions was used as a data collection tool in the research. While preparing the interview form, a comprehensive literature study was conducted and the questions were determined. The questions prepared after the literature study were examined by three field experts and a teacher in terms of scope, content and clarity, and necessary arrangements were made. The questions in the prepared interview form were directed to the administrators and teachers who volunteered in the study, and the answers were collected via audio recording. The data collected in the research were analyzed with the content analysis method.

As a result of the study, although the concept of social innovation was explained to the administrators and teachers before the interview, it was seen that the level of readiness was not sufficient when looking at the answers they gave. It has been determined that the administrators and teachers who participated in the interview confuse the concept of social innovation with the concepts of entrepreneurship, innovation and innovation, and they generally perceive social innovation as making a new project inside or outside of school, introducing a new product or engaging in any social activity.

**Keywords:** *Educational management, Social Innovation, Innovation*

## COĞRAFI İŞARETİ TEMEL ALAN YAYINLARIN BİBLİYOMETRİK ANALİZİ: WEB OF SCIENCE VERİ TABANINDA İNCELENMESİ

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### ÖZET

Tüketicilerin kaliteli ve geleneksel ürünlere artan ilgisi özellikle coğrafi kökenleri ve üretim yöntemleriyle bağlantılı olan, belirli ve tanımlanabilir özelliklere sahip ürünlere yönelik talep yaratmaktadır. Bu ihtiyacı tescilli olarak sunan coğrafi işaret ise son yıllarda ön plana çıkmaktadır. Tüketici kararlarını desteklemenin yanı sıra rekabet gücünü ve karlılığı artırıcı olması üreticilerin coğrafi işaret kullanımına daha fazla ilgi göstermesini sağlamaktadır. Ayrıca belirli bir üne sahip üründe, farklılaşma yaratıp ürünün korunması ve tanıtılmasını mümkün kılmaktadır. Bu noktada ulusal ve uluslararası literatürde coğrafi işaret konusundaki çalışmalarındaki artış dikkat çekmektedir. Bu çalışmada coğrafi işaret konulu yayınların bibliyometrik açıdan analiz edilmesi amaçlanmaktadır. Bu amaçla Web of Science veri tabanından 2001-2022 yılları arasında yapılmış çalışmalar başlık, özet ve anahtar kelimeler sınırlaması kullanılarak özet bir görünümde değerlendirilmiştir. Çalışma kapsamında elde edilen veriler WOSviewer bibliyografik analiz programına aktararak incelenmiştir. Doğrulanmış bilgi olarak kabul edilen "makale" ve "derleme" belge sınırlaması ile incelenen çalışma sonucunda coğrafi işaret konusunda 832 makaleye ulaşılmıştır. Konu ile ilgili en fazla çalışma 2021 yılında yayınlanmıştır. Bu konuda ön plana çıkan ülkelerin coğrafi işaret tesciline de sahip İtalya, İspanya ve Çin olduğu saptanmıştır. Yaygın olarak gıda bilimi, tarım ekonomisi politikası ve tarımsal multidisipliner alanlarında çalışmaların gerçekleştirildiği tespit edilmiştir. En çok kullanılan anahtar kelimeler ise coğrafi işaret, coğrafi işaret koruması ve kalite olarak öne çıkmaktadır. Gerçekleştirilen bibliyometrik analiz sonucunda coğrafi işaret konusuna ilişkin yazarlara literatürdeki çalışmalar hakkında bilgi ve gelecek çalışmalara katkı sağlayacağı düşünülmektedir.

**Anahtar Kelimeler:** Coğrafi İşaret, GI, bibliyometrik analiz

### BIBLIOMETRIC ANALYSIS OF PUBLICATIONS BASED ON GEOGRAPHICAL INDICATION: EXAMINATION IN WEB OF SCIENCE DATABASE

### ABSTRACT

Consumers' growing interest in quality and traditional goods causes demand for goods with distinctive and recognisable qualities, particularly geographic origins. Geographical indication, which presents this need as registered, is one of the prominent issues in recent years. In addition to supporting consumer decisions, the fact that it increases competitiveness and profitability makes manufacturers show more interest in the use of geographical indications. Also, it makes it simpler to distinguish and advertise a product with a certain reputation. At this point, the increase in studies on geographical indication in national and international literature draws attention. In this study, it is aimed to analyze the publications on geographical indications in terms of bibliometric. For this purpose, the studies made in the Web of Science database between 2001-2022 were evaluated using the limitation of title, abstract and keywords. The data obtained within the scope of the study were analyzed by transferring them to the WOSviewer bibliographic analysis program. As a result of the study, which was examined with the limitation of "article" and "compilation" document, 832 articles on geographical indication were reached. The most studies on the subject were published in 2021. It was determined that the countries that broadcast the most were Italy, Spain and China. Studies in the areas of food science, agricultural economics policy, and agriculture multidisciplinary have been founded to have been widely conducted. The most preferred keywords when the publications are examined; geographical



indication, protected geographical indication and quality. As a result of the bibliometric analysis carried out, it is thought that it will provide information to the authors about the studies in the literature on geographical indication and contribute to future studies.

**Keywords:** Geographical indication, GI, bibliometric analysis

## ÖĞRETMENLERİN SINIFIÇİ DİL GEÇİŞİ KULLANIMINA KARŞI İNGİLİZCE ÖĞRETMENİ ADAYLARININ TUTUMLARI

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### ÖZET

Bu çalışma, İngilizce öğretmen adaylarının, öğretmenlerin sınıf içi dil geçişi kullanımına karşı tutumlarını ortaya çıkarmayı ve dil geçişinin tercih edildiği ve edilmediği durumları belirlemeyi amaçlamaktadır. Araştırmanın katılımcıları, Türkiye'de bir devlet üniversitesinde öğrenim görmekte olan 48 İngilizce öğretmen adayıdır. Verilerin toplanmasında nicel veri toplama prosedürü uygulanmıştır. Verilerin elde edilmesinde Yao (2011) tarafından hazırlanan 20 maddelik Likert tipi "Yabancı Dil Sınıflarında Öğretmenin Dil Geçişi Kullanımına Yönelik Tutumlar" anketi kullanılmıştır. Toplanan verilerin analizinde SPSS 22.0 yazılımı kullanılmıştır. Sonuçlara göre, katılımcılar öğretmenlerin sınıfta dil geçişi kullanmasına karşı nispeten olumlu bir tutuma sahiptir. Ayrıca çoğunlukla bazı belirli fikirler üzerinde anlaştıkları da ortaya çıkmıştır. Bu katılımcılar, öğretmenin iki dil arasında kullandığı dil geçişinin, öğrenen veya dinleyen için konuşma sırasında kafa karışıklığına neden olabileceği konusunda hemfikirdir. Ayrıca dilbilgisi öğeleri ve görev talimatı gibi soyut kavramlar söz konusu olduğunda katılımcıların dil geçişi kullanımını daha fazla tercih ettikleri belirlendi. Araştırmaya katılanların, ayrıca öğretmenlerinin dil geçişi kullanmalarının sınıf atmosferini canlandırmaya yardımcı olduğu konusunda hemfikir oldukları görülmüştür. Katılımcılar, öğrencilerin disipline edilmesi söz konusu olduğunda kod değiştirme kullanımının bir fark yaratıp yaratmadığı konusunda çekimser kalmaktadır. Benzer şekilde, öğretmenlerin dil yeterlilikleri ile dil geçişi kullanımları arasında bir ilişkinin varlığı konusunda da net bir karara varmamışlardır. Son olarak, dil geçişi kullanımının övgü bağlamında herhangi bir etkisinin olup olmadığı konusunda çekimser kalmışlardır. Tüm bu sonuçlar göz önüne alınarak, yabancı dil öğretmenleri hem kendi tercihleri hem de öğrenenlerin dil geçişi kullanımına ilişkin tercihleri hakkında fikir sahibi olarak sınıf içi etkinliklerini bu doğrultuda düzenleyebilirler.

**Anahtar Kelimeler:** *Dil geçişi, yabancı dil öğrenenler, yabancı dil öğrenimi,*

## THE ATTITUDES OF PRE-SERVICE EFL TEACHERS TOWARDS THE USE OF TEACHER CODE-SWITCHING

### ÖZET

This study aimed to reveal the attitudes of pre-service EFL teachers' towards the use of teacher code-switching and determine the situations where code-switching is preferred or not preferred by pre-service EFL teachers. The participants of the study are 48 pre-service EFL teachers in a state university in Turkey. Quantitative data collection procedure was applied to collect the data. To obtain data, a 20-item Likert-type questionnaire, "Attitudes Towards the Use of Teacher Code-Switching in EFL Classrooms" by Yao (2011) is used. SPSS 22.0 Software (Statistical Package for the Social Science) was used to analyze the collected data. According to the results, participants have a somewhat positive attitude towards the teachers' use of code-switching in the classroom. It is also revealed that they mostly agreed on some specific ideas. These participants agreed that the code-switching used by the teacher between the two languages may cause confusion for the learner or the listener especially while speaking. It is also revealed that learners prefer the use of code-switching when it comes to abstract concepts such as grammar items and task instruction. The participants of the study have also been found to agree that teachers' use of code-switching helps to enliven the atmosphere of the class. The participants abstain from whether the use of code-switching makes a

difference when it comes to disciplining students. Similarly, they are also not sure about the existence of a relationship between teachers' proficiency and their use of code-switching. Lastly, they are still unsure whether the use of code-switching has any effect on praising. Considering the results, foreign language teachers can organize their classroom activities in this direction by having an idea about both their preferences and learners' preferences about the use of code-switching.

**Anahtar Kelimeler:** *Code-switching, EFL learners, language learning*

**THE EFFECTS OF THE CENTRALIZED LAW AND REGULATIONS ON THE SCHOOL-FAMILY PARTNERSHIP IN LOW SOCIO-ECONOMIC REGIONS**

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**ABSTARCT**

The purpose of this research is to reveal what kind of legal and administrative support school principals, who need to cooperate with families with low socio-economic level, need in terms of academic development of students during this cooperation process. This research focuses to understand the laws that explain the responsibilities of families over attendance, school discipline and academic success, which affect the academic success of students, and the power of school principals in this context, and the nature of the functioning process of the laws. The research is designed according to the case study approach and the data are collected by semi-structured interview technique. Descriptive analysis technique is used to analysis the data. Therefore, school administrators say that parents should take responsibility for the student's attendance, the school's discipline and the academic success of the students. Parents should demand their rights to the extent that they take responsibility. New legal regulations need to be developed to ensure the participation of parents. But the operability of the laws depends on the managers who assume hierarchical positions in the centralized management structure. Because the existing laws regarding school attendance or the school-parent agreement seem clear and working, but they cannot be finalized during implementation. In addition, school administrators say that they do not have enough authority to implement the laws, and they attribute the responsibility for the implementation of these laws to a higher authority.

**Keywords:** School-parent partnership, schools with low socio-economic level, academic success, centralized laws.

## KOLOREKTAL KANSERLERDE NEOADJUVAN VE ADJUVAN TEDAVİ SÜRECİNDE TIBBİ BESLENME TEDAVİSİ

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### ÖZET

Kolorektal kanser, var olan inflamasyon ve bağırsak fonksiyonlarının olumsuz etkilenmesi nedeniyle malnütrisyon için tek başına risk faktörüdür. Bunun yanında neoadjuvan ve adjuvan tedavi amacıyla uygulanan kemoterapi ve radyoterapi de bireylerde beslenme durumunu olumsuz etkileyebilecek yan etkiler oluşturabilir. Bu yan etkilerden biri kaşeksidir. Kaşeksi gelişimini engellemek amacıyla yeterli enerji ve protein alımının sağlanması; besin alımı yetersiz olan bireylerde glutamin, lösin, lösinin metabolik türeği (hidroksi metilbütirat) ve omega-3 yağ asitleriyle zenginleştirilmiş oral beslenme desteğinin verilmesi önemlidir. Bulantı ve kusma gelişen bireylerde kraker, tost gibi kuru besinler, baharatlarla zenginleştirilmiş ve aromalı atıştırmalıklar tercih edilebilir. Besin tüketim sıklığı artırılarak hastanın damak tadına uygun yeni besinler denenebilir. Gerekirse enerji ve protein içeriği yüksek besin takviyeleri kullanılmalıdır. Mukozit gelişen hastalarda glutamine yönelik literatür verileri çelişkili olduğundan glutaminin mukozitte terapötik kullanımına ilişkin herhangi bir öneri bulunamamıştır. Tedavinin yan etkisi olarak gelişen diyare durumunda diyetle çözünmez posa kaynaklarının azaltılması, kaybedilen sıvı ve elektrolitlerin yerine koyulması gereklidir. Ancak diyare durumunda probiyotik kullanımına yönelik yeterli kanıt mevcut değildir. Nötropeni gelişen bireylerde besinden kaynaklanan mikrobiyoloji ve fiziksel tehlikeleri en aza indirmek amacıyla nütropenik diyet uygulanmalıdır. Ayrıca neoadjuvan ve adjuvan tedavi sürecindeki risk faktörlerinden biri olan osteoporoz gelişimini engellemek için kemik sağlığı ile ilişkili olabilecek kalsiyum, D vitamini, K vitamini ve antioksidan besin öğelerinin yeterli alımı sağlanmalı; diyetle doymuş yağ asitlerinin alımı azaltılmalıdır. Sonuç olarak kolorektal kanser tanılı bireylerin beslenme durumlarının takip edilmesi, yeterli enerji ve besin öğelerinin alımlarının sağlanması ve tedavi sırasında ortaya çıkan yan etkilere yönelik tıbbi beslenme tedavilerinin uygulanması önemlidir.

**Anahtar kelimeler:** Kolorektal kanser, Neoadjuvan ve adjuvan tedavi, Beslenme

## NUTRITION IN THE PROCESS OF NEOADJUVAN AND ADJUVAN THERAPY IN COLORECTAL CANCERS

### ABSTRACT

Colorectal cancer is a stand-alone risk factor for malnutrition because of existing inflammation and adversely affecting bowel functions. In addition, chemotherapy and radiotherapy applied for neoadjuvant and adjuvant treatment may also cause adverse effects that may adversely affect the nutritional status of individuals. One of these side effects is cachexia. Ensuring adequate energy and protein intake in order to prevent the development of cachexia and oral nutritional support enriched with glutamine, leucine, leucine metabolic derivative (hydroxy methyl butyrate) and omega-3 fatty acids in individuals with insufficient nutritional intake is important. Dry foods such as crackers, toast, and flavored snacks enriched with spices can be preferred in individuals who develop nausea and vomiting. By increasing the frequency of food consumption, new foods suitable for the patient's palate can be tried. If necessary, nutritional supplements with high energy and protein content should be used. Since the literature data on glutamine in patients with mucositis are conflicting, no recommendations for the therapeutic use of glutamine in mucositis have been found. In case of diarrhea that develops as a side effect of the treatment, it is necessary to reduce the insoluble fiber sources in the diet and replace the fluid and electrolytes lost. However, there is insufficient

evidence for the use of probiotics in diarrhea. In individuals who develop neutropenia, a neutropenic diet should be applied in order to minimize the microbiology and physical hazards arising from food. In addition, adequate intake of calcium, vitamin D, vitamin K and antioxidant nutrients and reduced intake of saturated fatty acids that may be associated with bone health should be ensured in order to prevent the development of osteoporosis, which is one of the risk factors in the neoadjuvant and adjuvant treatment process. As a result, it is important to monitor the nutritional status of individuals with colorectal cancer, to ensure adequate energy and nutritional intake, and to apply palliative medical nutrition therapy for side effects that occur during treatment.

**Keywords:** Colorectal cancer, Neoadjuvant and adjuvant therapy, Nutrition

## YETİŞKİN BİREYLERDE YEME FARKINDALIĞINA ETKİ EDEN FAKTÖRLERİN BELİRLENMESİ

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### ÖZET

**Amaç:** Fizyolojik ihtiyaç olmamasına rağmen besin alımını teşvik eden uyarılar enerji alımını artırarak obezite başta olmak üzere birçok kronik hastalığın gelişiminden sorumlu olabilir. Ancak fiziksel açlık ve tokluk kavramının ve besin alımı üzerine etki eden faktörlerin farkında olarak o an tüketilen besine odaklanma (yeme farkındalığı) sağlık üzerinde ve ağırlık kontrolünün sağlanmasında önemli bir etkiye sahiptir. Bu çalışmanın amacı yetişkin bireylerde yeme farkındalığına etki eden faktörlerin değerlendirilmesidir. **Yöntem:** Çalışma 19 yaş üzeri yetişkin bireylerde gerçekleştirilmiştir. Çalışma için gerekli veriler Google Dokümanlar aracılığı ile online forma dönüştürülen anket formuyla toplanmıştır. Anket formu sosyo-demografik özellikler, Uluslararası Fiziksel Aktivite Anketi (kısa), Yeme Farkındalığı Ölçeği (YF-30) ve Stres Ölçeği'ne yönelik sorulardan oluşmaktadır. Çalışma için gerekli etik izin Gazi Üniversitesi Etik Komisyonu'ndan alınmıştır. **Bulgular:** Çalışmaya toplamda 538 yetişkin birey (%42.6 erkek, %57.4 kadın) katılmıştır. Kadın bireylerde erkeklere göre Yeme farkındalığı Ölçeği puan ortalaması anlamlı olarak daha yüksek bulunmuştur ( $p=0.017$ ). Yeme farkındalığına etki eden faktörler açısından ele alındığında çok değişkenli doğrusal regresyon analizi sonucuna göre yaş değişkeninin yeme farkındalığını olumlu ve anlamlı olarak etkilediği; BKİ ve Stres Ölçeği puanının ise yeme farkındalığını negatif ve anlamlı olarak etkilediği öngörülmektedir. Özellikle yaş değişkeninin yeme farkındalığı üzerindeki etkisi diğer değişkenlere göre daha fazladır. Ayrıca fiziksel aktivite düzeyinin yeme farkındalığı üzerinde anlamlı bir etkisi bulunamamıştır. **Sonuç:** Sonuç olarak özellikle artan yaş ve kadın cinsiyeti yeme farkındalığı düzeyini artıran, beden kütle indeksi ve stres düzeyi ise yeme farkındalığı düzeyini azaltan faktörler arasında sayılabilir.

**Anahtar kelimeler:** Yeme farkındalığı, Obezite, Stres

### DETERMINING THE FACTORS AFFECTING MINDFUL EATING IN ADULTS

#### ABSTRACT

**Objective:** Although there is no physiological need, stimuli that encourage food intake may be responsible for the development of many chronic diseases, especially obesity, by increasing energy intake. However, being aware of the concept of physical hunger and satiety and the factors affecting food intake, focusing on the food consumed at that moment (Mindful eating) has an important effect on health and weight control. The aim of this study is to evaluate the factors affecting mindful eating in adults. **Method:** The study was carried out in adults over 19 years. The necessary data for the study were collected through a questionnaire that was converted into an online form via Google Docs. The questionnaire form consists of questions about socio-demographic characteristics, International Physical Activity Questionnaire (short), Mindful Eating Scale (YF-30) and Stress Scale. Ethical permission for the study was obtained from Gazi University Ethics Committee. **Results:** A total of 538 adults (42.6% male, 57.4% female) participated in the study. Mindful

Eating Scale mean score was found to be significantly higher in females than in males ( $p=0.017$ ). When considered in terms of factors affecting mindful eating, according to the results of multivariate linear regression analysis, it is predicted that while age variable affects mindful eating positively and significantly; BMI and Stress Scale score negatively and significantly affect mindful eating. Especially the effect of age variable on mindful eating is higher than other variables. In addition, no significant effect of physical activity level on mindful eating was found. **Conclusion:** As a result, especially increasing age and female gender can be considered among the factors that increase the level of mindful eating, while body mass index and stress level decrease the level of mindful eating.

**Keywords:** Mindful eating, Obesity, Stress



## KANSER HASTALARININ ORAL MUKOZİT YÖNETİMİNDE FARMAKOLOJİK VE NON-FARMAKOLOJİK YÖNTEMLERİN KULLANIMI

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### ÖZET

Kanser günümüzde tüm dünyada hala önemli bir halk sağlığı sorunudur. Dünya çapında 2020 yılında yaklaşık 19,3 milyon yeni kanser vakası teşhis edilmiştir. Kanser tedavisinde ciddi yan etkilere sahip olan kemoterapi sıklıkla kullanılan farmakolojik bir yöntemdir. Kemoterapinin en önemli yan etkilerinden biri olan oral mukozit; ağız mukozasında ağrıya, kanamaya, sıvı ve katı gıdaları yutmada veya konuşmada güçlüğüne neden olan ülserlerin varlığı ile karakterize ciddi bir semptomdur. Kanser hastalarında oral mukozit insidansı %40 ile %100 arasında değişmektedir. Tümörün tipi ve tedavi yöntemleri ile hastanın yaşı, beslenme durumu ve ağız hijyeni oral mukozit gelişimi ile ilişkilidir. Oral mukozada lokal analjezik kullanımını gerektiren ülserasyonlar oldukça ağrılıdır, yeme gücüne ve yetersiz beslenmeye yol açar, sepsis gelişme riskini, enteral/parenteral beslenme ihtiyacını ve sistemik analjezik gereksinimini artırır. Bu da kanser hastalarının yaşam kalitesini olumsuz etkiler, kemoterapisini geciktirir ve sonuç olarak tekrarlı hastane yatışlarını ve sağlık harcamalarını artırır. Oysaki maliyeti daha düşük nonfarmakolojik yöntemlerden olan Aloe vera, Glycyrrhiza glabra, Camellia sinensis ve Calendula officinalis gibi doğal ürünler ile bal arısının antimikrobiyal, antiviral, antiinflamatuvar, analjezik ve yara iyileştirme özellikleri bulunmaktadır. Bu nedenle oral mukozitin yönetiminde nonfarmakolojik bu ürünlerin özelliklerinden de yararlanılabileceği düşünülmektedir. Bu derlemede kanser hastalarının oral mukozit yönetiminde farmakolojik ve non-farmakolojik yöntemlerin kullanımı literatür eşliğinde tartışılacaktır.

**Anahtar Kelimeler:** Farmakolojik yöntemler, Non-farmakolojik yöntemler, Oral mukozit

### THE USE OF PHARMACOLOGICAL AND NON-PHARMACOLOGICAL METHODS IN THE MANAGEMENT OF ORAL MUCOSITIS OF CANCER PATIENTS

#### ABSTRACT

Cancer is still a primary public health problem all over the world today. Around 19.3 million new cases of cancer were diagnosed worldwide in 2020. Chemotherapy, which cause serious side effects, which is pharmacological method often used to treat cancer. Oral mucositis is one of the most significant side effects of chemotherapy; It is a solemn symptom characterized by the presence of ulcers in the oral mucosa that causes pain, bleeding, and difficulty in swallowing liquid and solid foods or speaking. The incidence of oral mucositis in cancer patients ranges from 40% to 100%. The type of tumor and treatment methods, the patient's age, nutritional status, and oral hygiene is associated with the development of oral mucositis. Ulcerations that require the use of local analgesics in the oral mucosa are quite painful, cause eating

difficulties and malnutrition, increase the risk of developing sepsis, the need for enteral/parenteral nutrition, and the need for systemic analgesics. This adversely affects the quality of life of cancer patients, delays chemotherapy, and consequently increases repeated hospitalizations and health expenditures. However, natural products such as Aloe vera, Glycyrrhiza glabra, Camellia sinensis, and Calendula officinalis, which are non-pharmacological methods with lower costs, and honey bees have antimicrobial, antiviral, anti-inflammatory, analgesic, and wound healing properties. For this reason, it is considered that the properties of these non-pharmacological products can also be used in the management of oral mucositis. In this review, the use of pharmacological and non-pharmacological methods in the management of oral mucositis in cancer patients will be discussed in light of the literature.

**Keywords:** Non-pharmacological methods, Oral Mucositis, Pharmacological methods

## ALZHEİMER HASTALIĞINDA YENİ BİR İŞİK: PARLAK İŞİK TERAPİSİ

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### ÖZET

Alzheimer Hastalığı, bilişsel ve davranışsal bozuklukların görüldüğü, ilerleyici nörodejeneratif ve/veya vasküler hasarla karakterize bir tablodur. Hastalık, dünya çapında yaşlı yetişkinler arasında engelliliğin ve bağımlılığın ana nedenlerinden biri olarak, toplumda bakım ve maliyeti nedeniyle önemli bir halk sağlığı sorununu oluşturur. Hastalığın bilişsel ve davranışsal semptomlarının tedavisinde sıklıkla kullanılan farmakolojik ajanlar, orta düzeyde etkinlik ve artan hastaneye yatış, düşme ve mortalite risklerini içeren ciddi yan etkiler gösterir. Bu nedenle semptomları azaltmak için etkili ve uygulanabilir farmakolojik olmayan müdahaleler birinci basamak tedavi olarak önerilir. Bu tür müdahalelerden biri, yaşam ortamındaki aydınlatma koşullarındaki değişikliklerdir. Parlak Işık Terapisi, özellikle çeşitli yoğunlaştırılmış ışık ışınları veya belirli dalga boyları ile ışığa maruz kalmayı ifade etmektedir. Bu terapi, dış mekan güneş ışığı, ışıklı kutular, başa takılan ışıklı siperlikler ve tavan lambaları gibi farklı şekillerde uygulanabilen belirli ışık seviyelerinin kontrollü uygulamasından oluşur. Beynin sirkadiyen ritmindeki değişikliklere odaklanan Parlak Işık Terapisi, demans bakımı alanında gelişmekte olan bir terapidir. Alzheimer hastalarında, sirkadiyen bir ritim oluşturmaktan sorumlu olan hipotalamusun suprakiazmatik çekirdeklerinde, dejeneratif değişiklikler vardır. Bu dejenerasyon biyolojik ritmi bozabilir, davranışsal ve psikolojik semptomlara neden olabilir. Parlak Işık Terapisi, bozulan ritim üzerinde bazı olumlu etkiler ve bilişsel düzelmeler göstermektedir. Daha yüksek kalitede ve miktarda ışık, sakinlerin günlük yaşam aktivitelerini gerçekleştirmelerine, kendilerini daha iyi hissetmelerine, düşme riskinin azalmasına yardımcı olmaktadır. Hastalar tarafından da kabul oranı yüksek olan Parlak Işık Terapisi, ilaç tedavisini tolere edemeyen, ilaç kullanımına karşı çıkan hastalarda veya ilaç tedavisinin etkili olmadığı durumlarda uygulanabilir bir seçenektir.

**Anahtar Kelimeler:** Alzheimer, Parlak ışık terapisi, Semptom

### A NEW LIGHT IN ALZHEIMER'S DISEASE: BRIGHT LIGHT THERAPY

#### ABSTRACT

Alzheimer's Disease is a picture characterized by progressive neurodegenerative and/or vascular damage, in which cognitive and behavioral disorders are seen. The disease poses a major public health concern due to its care and cost in the community, as one of the main causes of disability and addiction among older adults worldwide. Pharmacological agents frequently used in the treatment of cognitive and behavioral symptoms of the disease show moderate efficacy and serious side effects, including increased risks of hospitalization, falls, and mortality. Therefore, effective and feasible non-pharmacological interventions to reduce symptoms are recommended as first-line therapy. One such intervention is changes in lighting conditions in the living environment. Bright Light Therapy refers to exposure to light, especially with various concentrated rays of light or certain wavelengths. This therapy consists of the controlled application of specific levels of light that can be applied in different ways, such as outdoor sunlight, light boxes, head-mounted light visors, and downlights. Focusing on changes in the brain's circadian rhythm, Bright Light Therapy is an emerging

therapy in the field of dementia care. In Alzheimer's patients, there are degenerative changes in the suprachiasmatic nuclei of the hypothalamus, which are responsible for establishing a circadian rhythm. This degeneration can disrupt the biological rhythm and cause behavioral and psychological symptoms. Bright Light Therapy shows some positive effects on the disrupted rhythm and cognitive improvements. Higher quality and quantity of light helps residents perform their daily activities, feel better, and reduce the risk of falling. Bright Light Therapy, which has a high rate of acceptance by the patients, is a viable option for patients who cannot tolerate drug treatment, who oppose drug use, or when drug treatment is not effective.

**Keywords:** Alzheimer's, Bright light therapy, Symptom

## RESVERATROL'ÜN METASTATİK KOLON KANSER HÜCRELERİ ÜZERİNE APOPTOTİK ETKİLERİ

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### ÖZET

Son yıllarda polifenoller üzerine yapılan çalışmalar, bu kimyasalların sağlık üzerine olumlu etkilerinin olduğunu göstermiştir. Stilbenler grubuna ait bir polifenol olan resveratrolün yapılan son yıllardaki araştırmalarda anti-oksidan, anti-kanser ve anti-inflamatuvar etkileri olduğu görülmüştür. Resveratrol üzümde ve üzümünden üretilen besinlerde, kırmızı şarapta, ayrıca taneli orman meyvelerinde ve yer fıstığında bol miktarda bulunmaktadır. Resveratrolün vücutta serbest radikal temizleme, oksidatif stresi azaltma, inflamasyonu baskılama gibi potansiyel olumlu etkileri mevcuttur. Araştırmanın amacı ise resveratrolün Colo-741 metastatik kolon adenokarsinom hücrelerindeki apoptotik etkilerini incelemektir.

Resveratrolün Colo-741 hücrelerindeki ideal dozu hücre canlılığı testi ile (MTT) belirlenmiştir. Ayrıca, bir boyama yöntemi olan immünohistokimya (İHK) yöntemi ile de üç farklı antikor kullanılarak resveratrolün apoptotik etkilerine bakılmıştır. Bu antikorlar apoptozun ana yollarından biri olan intrinsik apoptotik yolak göstergesi olan sitokrom-c, bir diğer apoptoz ana yolağı olan ekstrinsik yolak göstergesi olan FasLigand (FasL) ve bitirici kaspaz olarak bilinen apoptozun indüklendiğinin göstergesi olan kaspaz-3'tür.

MTT yönteminin uygulanmasından sonra resveratrolün Colo-741 hücrelerindeki ideal dozunun 48 saat inkübasyon sonrasında 25  $\mu$ M olduğu belirlenmiştir. İHK boyama yöntemi sonucunda ise 25  $\mu$ M resveratrolün 48 saat inkübasyonundan sonra, sitokrom-c immünoaktivitesinin kontrol grubuna kıyasla anlamlı derecede arttığı saptanmıştır ( $p<0,05$ ). Ayrıca, aynı dozda, FasL immünoaktivitesinin de kontrol grubuna kıyasla anlamlı derecede artış gösterdiği görülmüştür ( $p<0,01$ ). Kaspaz-3'ün ekspresyonunda da yine, resveratrolün 25  $\mu$ M dozda, 48 saat inkübasyon ile kontrol grubuna göre metastatik kolon kanser hücrelerinde anlamlı derecede artışa neden olduğu belirlenmiştir ( $p<0,05$ ).

Resveratrolün Colo-741 metastatik kolon adenokarsinom hücrelerinde hem intrinsik ve ekstrinsik apoptotik yolları, hem de kaspaz-3'ü aktive ederek apoptozu indüklediği yapılan çalışma ile gösterilmiştir. Yapılan çalışmada resveratrolün potansiyel olarak metastatik kolon kanser hücrelerinde apoptozun indüklenmesini sağlayarak, potansiyel olarak kansere karşı koruyucu etkisi olabileceği gösterilmiştir.

**Anahtar kelimeler:** Kolon kanser, resveratrol, metastaz

### APOPTOTIC EFFECTS OF RESVERATROL ON METASTATIC COLON CANCER CELLS

#### ABSTRACT

Studies on polyphenols in recent years have shown that these chemicals have possible positive effects on health. Resveratrol, a polyphenol belonging to the stilbenes group, has been found to exert anti-oxidant, anti-cancer and anti-inflammatory effects. Resveratrol is abundant in grapes and food produced from grapes, red wine, as well as berries and peanuts. Resveratrol has potential positive effects such as scavenging free radicals, reducing oxidative stress and suppressing inflammation in the body. The aim of the study is to examine the apoptotic effects of resveratrol in Colo-741 metastatic colon adenocarcinoma cells.

The ideal dose of resveratrol on Colo-741 cells was determined by cell viability test (MTT). In addition, the apoptotic effects of resveratrol were examined by using three different antibodies with the immunohistochemistry (IHC), which is a staining method. These antibodies were cytochrome-c, an indicator of intrinsic apoptotic pathway, which is one of the main pathways of apoptosis, FasLigand (FasL), an indicator of extrinsic pathway that is another main apoptosis pathway, and caspase-3, an indicator of induction of apoptosis, known as the primary executioner caspase.

After the use of the MTT method, the ideal dose of resveratrol in Colo-741 cells was determined to be 25  $\mu$ M after 48 hours of incubation. As a result of the IHC staining method, after 48 hours of incubation with 25  $\mu$ M resveratrol, cytochrome-c immunoreactivity was found to be significantly increased compared to the control group ( $p < 0.05$ ). In addition, FasL immunoreactivity was also significantly increased at the same dose compared to the control group ( $p < 0.01$ ). In addition, it was determined that resveratrol caused a significant increase in the expression of caspase-3 on metastatic colon cancer cells compared to the control group at a dose of 25  $\mu$ M with 48 hours of incubation ( $p < 0.05$ ).

The current study has shown that resveratrol induces apoptosis by activating both intrinsic and extrinsic apoptotic pathways and caspase-3 in Colo-741 metastatic colon adenocarcinoma cells. In the current study, it was shown that resveratrol can potentially have a protective effect against cancer by inducing apoptosis in metastatic colon cancer cells.

**Keywords:** Colon cancer, resveratrol, metastasis

## TIBBİ BİYOKİMYA LABORATUVARINDA KALİTE, VALİDASYON, ANALİZ VE ÖLÇÜM BELİRSİZLİĞİ

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### ÖZET

Tıbbi laboratuvarların en önemli görevlerinden biri yapılan analiz sonuçlarını güvenilir bir şekilde raporlamasıdır. Bu nedenle, analiz sonuçlarının standardize olması, tekrarlanabilirlik, güvenilirlik çalışmaları yapılarak kayıtların tutulması gerekmektedir. Laboratuvar analizlerinin performansının değerlendirildiği “Kalite kontrol” kavramı ve laboratuvar testlerinin güvenilirliğinin, verimliliğinin ve sürekli olarak geliştirilip monitörize edilmesini gösteren “kalite güvencesi” terimleri, laboratuvar ve kliniğin rolünün incelendiği parametrelerdir. Sağlık hizmeti veren kurumlarda iç kalite kontrollerini içeren “kalite yönetimi” ve kalite göstergelerinin sürekli güncellendiği personel eğitimini de içeren “sürekli kalite gelişimi” uygulamaları kullanılmaktadır. Bu kalite kontroller, bağımsız kurumlar tarafından denetlenir ve laboratuvar işleyişinin denetlendiği kalite belgelendirilmelerini de içerir. Bu belgelendirmeler akreditasyon veya sertifikasyon şeklinde yapılarak belgelenmiş kalite seviyesi belirlenmiş olur. İstenilen kalite seviyesi kurumun belirlediği standartlara ulaştığında ve akreditasyon belgesini veren kurum tarafından belirlenmiş standartlara uygun ise yeterlilik belgelenmiş olmaktadır. Analizlerin validasyon parametrelerine göre valide edilmiş metotlar ile yapılması ölçüm belirsizliğinin güvenilirlik düzeylerini göstermektedir. Ölçüm belirsizliği sonuçların doğruluğunun şüpheli olduğunu değil dağılımını gösteren bir değerdir ve sonuçların referans değerlere uygunluğu açısından karar verirken önemlidir. Test sonuçları verilirken ölçüm belirsizliğinin uluslararası standardizasyon kuralları içinde hesaplanması gerekmektedir. Ancak ülkelerin kendi koşullarını da içeren farklı varyasyonlar göz önüne alındığında kendilerine ait ölçüm belirsizliği kılavuzları gereklidir. Sonuç olarak tıbbi laboratuvarların ölçüm belirsizliği hesaplama modelleri ve değerlendirme kriterleri oluşturulmalı, cihazlar arasındaki oluşabilecek analitik farklılıklara da dikkat edilmelidir.

**Anahtar kelimeler:** Akreditasyon, Laboratuvar, Ölçüm Belirsizliği, Validasyon

### QUALITY, VALIDATION, ANALYSIS AND MEASUREMENT UNCERTAINTY IN THE MEDICAL BIOCHEMISTRY LABORATORY

### ABSTRACT

One of the most important tasks of medical laboratories is to report the results of the analysis in a reliable way. For this reason, it is necessary to standardize the results of the analysis, and to keep records by making repeatability and reliability studies. The concept of "quality control", in which the performance of laboratory analyzes is evaluated, and the terms "quality assurance", which indicates the reliability, efficiency and continuous development and monitoring of laboratory tests, are the parameters in which the role of laboratory and clinic is examined. "Quality management", which includes internal quality controls, and "continuous quality improvement" practices, including personnel training, in which quality indicators are constantly updated, are used in healthcare institutions. These quality controls are audited by independent institutions and include quality certifications in which laboratory operation is audited. These certifications are made in the form of accreditation or certification, and the documented quality level is determined. If the desired quality level reaches the standards set by the institution and conforms to the standards set by the institution issuing the accreditation document, the qualification is documented. Performing the analyzes with validated methods according to the validation parameters shows the reliability levels of the measurement uncertainty. The uncertainty of measurement is a value that indicates the distribution of the results, not that the accuracy is questionable, and is important when deciding whether the results are suitable for reference values. While giving test results, measurement uncertainty should be calculated within international standardization rules. However, countries require their own measurement uncertainty guidelines, given the

different variations, including their own conditions. As a result, measurement uncertainty calculation models and evaluation criteria of medical laboratories should be established, and attention should be paid to analytical differences that may occur between devices.

**Keywords:** Accreditation, Laboratory, Measurement Uncertainty, Validation



## METABOLİK SENDROM PATOGENEZİNİN BAĞIRSAK MİKROBİYOTASI İLE İLİŞKİSİ

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### ÖZET

Abdominal obezite, HDL kolesterol düşüklüğü, trigliserid yüksekliği, kan basıncı yüksekliği, açlık kan şekeri yüksekliği ile karakterize olan ve komplike bir sendrom olarak tanımlanan metabolik sendrom bağırsak mikrobiyotası ile yakından ilişkilidir. Bu çalışmada bağırsak mikrobiyotasının metabolik sendrom üzerine etkisi değerlendirilerek incelenmiştir. Yapılan hayvan ve insan çalışmalarından elde edilen veriler, bağırsak mikrobiyotası ile enerji homeostazı arasında bir ilişki olduğunu göstermektedir. Bağırsak mikrobiyotası ve obezite arasındaki ilişkiye dair bu bulgular, bağırsak mikrobiyotasının probiyotikler ile modülasyonunun antropometrik ölçümler üzerinde etkili olabileceğini düşündürmüştür. Özetle, probiyotiklerin ve bağırsak mikrobiyotasının metabolik sendromda vücut ağırlığı üzerindeki etkisinin kullanılan suş ya da suşlara, bireylerin başlangıç BKİ'lerine göre değişebileceğini söylemek mümkündür. Doğal gıdaların vücutta besin maddelerinin enerjiye dönüştürülüp yakılmasında etkili bir zayıflatma aracı olduğu söylenebilir. Metabolik sendromun ana nedenlerinden biri olan obezite ve diğer kardiyovasküler etkileri hafifletmek ve kilo kaybı için bağırsak mikrobiyotasının korunması ve beslenme alışkanlıklarının gözden geçirilmesi önemlidir. En büyük endokrin organımız olan bağırsak, metabolik sendrom tedavisinde büyük bir öneme sahiptir. Metabolik sendrom; metabolizma bozuklukları, ateroskleroz, insülin direnci ve lipid tedavisini içerdiğinden dolayı hedef tedavi protokolleri mikrobiyota ile planlanmalıdır. Gelecekte modern tıp ve global araştırmalar mikrobiyotanın patofizyolojisinde ve tedavide etkinlik açısından bir hayli önem kazanacağı ve yeni perspektifler sunacağı düşünülmektedir.

**Anahtar Kelimeler:** Metabolik Sendrom, Bağırsak Mikrobiyotası, Probiyotik

### RELATIONSHIP OF METABOLIC SYNDROME PATHOGENESIS WITH GUT MICROBIOTA

#### ABSTRACT

Metabolic syndrome, which is characterized by abdominal obesity, low HDL cholesterol, high triglyceride, high blood pressure, high fasting blood sugar and defined as a complicated syndrome, is closely related to the intestinal microbiota. In this study, the effect of gut microbiota on metabolic syndrome was evaluated and investigated. Data from animal and human studies show that there is a relationship between gut microbiota and energy homeostasis. These findings on the relationship between gut microbiota and obesity suggested that modulation of gut microbiota with probiotics may have an effect on anthropometric measurements. In summary, it is possible to say that the effect of probiotics and gut microbiota on body weight in metabolic syndrome may vary according to the strain or strains used and the initial BMI of individuals. It can be said that natural foods are an effective weight loss tool in the body to convert and burn nutrients into energy. It is important to protect the intestinal microbiota and review the nutritional habits for weight loss and to alleviate obesity and other cardiovascular effects, which are one of the main causes of metabolic syndrome. The intestine, our largest endocrine organ, has a great importance in the treatment of metabolic syndrome. metabolic syndrome; Target treatment protocols should be planned with microbiota since they include metabolism disorders, atherosclerosis, insulin resistance and lipid therapy. It is thought that in the future, modern medicine and global research will gain great importance in the pathophysiology of the microbiota and in terms of efficacy in treatment and will offer new perspectives.

**Keywords:** Metabolic Syndrome, Gut Microbiota, Probiotic

## SAMATYA-PREDICTING SCORE IN ACUTE LYMPHOBLASTIC LEUKEMIA (ALL): COMBINING CLINICAL FEATURES WITH FLOW CYTOMETRY

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### ABSTRACT

**Aim:** Flow cytometric features appear to play a role in addition to laboratory, clinical and genetic factors, which have been defined in the prognosis prediction of hematological malignancies. In our study, we aimed to develop a scoring system that can be used in the prediction of response to induction and survival by combining previously defined clinical factors and flow cytometric features in B cell acute lymphoblastic leukemia (B-ALL) patients. **Methods:** We included 102 patients who received induction between January 2010-2022. The total risk scores were calculated by using defined risk scoring system parameters: Age, initial leukocyte count, presence of extramedullary disease, presence of tumor lysis during induction therapy, risk stratification by genetics, time to complete remission and flow cytometry findings (CD5, CD7, CD117, CD45 >90% Positivity = 1 point). **Results:** It was revealed that the risk score (3.35) was higher in patients who were non-complete responders ( $p=0.019$ ). The cut-off value for the response to induction was determined as 2.5, based on this the sensitivity was calculated as 65.2% and the specificity as 63.3%. The median overall survival of patients with a risk score of  $\geq 2.5$  was found to be significantly shorter compared to those with a risk score of  $<2.5$  (for  $<2.5$  17 months, range:1-162; for  $\geq 2.5$  10 months, range: 1-84;  $p=0.035$ ). It would be more appropriate to evaluate the risk score system in larger patient populations.

**Keywords:** Acute lymphoblastic leukemia (ALL), flow cytometry, response

## AKUT LENFOBLASTİK LÖSEMİDE (ALL) SAMATYA TAHMİN SKORU: KLİNİK ÖZELLİKLERİN AKIŞ SİTOMETRİ İLE KOMBİNASYONU

### ÖZET

**Amaç:** Hematolojik malignitelerin prognoz tahmininde tanımlanmış olan laboratuvar, klinik ve genetik faktörlerin yanı sıra, akım sitometrik özelliklerin de rol oynadığı görülmektedir. Çalışmamızda B hücreli akut lenfoblastik lösemi (B-ALL) hastalarında önceden tanımlanmış klinik faktörler ile akım sitometrik özellikleri birleştirilerek indüksiyona yanıtı ve sağkalımı öngörmede kullanılacak bir skorlama sistemi geliştirmeyi amaçladık. **Yöntemler:** Ocak 2010-2022 arasında indüksiyon alan 102 hastayı dahil ettik. Toplam risk puanları, tanımlanmış risk puanlama sistemi parametreleri kullanılarak hesaplanmıştır: Yaş, başlangıç lökosit sayısı, ekstrapredüller hastalık varlığı, indüksiyon tedavisi sırasında tümör lizisi varlığı, genetik risk sınıflandırması, tam yanıt kadar geçen süre ve akış sitometrisi bulguları (CD5, CD7, CD117, CD45 >%90 Pozitiflik = 1 puan). **Sonuçlar:** Tam yanıt vermeyen hastalarda risk skorunun (3,35) daha yüksek olduğu saptandı ( $p=0,019$ ). İndüksiyona yanıt için cut-off değeri 2,5 olarak belirlenmiş, buna göre sensitivite %65,2, spesifite %63,3 olarak hesaplanmıştır. Risk skoru  $\geq 2,5$  olan hastaların ortanca genel sağkalımı, risk skoru  $<2,5$  olanlara göre anlamlı olarak daha kısa bulundu ( $<2,5$  17 ay, aralık: 1-162;  $\geq 2,5$  10 ay, aralık: 1-84; $p=0.035$ ). Risk skorlama sisteminin daha geniş hasta popülasyonlarında değerlendirilmesi daha uygun olacaktır.

**Anahtar Kelimeler:** Akut lenfoblastik lösemi (ALL), akış sitometrisi, yanıt

***p*-AMİNOBENZOİK ASİD: İZONİKOTİNAMİD KO-KRİSTALİNİN ANTI SARS-CoV-2 POTANSİYELİNİN MOLEKÜLER DOCKING ÇALIŞMALARI İLE DEĞERLENDİRİLMESİ**

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**ÖZET**

Bu çalışmada, daha önceki çalışmamızda sentezlenmiş olan *p*-aminobenzoik asid:izonikotinamid ko-kristalinin SARS CoV-2'nin 2019 yılı sonlarında hastalığa neden olan ilk varyantın spike proteini (PDB Kodu: 6M0J), Omicron varyantının spike proteini (PDB Kodu: 7T9J), main proteaz (PDB Kodu: 7BQY), papain benzeri proteaz (PDB Kodu: 6W9C), NSP12-NSP7-NSP8 kompleksi (PDB Kodu: 7BV2), NSP15 Endoribonükleaz (PDB Kodu: 6WXC), NSP16-NSP10 heterodimeri (PDB Kodu: 6WKQ), transmembran proteaz (PDB Kodu: 7MEQ) ve TNF-alfa dönüştürücü enzimi (PDB Kodu: 2DDF) ile etkileşimleri Moleküler Docking çalışmaları ile incelenmiştir. Ayrıca ko-kristalin absorpsiyon, dağılım, metabolizma, atılım ve toksisite parametreleri (ADMET) tahminleri SwissADME ve ProTox-II çevrimiçi veritabanları yardımı ile elde edilmiştir. Kokristal ile SARS CoV-2'nin ilk varyantın spike proteini, Omicron varyantının spike proteini, main proteaz, papain benzeri proteaz, NSP12-NSP7-NSP8 kompleksi, NSP15 Endoribonükleaz, NSP16-NSP10 heterodimeri, transmembran proteaz ve TNF-alfa dönüştürücü enzimi arasındaki bağlanma enerjileri sırasıyla, -7,3 kcal/mol, -7,0 kcal/mol, -7,5 kcal/mol, -6,1 kcal/mol, -7,4 kcal/mol, -7,9 kcal/mol, -8,0 kcal/mol, -6,3 kcal/mol ve -8,6 kcal/mol, olarak belirlenmiştir. Bu verilere göre, *p*-aminobenzoik asid:izonikotinamid ko-kristalinin, 2019 yılı sonlarında hastalığa neden olan ilk varyantın spike proteinine bağlanma afinitesi, Omicron varyantına bağlanma afinitesine kıyasla daha yüksektir. Ayrıca ko-kristalin diğer hedef proteinlere yüksek bağlanma enerjisi ile bağlanabileceği ve inhibe edebileceği tespit edilmiştir. Ko-kristalin hedef proteinler ile hidrojen bağı, karbon-hidrojen bağı,  $\pi$ -donor hidrojen bağı,  $\pi$ - $\pi$  istiflenmesi,  $\pi$ - $\pi$  T-şekilli etkileşimleri,  $\pi$ -alkil,  $\pi$ - $\sigma$ ,  $\pi$ -anyon,  $\pi$ -kasyon ve  $\pi$ -kükürt etkileşimleri gibi birçok farklı türde hidrojen bağı, hidrofobik ve elektrostatik etkileşimler vasıtasıyla etkileşebileceği ve bu proteinlerin aktif bölgelerine karşı antagonist etki sergileyebileceği düşünülmektedir.

**Anahtar kelimeler:** Ko-kristal, SARS CoV-2, Moleküler Docking, ADMET.

**EVALUATION OF THE ANTI SARS-CoV-2 POTENTIAL OF *p*-AMINOBENZOIC ACID: ISONICOTINAMIDE Co-CRYSTAL BY MOLECULAR DOCKING STUDIES**

**ABSTRACT**

In this study, the interactions of *p*-aminobenzoic acid:isonicotinamide co-crystal, which was synthesized in a previous study, with the spike protein (PDB Code: 6M0J) of the first variant that caused the disease of SARS CoV-2 in late 2019, spike protein of Omicron variant (PDB Code: 7T9J), main protease (PDB Code: 7BQY), papain-like protease (PDB Code: 6W9C), NSP12-NSP7-NSP8 complex (PDB Code: 7BV2), NSP15 Endoribonuclease (PDB Code: 6WXC), NSP16-NSP10 heterodimer (PDB Code: 6WKQ), transmembrane protease (PDB Code: 7MEQ) and TNF-alpha converting enzyme (PDB Code: 2DDF) were investigated by Molecular Docking studies. In addition, estimations of absorption, distribution, metabolism, excretion and toxicity parameters (ADMET) of the co-crystal were obtained with the help of SwissADME and ProTox-II online databases. Binding energies between co-crystal and spike protein of first variant of SARS CoV-2, spike protein of Omicron variant, main protease, papain-like protease, NSP12-NSP7-NSP8 complex, NSP15 Endoribonuclease, NSP16-NSP10 heterodimer, transmembrane protease and TNF-alpha converting enzyme were determined as -7.3 kcal/mol, -7.0 kcal/mol, -7.5 kcal/mol, -6.1 kcal/mol, -7.4 kcal/mol, -7.9 kcal/mol, -8.0 kcal/mol, -6.3 kcal/mol and -8.6 kcal/mol, respectively. According to these data, the binding affinity of the *p*-aminobenzoic acid:isonicotinamide co-crystal to the active site of the spike protein of the first disease-causing variant in late 2019 is higher than that of the Omicron variant. In addition, it has been determined

that the co-crystal can bind and inhibit other target proteins with high binding energy. It is thought that the co-crystal may interact with target proteins through many different types of hydrogen bonding, hydrophobic and electrostatic interactions such as hydrogen bonding, carbon-hydrogen bond,  $\pi$ -donor hydrogen bond,  $\pi$ - $\pi$  stacking,  $\pi$ - $\pi$  T-shaped,  $\pi$ -alkyl,  $\pi$ - $\sigma$ ,  $\pi$ -anion,  $\pi$ -cation and  $\pi$ -sulfur interactions and may exhibit antagonistic effects against the active sites of these proteins.

**Keywords:** Co-crystal, SARS CoV-2, Molecular Docking, ADMET.

## SÜRDÜRÜLEBİLİR ULAŞIM PLANLAMASI İÇİN CBS TABANLI OTOPARK UYGUNLUK ANALİZİ

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### ÖZET

Günümüz şehirlerinde yaşam tarzı ve çalışma disiplinlerindeki değişiklikler, daha fazla insanın kentsel alanlara yönelmesi ile kentleşmenin artışına neden olmuştur. Artan şehir nüfusu ve bunun paralelinde de araç sayısındaki hızlı artış ile şehir içi ulaşım sistemleri olumsuz etkilenmiştir. Bu sebeple, gelişmiş şehirlerin çoğunda, sürdürülebilir kentsel ulaşım ve trafik yönetiminde önemli bir rolü olan otopark alanlarının eksikliği ve yanlış yerlere planlanmasından kaynaklı olarak problemler yaşanmaktadır. Araçların çoğu zaman durağan trafik olarak adlandırılan otoparklarda vakit geçirdiği düşünülürse, otopark yeri için en uygun konumun belirlenmesi sonucunda trafik yükü ve araçların hareket kabiliyeti iyileştirilmiş olur. Bu durum özellikle araç sahipliği oranlarının ve nüfus yoğunluğunun yüksek olduğu metropoliten alanlarda insanların ulaşımının aksamadan sağlanması açısından hayati önem taşımaktadır. Doğru yerlere planlanmış otopark alanları trafik sıkışıklığının azaltılması ve dolayısıyla havaya salınan karbon salınımlarının azaltılarak kentsel hava kalitesinin artırılmasında önemli bir rol oynayabilir. Bu kapsamda metropoliten alanlarda sürdürülebilir ulaşım planlaması için otopark uygunluk analizi için etkili Ulaşım Özellikleri, Ekonomi & Finans ve Potansiyel Çekim Özellikleri kategorilerinde 23 kriter tanımlanmıştır. Tanımlanan kriterlerin önem düzeyinin tespiti için ilgili sektör paydaşları ile anket çalışması yapılmıştır. Anket sonuçları Best Worst Method (BWM) yöntemi ile değerlendirilerek kriter önem düzeyleri hesaplanmıştır. İstanbul ve Kocaeli illerinde belirlenen çalışma alanları için kriterleri temsil eden coğrafi veri altlıkları temin edilmiştir. İlgili veriler Coğrafi Bilgi Sistemleri (CBS) tabanlı yakınlık, yoğunluk ve bulanık mantık gibi teknikler ile analiz edilerek otopark uygunluk analizi gerçekleştirilmiştir. Analiz sonuçları metropoliten alanlarda otoparkların uygun yerlere konumlandırılması için rasyonel bir karar destek mekanizması olarak kullanılabilir.

**Anahtar Kelimeler:** *Best Worst Method (BWM), Coğrafi Bilgi Sistemleri (CBS), Otopark Uygunluk Analizi*

### GIS-BASED CAR PARKING SUITABILITY ANALYSIS FOR SUSTAINABLE TRANSPORTATION PLANNING

#### ABSTRACT

Changes in lifestyle and work disciplines in today's cities have led to an increase in urbanization as more people tend to urban areas. Urban transportation systems have been adversely affected by the increasing urban population and the rapid increase in the number of cars in parallel. For this reason, in most of the developed cities, problems are experienced due to the lack of car parking areas, which have an important role in sustainable urban transportation and traffic management, and their planning in unsuitable locations. Considering that the cars spend most of their time in the parking areas, which are called static traffic, the traffic load and the mobility of the cars are improved as a result of determining the most suitable location for the parking areas. As a result of determining the most suitable location, the traffic load and the mobility of the cars can be improved. This situation is of vital importance in terms of ensuring the transportation of

people without interruption, especially in metropolitan areas where car ownership rates and population density are high. Parking areas, which are planned in suitable locations, play an important role in reducing traffic congestion and thus increasing urban air quality by reducing carbon emissions into the air. In this context, 23 criteria have been defined in the categories of effective Transportation Features, Economy & Finance, and Potential Attraction Features for parking suitability analysis for sustainable transportation planning in metropolitan areas. In order to determine the importance level of the defined criteria, a survey was conducted with the relevant sector stakeholders. The criteria importance levels were calculated by evaluating the survey results with the Best Worst Method (BWM). Geographic data representing the criteria for the study areas determined in Istanbul and Kocaeli cities were obtained. The car parking suitability analysis was carried out by analyzing the relevant data with Geographic Information Systems (GIS) based techniques such as proximity, density, and fuzzy logic. The results of the analysis can be used as a rational decision support mechanism for the location of parking areas in metropolitan areas.

**Keywords:** *Best Worst Method (BWM), Geographic Information Systems (GIS), Car Parking Suitability Analysis*

## ASSESSING THE EFFECTS OF GROUND DELAY STRATEGIES ON FUEL CONSUMPTION AND TOTAL DELAY IN AIRPORT GROUND MANAGEMENT USING MATHEMATICAL MODELING

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### ABSTRACT

The increasing demand for air travel has made the effective management of ground operations at airports a critical concern. Delays in aircraft movement on the ground, such as before engine start, at intersections during taxiing, or departure queues, can result in significant deviations from the expected departure time, which contribute to the total delay in the airport. Such delays lead to increased fuel consumption and emissions. To reduce fuel consumption, strategic planning by air traffic controllers can involve delaying aircraft before the engine start. However, this type of approach may result in an increased level of utilization and congestion at airport parking stands and gates. Even if there are a sufficient number of parking stands at the airport, it is crucial to evaluate the impact of such approaches on total delay and sequence deviations. To address this issue, in this study a mathematical modeling approach is used to simulate two different scenarios including 40 aircraft with 3 different types in an hourly operation at an airport. While delaying before the engine start is not allowed in the first scenario, it is allowed in the second one. The ICAO emission database is used to obtain fuel consumption data for different engine types, and the GAMS programming language with the CPLEX solver is used to solve the scenarios. The objective function was to minimize fuel consumption during delays. The two scenarios are compared in terms of fuel consumption during delays, total delay, queue, and intersection delays, number of conflicts, and deviations from the first come first served (FCFS) strategy. Our model results indicate that although significant fuel savings can be achieved by delaying aircraft before the engine start, there will be a significant increase in total delay. These findings provide decision-makers with valuable insights for effective and efficient ground management at airports. The findings of this study highlight the importance of considering the trade-off between fuel consumption and total delay in implementing delay strategies.

**Keywords:** Airport ground management, strategic delaying, fuel consumption, mathematical modeling, air traffic control.

## HAVALİMANI YER OPERASYONLARININ YÖNETİMİNDE KALKIŞ UÇAKLARINI GECİKTİRME STRATEJİLERİNİN YAKIT VE TOPLAM GECİKME ÜZERİNDEKİ ETKİSİNİN MATEMATİKSEL MODELLEME İLE DEĞERLENDİRİLMESİ

### ÖZET

Hava yolu ulaşımına olan talebin artması, havaalanlarında yer operasyonlarının etkili bir şekilde yönetilmesini kritik bir konu haline getirmiştir. Motor çalıştırma öncesinde, taksi sırasında kavşaklarda veya kalkış kuyruklarında yaşanan gecikmeler, beklenen kalkış saatinden önemli ölçüde sapmalara neden olmakta ve havaalanındaki toplam gecikmeyi artırmaktadır. Bu tür gecikmeler, artan yakıt tüketimi ve emisyonlara yol açmaktadır. Kalkış uçakları hava trafik kontrolörleri tarafından motor çalıştırmadan önce geciktirilerek stratejik planlamalar ile yakıt tüketiminde iyileştirmeler elde edilebilmektedir. Ancak bu yaklaşım park pozisyonlarının veya kapıların yoğun kullanılmasına ve sıkışıklığa yol açabilir. Havalimanında yeterli sayıda park pozisyonu olsa da bu yaklaşımın toplam gecikme ve sıralamadan sapmalar üzerindeki etkisini değerlendirmek oldukça önemlidir. Bu sorunu ele almak için bu çalışmada, bir havalimanındaki 3 farklı tipte 40 kalkış uçağından oluşan bir saatlik operasyon için iki farklı senaryo matematiksel modelleme yaklaşımıyla simüle edilmiştir. İlk senaryoda motor çalıştırma öncesi gecikmeye izin verilmezken ikinci senaryoda izin verilmiştir. Farklı motor tipleri için yakıt tüketimi verileri ICAO emisyon veri tabanı

kullanılarak elde edilmiştir. Ayrıca ele alınan senaryolar GAMS programlama dili kullanılarak CPLEX çözücüsü ile çözülmüştür. Amaç fonksiyonu, gecikmeler sırasındaki yakıt tüketimini enküçüklemek olarak belirlenmiştir. İki senaryo, gecikmeler sırasında yakıt tüketimi, toplam gecikme, kuyruk ve kavşak gecikmeleri, çakışma sayısı ve ilk gelen ilk hizmet alır (FCFS) stratejisinden sapmalar açısından karşılaştırılmıştır. Model sonuçlarına göre, uçaklar motor çalıştırmadan önce geciktirilerek önemli yakıt tasarrufu sağlanabileceği, ancak toplam gecikmede önemli bir artış olacağı gözlenmiştir. Bu bulgular, havaalanlarında etkili ve verimli yer operasyonları yönetimi için karar vericilere değerli bilgiler sunmaktadır. Ayrıca bu çalışmada elde edilen bulgular, gecikme stratejilerinin uygulanmasında yakıt tüketimi ve toplam gecikme arasındaki dengeyi göz önünde bulundurmanın önemini vurgulamaktadır.

**Anahtar kelimeler:** Havaalanı yer operasyonu yönetimi, stratejik geciktirme, yakıt tüketimi, matematiksel modelleme, hava trafik kontrol.



## TÜRKİYE DENİZEL DİYATOME FLORASINA KATKILAR, CENTRALES (BACILLARIOPHYTA)

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### ÖZET

**Amaçlar:** Diyatomeleler sucul sistemlerde alg grupları içerisinde en bol bulunan ve çeşitli özellikleri ile sucul ekosistemlerde önemli bir yere sahiptir. Silis hücre duvarına sahip bu organizmalar, yüksek fotosentez oranına sahiptir ve birincil üretimin temel kaynaklarından. Centrales grubuna üye diyatomeleler ise dairesel yapıları sayesinde hem su kolonunda hem de bentik ortamlarda bulunmaktadır. Ayrıca bazı centrales grubuna ait türlerin daha kirli sularda yoğun olduğu ve indikatör olarak kullanıldığı bilinmektedir. Bu çalışma ile bu gruba ait diyatomelelerin çeşitliliğinin tespiti amaçlanmıştır.

**Yöntemler:** Bu çalışmada toplamda 76 istasyondan 2015-2022 yılları arasında Türkiye denizlerinde bulunan centrales grubuna ait diyatome örnekleri toplanmış ve incelenmiştir. Diyatome materyali hazırlanarak ışık mikroskobu (LM) ve taramalı elektron mikroskopları (SEM) ile incelenmiştir. Yapılan incelemeye göre farklı karaktere sahip denizlerimizde farklı türlere ait sentrik diyatomeleler tespit edilmiştir.

**Sonuçlar:** Toplamda 56 tür tespit edilmiştir. Bu gruplar arasında en yaygın 13 tür ile *Thalassiosira* Cleve cinsine ait türler olarak bulunmuştur. Ayrıca *Actinocyclus* Ehrenberg, *Coscinodiscus* Ehrenberg ve *Cyclotella* (Kützing) Brebisson türleri tespit edilmiş bu cinslere ait olan türlerinin bazılarının kirli sularda bulunduğu tespit edilmiştir. SEM çalışması ile de *Minidiscus* Hasle gibi küçük hücreli ve tespit edilmesi zor türler bulunarak katkıda bulunulmuştur. Bu sonuçlar su kolonunda planktonda yaygın olarak görülen bazı türlerin bentik ortamda da oldukça yaygın olduğunu ortaya koymuştur. Sonuç olarak Türkiye denizlerinde sentrik diyatome dağılımı bölgesel farklılık göstermiş ve zengin bir flora tespit edilmiştir.

**Anahtar Kelimeler:** *Diyatome, Centrales, Türkiye*

## CONTRIBUTIONS TO THE TURKISH MARINE DIATOM FLORA, CENTRALES (BACILLARIOPHYTA)

### ABSTRACT

**Aim:** Diatoms are one of the most abundant groups of algae and play an important role in aquatic ecosystems. These organisms have a silicious cell wall, contribute to photosynthesis with high rates and are an important source of primary productivity. Diatoms belonging to the centrales group have a lateral symmetry which makes them present both in the water column and benthos. Furthermore, several species of centrales are known to be present in polluted waters and can be used as indicators. The study aimed to reveal the biodiversity of the centrales group.

**Methods:** In this research, diatoms were collected from a total of 76 stations between 2015 and 2022. Diatom materials were prepared for investigation in light microscopy (LM) and scanning electron microscopy (SEM). The results revealed that differences were observed in different seas of Türkiye.

**Results:** A total of 56 species were observed. Among them, *Thalassiosira* Cleve was the most abundant with 13 species. In addition, *Actinocyclus* Ehrenberg, *Coscinodiscus* Ehrenberg and *Cyclotella* (Kützing) Brebisson species were observed, as several species belonging to the genera are known as pollutant tolerant. Also, SEM contributed to small-celled genera such as *Minidiscus* Hasle. These results showed that several species very common as plankton in the water column are also abundant in benthic environments. As a result, centric diatoms showed a spatial change in Türkiye and revealed high biodiversity.

**Keywords:** *Diatoms, Centrales, Türkiye*

## AKILLI ŞEHİRLERDE YAŞAM KALİTESİNİN ARTTIRILMASI İÇİN TUCBS İLİŞKİLİ GÜRÜLTÜ HARİTALARININ ÜRETİLMESİ: GTÜ KAMPÜS ÖRNEĞİ

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### ÖZET

Gürültü kirliliği, insan hayatının her anında bulunan, şiddetine ve maruz kalma süresine bağlı olarak fiziksel ve psikolojik anlamda ciddi olumsuz etkiler oluşturabilen bir çevresel kirlilik türüdür. Özellikle artan nüfus yoğunluğu ile gitgide kalabalıklaşan ve kentleşen büyük şehirlerde gürültü önemli bir kentsel problem haline gelmiştir. Akıllı şehirlerin en büyük amaçlarından olan kentsel yaşam kalitesinin artırılması anlamında çevresel gürültünün tespit edilerek vatandaşlara daha sakin bir çevre oluşturulması oldukça önemli bir uygulama hedefi haline gelmiştir. Coğrafi Bilgi Sistemleri'nin (CBS) konumsal analiz yeteneklerinden yararlanılarak oluşturulan gürültü haritaları ile yönetmelik çerçevesinde belirtilen gürültü kaynakları tespit edilerek gürültü sınır değerlerinin aşılmış ve o bölgedeki gürültü kaynağının ne kadar çok insanı etkilediği belirlenebilir. Bu çalışmada, Çevresel Gürültü Kontrol Yönetmeliği ile belirlenen gereksinimler Türkiye Ulusal Coğrafi Bilgi Sistemleri (TUCBS) veri temaları ile uyumlu olarak eşleştirilerek analiz edilmiştir. Çalışma alanı olarak sanayinin ve ticaretin oldukça yoğun olduğu Marmara bölgesinin en dinamik yerleşim merkezlerinden olan Gebze ilçesinde yer alan Gebze Teknik Üniversite kampüsü seçilmiştir. Özellikle öğrencilerin ve öğretim elemanlarının öğrenme ve araştırma kalitesini olumsuz yönde etkileyen gürültü kirliliğinin kampüs içerisinde dağılımının ve şiddetinin belirlenerek, etkinin olabildiğince en aza indirilmesi için yönetmelik gereksinimleri uyarınca gürültü değerlendirilmesi yapılmış ve TUCBS veri temaları ile uyumlu gürültü haritaları üretilmiştir. Çalışmada akşam, gündüz ve gece zaman aralıkları baz alınmış olup coğrafi analiz teknikleri kullanılarak gürültü kaynakları değerlendirilip kampüs içinde en yüksek ses şiddetleri belirlenmiştir.

**Anahtar Kelimeler:** *Gürültü analizi, Yaşam Kalitesi, Coğrafi Bilgi Sistemleri*

### PRODUCING TUCBS-RELATED NOISE MAPS TO IMPROVE THE QUALITY OF LIFE IN SMART CITIES: GTU CAMPUS CASE

### ABSTRACT

Noise pollution is a type of environmental pollution that can have serious physical and psychological negative effects in every moment of human life depending on its severity and exposure time. Especially in the big smart cities that become crowded and urbanized with increasing population density, noise pollution has become an important urban problem. In order to improve the quality of urban life, which is one of the greatest goals of smart cities, it has become a very important application to create a calmer environment for citizens by identifying environmental noise. With the noise maps created by utilizing the spatial analysis capabilities of Geographic Information Systems (GIS), noise sources specified within the framework of the regulation can be identified and it can be determined whether the noise limit values are exceeded, and how many people are affected by the noise source in that region. In this study, the requirements determined by the Environmental Noise Control Regulation were paired and analyzed in accordance with the data themes of

Turkey National GIS (TUCBS). The Gebze Technical University (GTU) Campus located in Gebze district, which is one of the most dynamic settlements of the Marmara region where industry and trade is very intense, has been studied. In order to determine the distribution and intensity of noise pollution which adversely affects the learning and research quality of students and faculty members and to minimize the impact as much as possible, noise maps compatible with TUCBS data themes were produced. In the study, the noise sources were evaluated, and the highest sound intensities were determined by using geographic analysis techniques in accordance with the requirements of the regulation.

**Keywords:** *Noise pollution analysis, Quality of Life, Geographic Information Systems*

## YANARDAĞ PATLAMASI SONRASI KÜKÜRTDİOKSİT DEĞERLERİNİN UZAKTAN ALGILAMA GÖRÜNTÜLERİ YARDIMIYLA İZLENMESİ; MAUNA LOA YANARDAĞI ÖRNEĞİ

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### ÖZET

Doğal afetler, ölümlere, çevre hasarına ve sosyal yaşamın bozulmasına neden olan, atmosferik, jeolojik ve hidrolojik kaynaklı olaylardır. Yanardağlar, yerkürenin var oluşundan günümüze kadar geçen süre içerisinde, doğal yaşamı hem pozitif (ısınma, jeotermal sular vb.) hem de negatif (yıkıcı etkiler vb.) şekilde etkilemişlerdir. Günümüz teknolojisinde volkanik afetlerin Uzaktan Algılama araçları ile izlenmesi, yönetimi ve takibi sıklıkla başvurulan yöntemler arasındadır. Bu çalışmanın amacı; 27.11.2022 günü saat 23:30'da Amerika Birleşik Devletleri'ne bağlı Havai adasındaki Mauna Loa yanardağının patlaması sonrası atmosfere yayılan Kükürtdioksit kirletici maddesinin Sentinel-5P Uzaktan Algılama görüntüleri ile takibinin yapılmasıdır. Çalışmada veri seti olarak Avrupa Uzay Ajansı kontrolünde bulunan ve atmosferdeki kirletici yoğunluğunun tespiti amacıyla kullanılan Sentinel-5P uzaktan algılama görüntülerinden faydalanılmıştır. 28 Kasım ile 10 Aralık tarihleri arasındaki görüntüler kullanılarak patlama sonrasında atmosfere yayılan SO<sub>2</sub> miktarlarının günlük takibi yapılmıştır. Uzaktan algılama görüntüleri açık kaynak kodlu Python yazılımı ile analiz edilmiş ve günlük SO<sub>2</sub> miktarları belirlenerek, yayılım haritaları oluşturulmuştur. Yapılan analizler sonucunda görüntüler üzerinden toplamda 11291701.63 Dobson Unit (DU) miktarında SO<sub>2</sub> 'nin atmosfere yayıldığı tespit edilmiştir. En yüksek miktarda gaz çıkışı 2274858.75 DU ile patlamanın ilk günü olan 28 Kasım'da gerçekleşmiştir. SO<sub>2</sub> bulutlarının patlamadan iki gün sonra 30 Kasım tarihinde yaklaşık 4700 km uzağa taşınarak Kaliforniya Körfezini aşmış Meksika'ya kadar ulaştığı belirlenmiştir. Uzaktan Algılama görüntülerinin afetlerin izlenmesinde kullanılması hızlı, etkin ve doğru sonuçların elde edilmesini sağlamaktadır. Afet öncesi, sırası ve sonrasında karar verici kurum-kuruluşlar ve bu kararları uygulayanlar için geniş imkân ve olanakların sağlanması, planlama ve karar verme süresini kısaltmaktadır. Ayrıca farklı veri türleri (meteorolojik vb.) ile bir araya getirilerek simülasyon üretebilme yeteneği ile afet sonrası senaryoların hızlı bir şekilde oluşturulabilmesi, afet alanına müdahalenin doğruluk oranını artırarak, afetten etkilenebilecek kişilerin belirlenmesi ve sayısının en azda tutulmasını sağlayacaktır.

**Anahtar Kelimeler:** Görüntü işleme, Sentinel 5P, Python

### MONITORING SULFUR DIOXIDE VALUES AFTER THE VOLCANO EXPLOSION WITH THE HELP OF REMOTE SENSING IMAGES; A CASE STUDY OF MAUNA LOA VOLCANO

#### ABSTRACT

Natural disasters are atmospheric, geological and hydrological events that cause deaths, environmental damage and disruption of social life. Volcanoes have affected natural life both positively (heating, geothermal waters, and so on) and negatively (destructive effects, and so on) during the period from the existence of the earth to the present day. In today's technology, monitoring, management and monitoring of volcanic disasters with Remote Sensing tools are among the methods frequently used. The aim of this study is to monitor the sulfur dioxide pollutant emitted into the atmosphere after the eruption of the Mauna Loa volcano on the island of Hawaii, USA at 23:30 on 27.11.2022, with Sentinel-5P Remote Sensing images. Sentinel-5P remote sensing images, which are under the control of the European Space Agency and used for the detection of pollutant density in the atmosphere, were used as a data set. Using the images between November 28 and December 10, daily monitoring of the amount of SO<sub>2</sub> emitted into the atmosphere after the explosion was carried out. Remote sensing images were analyzed with open source Python software, and diffusion maps were created by determining daily SO<sub>2</sub> amounts. As a result of the analyses, it was determined that a total of 11291701.63 Dobson Units (DU) of SO<sub>2</sub> was emitted into the atmosphere. The

highest amount of outgassing occurred on 28 November, the first day of the explosion, with 2274858.75 DU. It was determined that SO<sub>2</sub> clouds were transported approximately 4700 km away on 30 November, two days after the explosion, and reached Mexico across the Gulf of California. The use of Remote Sensing images in monitoring disasters provides fast, effective and accurate results. Providing a wide range of opportunities and possibilities for decision-making institutions and organizations and those who implement these decisions before, during and after disasters shortens the planning and decision-making time. In addition, the ability to produce simulations by combining different types of data (such as meteorological) with the ability to quickly create post-disaster scenarios will increase the accuracy of intervention in the disaster area and will ensure that the number of people who may be affected by the disaster is identified and minimized.

**Keywords:** Image Processing, Sentinel 5P, Python

## TÜRKİYE’DE OLASI DEPREM RİSKİ İLE İLGİLİ YAPILAN ÇALIŞMALARIN ANALİZİ

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### ÖZET

Bu çalışmada, Türkiye’de deprem riski ile ilgili yapılan araştırmaların analizini yapmak amaçlanmıştır. Bu amaç doğrultusunda ise, Türkiye’de deprem riskiyle ilgili çalışmalar ve bu çalışmalarla ilgili yürütülen araştırma konuları, yayın türleri, araştırma yöntemleri yıllara göre incelenmiştir. Araştırmada, nitel araştırma yöntemi olan belge taraması yöntemi kullanılmıştır. Araştırma alanı ölçüt olarak 1999-2023 yılları arasında Türkiye’de deprem riski konusunda yapılmış araştırmalar olmasına dikkat edilmiştir. Araştırma verileri, YÖK Ulusal Tez Veri Merkezi veri tabanları kullanılarak elde edilmiştir. Veriler elde edilirken, ‘‘Türkiye’de deprem, deprem riski, deprem’’ kelimeleri anahtar olarak kullanarak tarama yapılmıştır. Toplanan veriler ise, içerik analizi yöntemi ile analiz edilmiştir. Türkiye’deki depremler eski depremler ile karşılaştırılmış ve sonucunda en yıkıcı depremlerin 6 şiddeti ve üzeri olduğu görülmüştür. Araştırmada en çok 2000-2020 yılları arasında yapıldığı, yayın türü olarak ise en fazla yüksek lisans tezi ve makaleler olduğu ve araştırmalarda çoğunlukla nicel araştırma yöntemlerinin kullanıldığı sonucuna varılmıştır. Bu sonuç doğrultusunda, Türkiye’de deprem riski konusunda yapılacak sonraki araştırmalarda, son yaşanan depremlerde kayıplar ve müdahale, iletişim ve lojistikte yaşanan sorunlar dolayısıyla önem kazanan nitel araştırma yöntemlerinin ve karma yöntem araştırmalarının kullanılması önerilebilir.

**Anahtar Kelimeler:** Türkiye’de deprem, Deprem, Deprem riski.

### ANALYSES OF STUDIES ON POSSIBLE EARTHQUAKE RISK IN TURKEY

#### ABSTRACT

In this study, it is aimed to analyse the studies on earthquake risk in Turkey. In line with this purpose, studies on earthquake risk in Turkey and research topics, types of publications and research methods carried out in relation to these studies were analysed according to years. In the research, document scanning method, which is a qualitative research method, was used. As a criterion for the research area, it was paid attention that there were studies on earthquake risk in Turkey between 1999 and 2023. The research data were obtained by using YÖK National Thesis Data Centre databases. While obtaining the data, the words "earthquake in Turkey, earthquake risk, earthquake" were used as keywords. The collected data were analysed by content analysis method. Earthquakes in Turkey were compared with old earthquakes and as a result, it was seen that the most destructive earthquakes were of magnitude 6 and above. It was concluded that most of the researches were conducted between 2000-2020, most of the publications were master's theses and articles, and mostly quantitative research methods were used in the researches. In line with this result, it can be suggested that qualitative research methods and mixed method research, which have gained importance due to the losses in recent earthquakes and the problems experienced in response, communication and logistics, should be used in future research on earthquake risk in Turkey.

**Keywords:** Earthquake in Turkey, Earthquake, Earthquake risk.

## TÜRKİYE ÜZERİNDEKİ JEOİT YÜKSEKLİKLERİNİ EGM08 İLE DAHA İYİ HESAPLAMAK İÇİN TG20 KARELAJ DEĞERLERİNE DAYALI POLİNOMSAK BİR DÜZELTME

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### ÖZET

EGM08 (Earth Gravitational Model, 2008), Jeoit yüksekliklerini global olarak hesaplamak için iyi bilinen bir modeldir ve buna web üzerinden herkes kolayca erişebilir. Ancak modelden hesaplanan Jeoit yükseklikleri yerel Jeoit yüksekliklerini iyi yansıtmamaktadır, model Dünyanın herhangi bir bölgesinde yaşayan yerel kullanıcılara sadece yaklaşık bir yüzey vermektedir. Buna rağmen bu model pratik amaçlar için yerel veriler kullanılarak kısmen geliştirilebilir. Bu çalışma, HGM-TR (Türkiye Cumhuriyeti Milli Savunma Bakanlığı Harita Genel Müdürlüğü) tarafından izlenen TG20 (Türkiye Jeoidi, 2020) adlı yerel Jeoit verileri ile Türkiye'deki yerel kullanıcılar için EGM08'in geliştirilmesine yardımcı olmak amacıyla hazırlanmıştır. HGM-TR kendi web sayfasından TG20'ye ait 5'x5' kareli veriyi kullanıcıların erişimine açtığını duyurmuştur. Bu çalışmada, EGM08'in TG20'den çıkarılmasıyla hesaplanan Jeoit yükseklik farklarını gözlenen değerler olarak alınmış, Jeoit yüksekliklerinin EGM08 global modelinden TG20 yerel modeline dönüştürülmesi için bir polinomsal yüzey modeli geliştirilmiştir. EKK (En Küçük Kareler) kestirimi aşamasından önce genellikle kıyı ve dağlık alanlarda bulunan farkların ortalamasından (kabaca -30 cm olan) çok büyük olan farklar sezgisel olarak veri setinden ayrıştırılmıştır. Ortalamadan  $\pm 30$  cm fark (-60cm, 0cm) aralığı kullanılarak 0, 1, 2, ..., 5 derecelik polinomsal yüzey fonksiyonu için EKK tahmini yapılmıştır. 5. dereceden yüksek polinomsal dereceler için EKK kestiriminin soncul KOH'ya (Kersel Ortalama Hatası) anlamlı bir gelişme sağlamadığı görüldüğünden, kestirim süreci 5. (KOH=10.57 cm) derecede sona erdirilmiştir. EGM08 iyileştirmesi için sırasıyla  $\pm 11,46$  cm ve  $\pm 11,43$  cm ile 2. ve 3. derecelerin kullanılabileceğine karar verilmiştir.

**Anahtar Kelimeler:** *Jeoit, En Küçük Kareler, EGM08, TG20.*

### A POLYNOMIAL CORRECTION BASED ON TG20 GRID VALUES TO COMPUTE GEOID HEIGHTS ON TURKEY BETTER WITH EGM08

### ABSTRACT

EGM08 (Earth Gravitational Model, 2008) is a well-known model to compute the Geoid heights globally, and anyone can reach it by web easily. However, the Geoid heights calculated from the model do not reflect the local Geoid heights well, the model gives only an approximate surface to the local users living in any area of the World. But the model can be partially improved by using local data for practical purposes. This paper is prepared to assist the improvement of EGM08 for the local users in Turkey with local geoid data named TG20 (Turkey Geoid, 2020) monitored by GDM-TR (Republic of Türkiye Ministry of National Defense, General Directorate of Mapping). A 5'x5' grid data of TG20 is opened to public access announced on own-web pages by GDM-TR. In this study, taking the geoid height differences computed by subtracting the EGM08 from the TG20 as observed values, it has been developed a polynomial surface model to transform the Geoid heights from the EGM08 global model to the TG20 local model. Before the LS (Least Squares) estimation stage, the very large ones from the mean (roughly -30 cm) of the differences generally found in coastal and mountainous areas have been separated from the data set heuristically. Using the interval  $\pm 30$  cm differences (-60cm, 0cm) from the mean, has been performed LS estimation for 0, 1, 2, ..., 5 degrees polynomial surface function. Since the LS estimation for high degrees from the 5th does not get a significant improvement on a posterior RMS (Root Mean Square), the estimation process has ended at the

5th (RMS=10.57cm) degrees. And, it has been decided that 2nd and 3rd degrees could be used for the EGM08 improvement with  $\pm 11.46$  and  $\pm 11.43$  cm respectively.

**Keywords:** *Geoid, Least Squares, EGM08, TG20.*

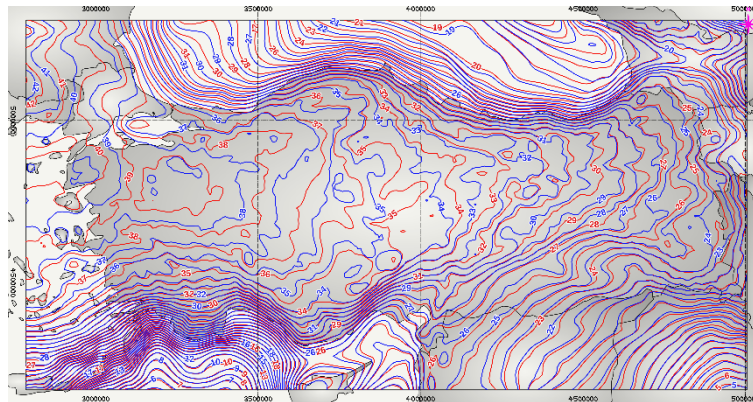


Figure 1. Comparison of the TG-20 (Datum: ITRF96) by the EGM08 (Datum: WGS84) using blue and red contour lines respectively (Contour lines are meter units).

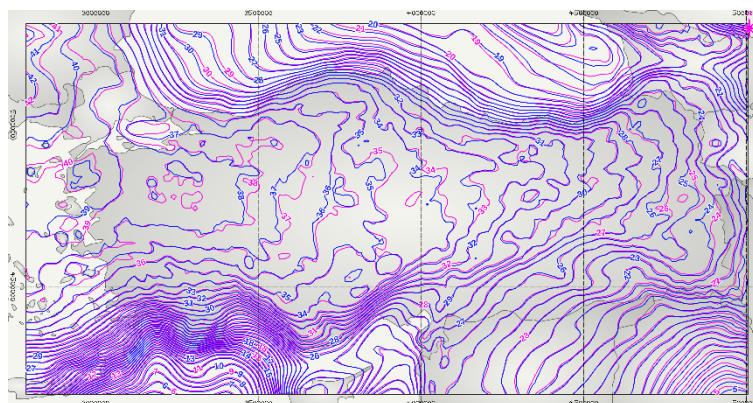


Figure 2. Simple improvement for the EGM08 with the mean ( $\sim 30$ cm) of all geoid height differences.

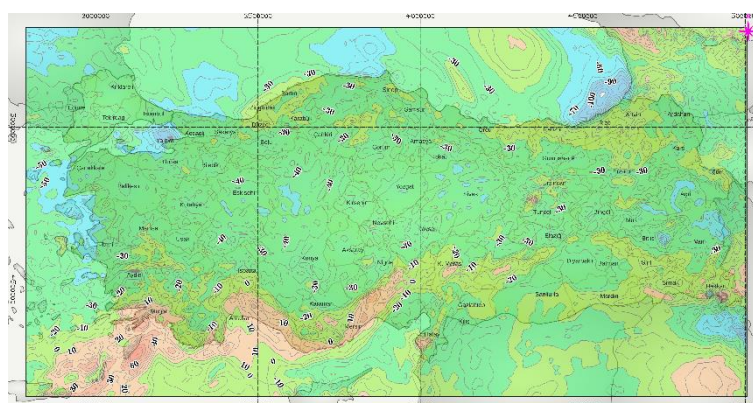


Figure 3. The green field of differences between TG-20 and EGM08. would be used in the polynomial surface estimation for the improvement EGM08 global geoid (Contour lines are centimeter units).



## YAYIN YÖRÜNGE KESTİRİMİNDE PARAMETRE BAĞIMLILIĞI

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GNSS (GPS-us, GLONASS-ru, GALILEO-eu, COMPASS-ch, ... ) uydularının ölçme anında alınan yayın yörünge bilgileri kontrol birimleri tarafından hesaplanır ve uydulardan yayılan taşıyıcı dalgalar üzerinden kullanıcılara ulaştırılır. Yayın yörünge elmanları, 6 adet Kepler yörünge elemanı, 3 adet hız parametresi, 6 adet ikinci basamak trigonometrik düzelme katsayısı ve 3 adet polinomsal katsayıdan oluşur. İlk 15 parametre ile son 3 parametre arasında cebrik bir ilişki olmadığından bu iki grup bağımsız çözülebilir. Bu çalışmada bu yol izlenmemiş bütün parametreler birlikte çözülmüştür. 18 adet bilinmeyen oluşmuş yayın yörünge belirleme işlemi doğrusal olmayan denklem sistemlerinin EKK (En Küçük Kareler) kestirimine göre çözümü sonucunda elde edilir. Doğrusal olmayan denklem sistemlerini çözerken bazı parametreler arasında bağımlılık oluşur. Herhangi bir önlem alınmaz ise bu bağımlılık bazı uydu yörünge bilgilerinin yanlış hesaplanmasına neden olur. Bu çalışmada, doğrusallaştırılmış denklem sistemini kararsız hale getiren bu bağımlılık üzerinde durulacaktır. Kararsız yapının bazı uyduların yörünge elemanlarının doğru bazı uyduların yörünge elemanlarının da yanlış hesaplanmasına yol açtığı gösterilecektir. Çalışmanın sayısal uygulama bölümünde, farklı GNSS uydu sistemlerinden seçilen uydu örnekleri kullanılarak kararsız olan genel yapının yörünge bilgilerini hesaplamadaki etkisi kestirilen yörünge elemanları üzerinden tartışılacaktır. Kestirilen yörünge elemanları RINEX (Receiver Independent Exchange) formatında yazdırılarak verilecektir. Yörünge referans anları (1, 3, 5, ..., 23) saatlerine denk gelecek şekilde seçilecektir. Bu kestirilen yayın yörünge elemanlarının kararlılığı ve kararsızlığı uyduların verilen duyarlı yörünge bilgileri ile karşılaştırılacaktır. Bu karşılaştırmalar grafikler halinde sunulacaktır.

**Anahtar Kelimeler:** *Parametre kestirimi, Bağımlılık, Yörünge Belirleme*

**PARAMETER DEPENDENCY IN BROADCAST EPHEMERIDES ESTIMATION****ABSTRACT**

Broadcast ephemerides of GNSS (GPS-us, GLONASS-ru, GALILEO-eu, COMPASS-ch, ... ) satellites are estimated before the observation time, and delivered to users via carrier waves emitted from satellites by their control units. The broadcast ephemerides elements consist of 6 Kepler orbital elements, 3 velocity parameters, 6 second-order trigonometric correction coefficients, and 3 polynomial coefficients. Since there is no algebraic relationship between the first 15 parameters and the last 3 parameters, these two groups can be solved independently. In this study, all parameters that did not follow this path were solved together. The broadcast ephemerides estimation which have 18 unknowns, is obtained as a result of the solution of nonlinear equation systems according to the Least Squares (Least Squares) method. When solving nonlinear systems of equations, dependencies occur between some parameters. If no precautions are taken, this dependency causes some satellite ephemerides to be estimated incorrectly. In this study, this dependency, which makes the inconsistent equation system, will be emphasized. It will be shown that the inconsistent equation system causes the orbital elements of some satellites to be estimated correctly or incorrectly. In the numerical application part of the study, the effect of the inconsistent structure in estimating the ephemerides will be discussed over the predicted orbital elements by using satellite samples selected from different GNSS

satellite systems. The orbital elements will be given in the RINEX (Receiver Independent Exchange) broadcast ephemerides format. The orbit will be selected with reference moments (1, 3, 5, ..., 23). In this publication, the consistency and inconsistency of the orbital elements will be compared with the given precise orbital elements of the satellites and presented in graphs.

**Keywords:** *Parameter Estimation, Dependency, Orbit Determination*

## GASRTRİK MUKORMİKOZ: OLGU SUNUMU

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### ÖZET

Zigomikozlar, hızla büyüyen küf mantarlarıdır. Hızla ilerleyen anjiyoinvaziv hastalık tablosu oluştururlar. Kontrolsüz diyabet ve immün sistemi baskılanmış hastalarda yüksek risk söz konusudur. En yaygın insan enfeksiyonu yapanlardan biri de 'mukor'dur. Sıklık sırasına göre yerleşimleri sinonazal, akciğer, sistemik, deri, santral sinir sistemi/rinoserebral ve orbita tutulumu şeklindedir. Tanı mikroskopik incelemede 90°lik açılar oluşturan, düzensiz dallanmalar gösteren, geniş septasız hif yapılarının varlığı ile konur. Hızla ilerleyen tıbbi acil durum olup, cerrahi debridman şarttır. Olgumuz 45 yaşında, solunum sıkıntısı nedeniyle yoğun bakım ünitesine yatırılıp yapılan erkek hastadır. Öyküsünde romatoid artriti olan ve bunun için 6 ayda bir intravenöz ilaç aldığı söylenen hastaya, mide kanaması nedeniyle endoskopi yapılmış ve mukozanın kırmızı-mor-siyah renkte olduğu, yaygın ülser/nekroz alanları içerdiği görülmüştür. Histopatolojik tanı mukormikozdur. Literatürde az sayıda gastrik mukormikoz vakası bildirilmesi ve fungal septisemiye hızlı ilerlemesi nedeniyle olgu sunulmaya değer bulunmuştur.

**Anahtar kelimeler:** Mide, mukor, zigomikoz

## GASRTRIC MUCORMYCOSIS: A CASE REPORT

### ABSTRACT

Zygomycoses are fast growing mold fungi. They form a rapidly progressive angioinvasive disease. Uncontrolled diabetes and immunocompromised patients are at high risk. One of the most common human infections is 'mucor'. In order of frequency, their localizations are sinonasal region, lung, systemic, skin, central nervous system/rhinocerebral and orbital involvement. Diagnosis is made by the presence of large non-septate hyphae structures with irregular branching and forming 90° angles on microscopic examination. It is a rapidly progressing medical emergency and surgical debridement is essential. Our case is a 45-year-old male patient who was admitted to the intensive care unit due to respiratory distress. Endoscopy was performed due to gastric bleeding and it was observed that the mucosa was red-purple-black and contained extensive ulcer/necrosis areas. Histopathological diagnosis is mucormycosis. The case is worth presenting because of the few reported cases of gastric mucormycosis in the literature and its rapid progression to fungal septicemia.

**Keywords:** Stomach, mucor, zygomycosis

## PERİTONEAL KARSİNOMATOZİSİ TAKLİT EDEN PERİTONEAL SARKOİDOZ

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### ÖZET

Sarkoidoz, etiyolojisi bilinmeyen sistemik inflamatuvar bir hastalıktır. En sık akciğerler (%90'dan fazla) olmak üzere herhangi bir organda görülebilir. Kazeifiye olmayan granülomlarla karakterizedir. Sarkoidoz tanısında hem klinik hem de patolojik özellikler göz önünde bulundurulmalıdır. Peritoneal sarkoidoz ise son derece nadir bir hastalık olup, klinik pratikte sıklıkla yanlış teşhis edilir. Peritoneal sarkoidozu klinik ve radyolojik olarak peritoneal karsinomatozis veya peritoneal tüberkülozdan ayırmak zor olabilir. Non-nekrotizan granülomları saptamak, malignite ve enfeksiyonu dışlamak için doku örnekleme gereklidir. Olgumuz 79 yaşında kadın hastadır. Umbilikal herni nedeniyle opere edilirken batında yaygın asit sıvısı ve karın duvarında yaygın solid lezyonlar saptanan hastanın bu lezyonlarından biyopsi alınmıştır. Postoperatif alt abdomen MR görüntülemesinde "kolon tümörü ve peritoneal karsinomatozis" sonucuna varılmış, ancak biyopsi örnekleri "peritoneal sarkoidoz" ile uyumlu bulunmuştur. Bu olgu, peritoneal karsinomatozis şüphesi yaratan bir lezyon varlığında, abdominal sarkoidozun ayırıcı tanıda düşünülmesi gerektiğini göstermektedir.

**Anahtar kelimeler:** Periton, sarkoidoz, karsinom

## PERITONEAL SARCOIDOSIS MIMICKING PERITONEAL CARCINOMATOSIS

### ABSTRACT

Sarcoidosis is a systemic inflammatory disease of unknown etiology. It can occur in any organ, most commonly the lungs (more than 90%). It is characterized by non-caseating granulomas. Both clinical and pathological features should be considered in the diagnosis of sarcoidosis. Peritoneal sarcoidosis is an extremely rare disease and is often misdiagnosed in clinical practice. It may be difficult to distinguish peritoneal sarcoidosis from peritoneal carcinomatosis or peritoneal tuberculosis clinically and radiologically. Tissue sampling is required to detect non-necrotizing granulomas and exclude malignancy and infection. Our case is a 79-year-old female patient. During the operation for umbilical hernia, diffuse ascites fluid in the abdomen and common solid lesions on the abdominal wall were detected, and biopsy was taken from these lesions. Postoperative MR imaging of the lower abdomen revealed "colon tumor and peritoneal carcinomatosis", but biopsy samples were found to be compatible with "peritoneal sarcoidosis". This case demonstrates that abdominal sarcoidosis should be considered in the differential diagnosis in the presence of a suspected peritoneal carcinomatosis lesion.

**Keywords:** Peritoneum, sarcoidosis, carcinoma

## ERKEK İNFERTİLİTESİNDE DNA METİLASYONUN ROLÜ

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### ÖZET

DNA sekansının bizzat kendinin değişmeksizin gen ifadesinin düzenlemesi ve fenotipe yansımış olan bütün kalıtsal bilgiler epigenetik olarak adlandırılır. Erkeğe ait germ hücreleri; fertilizasyon için yeterli harekete ve kabiliyete sahiptir. Sperme özgü hücreler eşeyssel olgunluğa erişirken değişim göstermektedir. Bu değişimler epigenetik modifikasyonlar olarak isimlendirilen DNA metilasyonu, histon modifikasyonu ve kromozomun yeniden düzenlenmesinden oluşmaktadır. Bahsi geçen değişimlerden DNA metilasyonu ve histon modifikasyonu sperm hücresinde büyük farklılaşmalara yol açmakla beraber spermatogenezi de düzenlemektedir. Histon modifikasyonu; DNA'ya bağlanacak olan histonların kapasitesini ve belirli koşulları değiştirerek gen ifadesi için önemli değişimler yapmaktadır. DNA metilasyonu, genom üzerindeki Sitozin yani C primidininin 5' konumuna metil grubunun eklenmesi şeklinde tanımlanabilir. DNA metilasyonu ise prenatal dönem için önemli bir mekanizmadır. DNA metilasyonu, DNMT de denilen DNA metiltransferaz ile meydana gelebilmektedir. Yapılan araştırmalarda infertil çiftlerin büyük bir çoğunluğunda sperme ait bir problem bulunduğu görülmektedir. Bahsi geçen problem erkeğin üreme organlarındaki gelişme sırasındaki bozukluğuna bağlı olabilir ya da bir diğer ihtimalle sperm üretilme bozukluğuna bağlı olabilir. Epigenetik; günümüzde çok araştırılan, cevabı bulunmaya çalışılan, pek çok soruyu yanıtlayan bir konudur. Erkek infertilitesinin nedenleri ile epigenetik faktörler arasında ilişkili olduğu öne sürülmüştür. Bu bildiride bu farklılıkların neler olduğuna, spermatogeneze, infertiliteye, epigenetiğe, DNA metilasyonuna ve bu metilasyonun erkek infertilitesini nasıl etkilediğine değinilmiştir. Sebebi bulunamamış infertilite ayrıntılı olarak hem dişi hem erkek yönünde incelenmelidir. Epigenetik araştırmalarsa sorunun yani infertilitenin asıl sebebine yön verebilir.

**Anahtar Kelimeler:** *Epigenetik, DNA Metilasyonu, İnfertilite*

### THE ROLE OF DNA METHYLATION IN MALE INFERTILITY

#### ABSTRACT

The regulation of gene expression without changing the DNA sequence itself and all hereditary information reflected in the phenotype are called epigenetics. male germ cells; has sufficient mobility and ability for fertilization. Sperm-specific cells change as they reach sexual maturity. These changes consist of DNA methylation, histone modification, and chromosome rearrangement, which are called epigenetic modifications. Among the aforementioned changes, DNA methylation and histone modification cause great differentiation in the sperm cell, but also regulate spermatogenesis. Histone modification; It makes important changes in gene expression by changing the capacity of histones to bind to DNA and certain conditions. DNA methylation can be defined as the addition of a methyl group to the 5' position of Cytosine, or C pyrimidine, on the genome. DNA methylation is an important mechanism for the prenatal period. DNA methylation can occur by DNA methyltransferase, also called DNMT. Studies have shown that most of the infertile couples have a sperm problem. The aforementioned problem may be due to the developmental disorder of the male's reproductive organs, or it may be due to another possible sperm production disorder. epigenetics; Today, it is a subject that is very researched, tried to be answered, and answers many questions. It has been suggested that there is a relationship between the causes of male infertility and epigenetic factors.

In this paper, what these differences are, spermatogenesis, infertility, epigenetics, DNA methylation and how this methylation affects male infertility are mentioned. Unexplained infertility should be examined in detail in terms of both males and females. Epigenetic research can guide the root cause of the problem, namely infertility.

**Keywords:** *Epigenetics, DNA Methylation, Infertility*

## FİZİKSEL AKTİVİTENİN SİGARA, ALKOL VE UYUŞTURUCU BAĞIMLILIĞI ÜZERİNDEKİ ROLÜ VE ETKİLERİ

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### ÖZET

Bağımlılık; kişinin bir maddeyi veya yaptığı davranışı birçok kez bırakma girişiminde bulunmasına rağmen bırakamaması, giderek dozunu arttırması, kullanmayı/yapmayı bıraktığında yoksunluk belirtilerinin ortaya çıkması, zararlarını görmesine rağmen kullanmayı/yapmayı sürdürmesi durumu olarak tanımlanmaktadır. Bağımlılık kavramı çok yönlü olup davranışsal bağımlılıklar ve psikoaktif maddeler ile ilişkilendirilmektedir. Madde kullanım bozuklukları, bir maddenin tekrar tekrar kullanılmasının bireyde belirgin psikofiziksel sıkıntıya ve bozulmaya neden olan zihinsel sağlık bozukluklarıdır. Madde kullanım bozukluklarının gelişimi, genetik, çevresel ve psikososyal unsurları içeren çok faktörlü bir süreçtir. Belirtileri arasında zamanla artan kullanım, şiddetli istek ve sosyal zarar yer alır. Bu davranışlar, artan morbidite ve mortalite ile ilişkilidir. Günümüzde madde kullanımının artan yaygınlığı hem bireyler hem de toplumlar için ciddi sorunlar oluşturmaktadır. Gençlerin bağımlılık riski altında olması etkin önleme ve tedavi yöntemlerinin geliştirilmesini zorunlu kılmaktadır. Fiziksel aktivite ve egzersiz, fiziksel ve psikolojik hastalık riskini azalttığı ve madde kullanımı bozukluklarına karşı koruyucu etkiler gösterilen olumlu sağlık davranışları arasında yer almaktadır. Sigara, alkol ve uyuşturucu bağımlılığının tedavisinde tek tedavi yöntemi fiziksel aktivite olmamakla birlikte, potansiyel ve destekleyici bir tedavi yöntemi olduğu bilinen bir gerçektir. Fiziksel aktivite sigara, alkol ve uyuşturucu bağımlılığıyla ilgili psikolojik, davranışsal ve nörokimyasal süreçleri etkilemektedir bu yönüyle bağımlılık oluşumunu önleyebilir, bağımlılıkla mücadele etmek için kullanılan diğer tedavi yöntemlerinin etkinliğini artırabilir. Bağımlılıkla mücadelede başlıca bir tedavi aracı olarak da kullanılabilir. Bu derlemede, madde bağımlılığına genel bir bakış sunulacak ardından fiziksel aktivitenin madde bağımlılığı üzerindeki rolü ve etkilerine ait kanıtlar literatür eşliğinde tartışılacaktır.

**Anahtar Kelimeler:** Bağımlılık, Bağımlılıkla mücadele, Fiziksel aktivite.

### THE ROLE AND EFFECTS OF PHYSICAL ACTIVITY ON SMOKING, ALCOHOL AND DRUG ADDICTION

### ABSTRACT

Addiction is defined as the state in which a person cannot quit a substance or behavior despite many attempts to quit, gradually increases its dose, the appearance of withdrawal symptoms when he stops using / doing, continues to use /do despite seeing the harms. The concept of addiction is multifaceted and is associated with behavioral addictions and psychoactive substances. Substance use disorders are mental health disorders in which repeated use of a substance causes significant psychophysical distress and impairment in the individual. The development of substance use disorders is a multifactorial process that includes genetic, environmental and psychosocial factors. Symptoms include increased use over time, cravings, and social harm. These behaviors are associated with increased morbidity and mortality. Today, the increasing prevalence of substance use poses serious problems for both individuals and societies. The fact that young people are at risk of addiction necessitates the development of effective prevention and treatment methods. Physical activity and exercise are among the positive health behaviors that reduce the risk of physical and psychological diseases and have protective effects against substance use disorders. Although physical activity is not the only treatment method in the treatment of smoking, alcohol and drug addiction, it is a known fact that it is a potential and supportive treatment method. Physical activity affects the psychological, behavioral and neurochemical processes related to cigarette, alcohol and drug addiction, thus it can prevent the formation of addiction and increase the effectiveness of other treatment methods used to fighting

addiction. It can also be used as a main treatment tool in the fight against addiction. In this review, an overview of substance addiction will be presented, and then the role of physical activity on substance addiction and the evidence for its effects will be discussed in the light of the literature.

**Keywords:** Addiction, Fighting addiction, Physical activity.



## MULTİPL SKLEROZ HASTALARINDA TELEREHABİLİTASYONA DAYALI DOKUMA EĞİTİMİNİN EL BECERİSİ, KOGNİSYON VE YORGUNLUK ÜZERİNE ETKİLERİ

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### ÖZET

**Giriş:** Telerehabilitasyon, telekomünikasyon teknolojisini kullanarak hastalara evde veya toplum içinde rehabilitasyon hizmetinin sağlanmasıdır. Bu çalışma multipl sklerozlu bireylerde (MS) telerehabilitasyon yöntemiyle verilen dokuma eğitiminin; el becerisi, kognitif fonksiyonlar ve yorgunluk üzerine etkilerini araştırmak amacıyla planlanmıştır.

**Yöntemler:** Çalışmaya MS tanısı almış, yaş ortalaması 51.00± 8.19 yıl olan 15 gönüllü birey dahil edildi. Telerehabilitasyon yöntemi ile dokuma eğitimi günde 1 saat, haftada 2 gün olmak üzere toplam 10 hafta boyunca uygulandı. Uygulama öncesi ve sonrasında el fonksiyonları için 9 delikli PEG testi (9-DPT), pinçmetre ile parmak çimdikleme kuvveti, yorgunluk şiddeti ölçeği (YŞÖ) ve kognitif fonksiyonlar için Hızlandırılmış İşitsel Seri Ekleme Testi (PASAT-3) uygulandı.

**Sonuçlar:** Telerehabilitasyon yöntemi ile uygulanan 10 haftalık dokuma eğitimi sonrasında dominant el 9-DPT ve YŞÖ anlamlı azalma bulundu ( $p<0.05$ ). Dominant-non dominant pinçmetre kuvvetlerinde ve PAST-3 skorlarında artış saptandı ( $p<0.05$ ).

**Tartışma:** Geleneksel rehabilitasyona erişimde zorluk çeken MS hastalarında telerehabilitasyon fiziksel sağlığı iyileştirmede uygun bir yöntemdir. Telerehabilitasyonla dokuma uygulamaları MS hastalarının el ve bilişsel fonksiyonlarını iyileştirmede ve yorgunluğu azaltmada etkilidir ve geleneksel fizyoterapi yöntemlerine farklı bir bakış kazandırabilir.

**Anahtar Kelimeler:** Telerehabilitasyon, el becerisi, yorgunluk

## THE EFFECTS OF WEAVING TRAINING BASED ON TELEREHABILITATION ON DEXTERITY, COGNITION, AND FATIGUE IN PATIENTS WITH MULTIPLE SCLEROSIS

### ABSTRACT

**Introduction:** Telerehabilitation is the delivery of rehabilitation methods to patients at home or in the community using telecommunication technology. This study was planned to investigate the effects of weaving training given by the telerehabilitation method on dexterity, cognitive functions, and fatigue in individuals with multiple sclerosis (MS).

**Methods:** Fifteen volunteers diagnosed with MS, mean age of 51.00±8.19 years, were included in the study. Weaving training with the telerehabilitation method was applied for 1 hour a day, 2 days a week for a total of 10 weeks. Before and after the application, the 9-hole PEG test (9-HPT), pinching strength with a pinch meter, fatigue severity scale (FSS), and Paced Auditory Serial Additional 3 Test (PASAT-3) were applied for cognitive functions.

**Results:** After 10 weeks of weaving training applied with the telerehabilitation method, a significant decrease was found in the dominant hand 9-HPT and FSS ( $p<0.05$ ). Dominant-non-dominant pinch meter strengths and PAST-3 scores were increased ( $p<0.05$ ).

**Discussion:** In MS patients who have difficulty accessing conventional rehabilitation, telerehabilitation is a viable method of improving physical health. Weaving practices with telerehabilitation are effective in improving the dexterity and cognitive functions of MS patients and reducing fatigue and can bring a different perspective to traditional physiotherapy methods.

**Keywords:** Telerehabilitation, dexterity, fatigue

## ÜNİVERSİTE ÖĞRENCİLERİNİN TOPLUMSAL CİNSİYET ROLLERİ TUTUMLARI İLE EVLİLİK KAYGISI ARASINDAKİ İLİŞKİ

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### ÖZET

Bu araştırmada üniversite öğrencilerinin toplumsal cinsiyet rolleri tutumları ile evlilik kaygısı arasındaki ilişki araştırılmak istenmiştir. Bu araştırma üniversite öğrencilerinin toplumsal cinsiyet rolleri tutumları ve evlilik kaygısının çeşitli değişkenlere göre incelendiği betimsel bir çalışmadır. Araştırmanın evrenini Türkiye’de yaşayan 18 ve 26 yaş üzeri üniversite öğrencileri oluşturmaktadır. Gönüllü katılım ile 304 üniversite öğrencisine ulaşılmıştır. Araştırmanın örneklemini belirlemede kartopu örnekleme yöntemi kullanılmıştır. Gönüllü katılım dikkate alınarak toplam 304 kişiye ulaşılmıştır. Araştırmada veri toplama aracı olarak “Toplumsal Cinsiyet Roller Tutum Ölçeği” ve “Evlilik Kaygısı Ölçeği” kullanılmıştır. Araştırmada elde edilen veriler üzerinde Bağımsız t-Testi, One-Way ANOVA, Post-Hoc, Pearson Kolerasyon, Regresyon analizi yapılmıştır. Araştırma sonuçlarına göre toplumsal cinsiyet rolleri ile evlilik kaygısı arasında pozitif ve anlamlı bir ilişki bulunmuştur. Bununla birlikte gelir düzeyine göre üniversite öğrencilerinin toplumsal cinsiyet rolleri tutumları arasında; cinsiyet, yaş, yaşanan yer, gelir düzeyi ve romantik ilişki yaşama değişkenlerine göre de evlilik kaygısı ölçeği arasında anlamlı bir farklılık bulunmuştur.

**Anahtar Kelimeler:** Evlilik Kaygısı, Toplumsal Cinsiyet Roller, Üniversite Öğrencileri.

### EXAMINATION OF THE RELATIONSHIP BETWEEN UNIVERSITY STUDENTS' ATTITUDES ON GENDER ROLES AND MARRIAGE ANXIETY

#### ABSTRACT

In this research, it was intended to investigate the relationship between university students' attitudes about gender roles and marriage concerns. This research is a descriptive study in which university students' attitudes towards gender roles and marriage concerns were examined according to various variables. The universe of the research consists of university students over the age of 18 and 26 living in Turkey. 304 university students were reached with voluntary participation. Snowball sampling method was used to determine the sample of the research. The “Gender Roles Attitude Scale” and “Marriage Concerns Scale” were used as data collection tools in the research. Independent t-Test, One-Way ANOVA, Post-Hoc, Pearson Correlation, Regression analysis were performed on the data obtained in the study. According to the results of the research, a positive and significant relationship was found between gender roles and marriage concerns. By the way, the level of income between gender role attitudes of university students according to gender, age, country of residence, income level, according to the scale of life romantic relationship and marriage concerns found a significant difference between the variables.

**Keywords:** Marriage Anxiety, Gender Roles, University Students.

## ORTODONTİ PRATİĞİNDE UTİLİTY ARKLARIN KULLANIMI

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### ÖZET

Utility ark, 1950'lerin başında Robert M. Ricketts tarafından tasarlanmıştır. Bu ark, hem karışık hem de kalıcı dişlenmede ortodontik tedavinin çeşitli aşamalarında kullanılabilen çok yönlü yardımcı ark tellerinden biridir. Utility ark, her iki bukkal segment boyunca uzanan, ancak farklı kullanımlar için ve ayrıca hangi arka kullanıldığına bağlı olarak farklı tellerden yapılabilen sürekli bir ark telidir. Yalnızca altı dişi, yani iki birinci büyük azı ve dört kesici dişi kapsar.

Başlangıçta, Burstone tarafından tanımlanan biyomekanik ilkelere göre mandibuladaki spee eğrisini dengelemek için bir yöntem sağlamak amacıyla geliştirilmiştir. Fakat daha sonraları utility arka loopların eklenmesi ile keser dişlerin gömülmesinden başka amaçlar için de kullanılmaya başlanmıştır. İlerleyen dönemlerde ise biyoprogresif terapinin vazgeçilmez bir parçası olmuştur.

Biyoprogresif teknikte tedavi süresince, daha serbest diş hareketleri için yuvarlak ve ince teller öneren tekniklerin aksine kök hareketlerinin kontrol edilmesi gerektiği savunulur. Bu yolla, kökler vasküler trabeküler kemik içinde etkili bir şekilde hareket ettirilir, ankraj için kökler kortikal kemiğe dayandırılır, çeşitli diş hareketleri sırasında kortikal kemiğin yeniden şekillenmesi ve dişlerin son oklüzyonda uygun torklarla yerleştirilmesi sağlanır.

Genel utility ark dizaynı; molar segmenti, posterior vertikal segment, vestibüler segment, anterior vertikal segment ve insizal segment olmak üzere beş bölümden oluşmaktadır. Utility arkların birçok çeşidi bulunmasına karşın, temel olarak dört tipi bulunmaktadır. Bunlar; pasif utility ark, intrüzyon utility arki, retraksiyon utility arki ve protraksiyon utility arkidir.

Bu çalışmanın amacı utility arkların tarihçesini, farklı amaçlarla kullanılabilen utility ark tipleri ve bunların yapımı ile aktivasyonunu, biyoprogresif teknikteki kullanım alanlarını, literatürdeki çalışmalar rehberliğinde sunmaktır.

**Anahtar Kelimeler:** Utility ark, Biyoprogresif teknik, intrüzyon

## THE USE OF UTILITY ARCHES IN ORTHODONTIC PRACTICE

### ABSTRACT

The Utility arch was designed by Robert M. Ricketts in the early 1950s. This arch is one of the versatile auxiliary arch wires that can be used at various stages of orthodontic treatment in both mixed and permanent dentition. The utility arch is a continuous arch wire that runs along both buccal segments but can be made of different wires for different uses and also depending on which arch it is used in. It contains only six teeth, namely two first molars and four incisors.

It was originally developed to provide a method for stabilizing the spee curve in the mandible according to the biomechanical principles described by Burstone. But later, with the addition of loops to the utility arch, it started to be used for purposes other than the embedding of incisors. In the following periods, it has become an indispensable part of bioprogresive therapy.

In the bioprogresive technique, it is argued that root movements should be controlled during the treatment, unlike the techniques that recommend round and thin wires for freer tooth movement. In this way, the roots

are effectively moved within the vascular trabecular bone, anchoring the roots to the cortical bone for anchorage, reshaping of the cortical bone during various tooth movements and placing the teeth with appropriate torques in final occlusion.

General utility arch design; It consists of five parts: molar segment, posterior vertical segment, vestibular segment, anterior vertical segment and incisal segment. Although there are many types of utility archs, there are basically four types. These; passive utility arch, intrusion utility arch, retraction utility arch and protraction utility arch.

The aim of this study is to present the history of utility archs, the types of utility archs that can be used for different purposes, their construction and activation, their use in bioprogressive technique, in the guidance of studies in the literature.

**Key Words:** Utility arch, Bioprogressive technique, intrusion

## SINIF III MALOKLUZYONLARDA GÜNCEL İSKELETSEL ANKRAJ YÖNTEMLERİ İLE MAKSİLLER PROTRAKSİYON UYGULAMALARI

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### ÖZET

Sınıf III maloklüzyon, maksilla ve mandibulanın anteroposterior yön ilişkisindeki uyumsuzluktan kaynaklanmaktadır. Diğer anomalilere göre toplumda daha az sıklıkta görülmelerine rağmen hastalar ve ebeveynleri tarafından kolayca fark edilebilen bu maloklüzyonlar, tedavisi oldukça zor olan ortodontik anomalilerden biridir. Tedavi yaklaşımları maloklüzyonun kaynaklandığı çeneye, etiyojisine, maloklüzyonun şiddetine ve bireyin içinde bulunduğu büyüme gelişim dönemine bağlı olarak değişir. Sınıf III maloklüzyonun oluşumunda maksiller retrognatinin önemli bir etken olduğu bildirilmektedir.

Maksiller gelişim yetersizliğine bağlı görülen Sınıf III maloklüzyonların tedavisinde maksiller protraksiyon, tedavinin temelini oluşturmaktadır. Bu amaçla; çeşitli ağız içi ve ağız dışı fonksiyonel ve ortopedik uygulamalar geliştirilmiştir. Bu uygulamaların ortak hedefi protraksiyon ile maksillanın büyüme ve gelişimini uyarak erken dönemde uygun oklüzal ilişkileri temin edip büyümenin devamını sağlamaktır. Dişlerden ankraj alındığında oluşan istenmeyen dentoalveoler etkilerini elimine etmek, maksillanın paralel olarak protraksiyonunu sağlamak ve iskeletsel etkiyi arttırmak amacıyla son senelerde araştırmacılar iskeletsel ankraj ile maksillanın protraksiyonu üzerinde çalışmaktadırlar. İskeletsel kökenli Sınıf III maloklüzyonların tedavisinde kemik destekli intermaksiller elastik, ağız içi uygulama olarak De Clerck öncülüğünde ortodonti literatürüne kazandırılmıştır. Ağız dışı uygulamaların hasta kooperasyonu gerektirmesi, dikey boyutta artış ve estetik kaygılar içermesi bu yöntemin daha popüler olmasını sağlamıştır. Fakat De Clerck yönteminde cerrahi girişimlerin fazla olması araştırmacıları daha az invaziv yöntemlere sevk etmiştir. Farklı teknikler ile iskeletsel ankraj yöntemleri uygulanmış ve başarılı sonuçlar rapor edilmiştir.

Bu çalışmanın amacı, sınıf III maloklüzyonlu bireylerde iskeletsel ankraj ile yapılan maksillanın protraksiyon yöntemleri hakkında bilgi vermektir.

**Anahtar Kelimeler:** Sınıf III maloklüzyon, maksiller protraksiyon, iskeletsel ankraj.

### MAXILLARY PROTRACTION APPLICATIONS WITH CURRENT SKELETAL ANCHORAGE METHODS IN CLASS III MALOCCLUSIONS

### ABSTRACT

Class III malocclusion is caused by the discrepancy between the anteroposterior relationship of the maxilla and mandible. While they are less common than other anomalies, these malocclusions can be easily noticed by patients and parents and are one of the more difficult orthodontic anomalies to treat. Treatment approaches vary depending on the cause, severity, and growth and development stage of the individual. Maxillary retrognathism is reported to be a significant factor in the development of Class III malocclusion.

Maxillary protraction is the basis of treatment for Class III malocclusions caused by inadequate maxillary growth. Various intraoral and extraoral functional and orthopedic applications have been developed for this purpose. The common goal of these applications is to stimulate maxillary growth and development through protraction, providing appropriate occlusal relationships in the early stages and ensuring continued growth. In recent years, researchers have been working on skeletal anchorage to eliminate unwanted dentoalveolar effects, ensure parallel maxillary protraction, and increase skeletal effects. In the treatment of skeletally-

based Class III malocclusions, the bone-supported intermaxillary elastic method has been introduced to orthodontic literature as an intraoral application under the leadership of De Clerck. The need for patient cooperation, increased vertical dimension, and aesthetic concerns have made this method more popular. However, the high number of surgical interventions in the De Clerck method has led researchers to seek less invasive methods. Different techniques have been applied to skeletal anchorage methods, and successful results have been reported.

The aim of this study is to provide information about maxillary protraction applications with skeletal anchorage methods in individuals with Class III malocclusion.

**Keywords:** Class III malocclusion, Maxillary protraction, Skeletal anchorage.

## AİLELERDE, DİĞERKÂMLIK VE ACININ DÖNÜŞTÜRÜCÜ GÜCÜ DÜZEYLERİNİN YAŞAM DOYUMUNA ETKİSİNİN İNCELENMESİ

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### ÖZET

Bu çalışmanın amacı; ailelerde, diğerkâmlık ve acının dönüştürücü gücü düzeylerinin yaşam doyumuna etkisini incelemektir. Araştırmada örneklem grubu 245 kadın ve 157 erkek toplamda 402 kişiden oluşmaktadır. Veri toplamak için araştırmaya katılan bireylere; Acının Dönüştürücü Gücü Ölçeği, Diğerkâmlık Ölçeği, Yaşam Doyum Ölçeği ve Kişisel Bilgi Formu uygulanmıştır. Araştırmanın istatistiksel analizlerinde SPSS 22.0 (Statistical Package for Social Sciences) paket programından faydalanılmıştır

Araştırmanın çalışma grubunu oluşturan aile üyelerinin acının dönüştürücü gücü ve diğerkâmlık ölçeğinden aldıkları puanların yaşam doyumuyla aralarında anlamlı bir ilişki olup olmadığını tespit etmek amacıyla Pearson Momentler Çarpım Korelasyon Analizi yapılmıştır. Yapılan araştırma sonucuna göre ailelerde diğerkâmlık ve acının dönüştürücü gücünün yaşam doyumuyla zayıf düzeyde pozitif bir ilişkisinin olduğu tespit edilmiştir. Araştırmada, diğerkâmlık, acının dönüştürücü gücü ve yaşam doyumunu düzeyleri açısından kadın ve erkeklerin birbirlerine çok yakın puanlar aldığı belirlenmiştir. Araştırmada katılımcıların eğitim düzeyine bakıldığında diğerkâmlık ve yaşam doyumunu arasında anlamlı bir farklılık görülürken, acının dönüştürücü gücü düzeyleri arasında anlamlı bir farklılık tespit edilememiştir. Araştırmada katılımcıların diğerkâmlık ve yaşam doyumunu düzeyleri ile medeni durumları arasında anlamlı bir farklılık belirlenmiştir. Dul bireylerin diğerkâmlık puanlarının bekâr ve evli bireylerden yüksek çıktığı tespit edilmiştir. Araştırmada algılanan sosyoekonomik düzeye göre katılımcıların diğerkâmlık ve yaşam doyumunu düzeyleri arasında anlamlı bir farklılık belirlenirken acının dönüştürücü gücü düzeyleri arasında anlamlı bir farklılık belirlenmemiştir. Araştırmada, algılanan sosyoekonomik düzey ile yaşam doyumları arasında da anlamlı bir farklılık tespit edilmiştir.

**Anahtar Kelimeler:** Özgeçicilik, Travma, Travma Sonrası Gelişim, Yaşam Doyumu.

### INVESTIGATION OF THE EFFECTS OF ALTERNITY AND PAIN TRANSFORMING POWER LEVELS ON LIFE SATISFACTION IN FAMILIES

#### ABSTRACT

This is to develop; the aim of this study is to examine the life satisfaction of the transformative power source of other identity and pain in families. In the study, the group consisted of 245 female and 157 male bodies and 402 enclosures. To the people who participated in the embrace to collect data; The Transformative Power of Pain Scale, Altruism Scale, Life Satisfaction Scale and Personal Information Form were applied. SPSS 22.0 (Statistical Package for Social Sciences) package was used in the analysis of the research.

Pearson Product Moments Correlation Analysis was conducted in order to determine whether there is a relationship between the transformative power of family pain and the scores they got from other quality measures, which consisted of the study group of the research, and life satisfaction. According to the results of the research, it has been determined that there is a weak positive relationship with life satisfaction, being able to protect other identity and pain in families. In the study, scores that are very close to women and arguments in terms of altruism, transformative power of pain and life satisfaction were discussed. While a measurement between altruism and life satisfaction for the level of education in the data appeared to be a variable, a measurement could not be detected among the evidence of the protective power of pain. It has



been determined that widowed individuals have higher scores than single and married individuals. According to the socioeconomic level taken in the research, while the manager was determined as a determinant between the levels of altruism and life satisfaction, he did not determine a variable between the scope of the transformative power of pain. In the study, an outcome-oriented variable was determined between the perceived socioeconomic level and life satisfaction.

**Keywords:** Altruism, Trauma, Post Traumatic Development, Life Satisfaction.

## METAL KAMP EŞYALARI ÜRETİMİNİN İŞ SAĞLIĞI VE GÜVENLİĞİ AÇISINDAN İNCELENMESİ

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### ÖZET

Günümüzde İş sağlığı ve güvenliği, insan yaşamını ilgilendiren küresel bir sorun haline gelmiştir. İş kazaları ve çalışma esnasında oluşan mesleksel hastalıkları kaynaklı maliyetler, her yıl gayri safi milli hasılanın (GSMH) % 4'üne yaklaşmıştır. Metal sektörü GSMH'ın yaklaşık %3'ünü, sanayi sektörlerindeki işgücünün toplam %2'sini ve ihracatın toplam %12'sini oluşturmaktadır. Metal sektörüne bu açıdan bakıldığında, en çok ihracat yapan sektörler arasında üçüncü sırada yer aldığı görülmektedir. Metal sanayisi, Türkiye'nin kalkınmasına katkı sağlayan en önemli sektörlerden biri olarak öne çıkmakla birlikte, ihracat ve rekabet gücü açısından ana sektörler arasında ilk 10'a girmektedir. Son yıllarda metal sektöründe güvenlik önlemlerinin artmasıyla meydana gelen kaza oranları düşüş eğilimindedir. İş kazalarının zamanlamasına bakıldığında, özellikle yaz aylarında ve gece vardiyasında daha fazla meydana geldiği anlaşılmaktadır. Genel olarak uzuvlarda kesik, sıyrık gibi yüzeysel yaralanmalar şeklinde, küçük el aletleri kullanımına, çalışma ortamındaki anormal hareketlere bağlı olarak gerçekleştiği ve makinelerinde ayrıca iş kazalarının oluşumuna katkıda bulunduğu görülmektedir. İş kazaları sebebiyle her gün, maddi ve manevi kayıplar çok büyük boyutlara ulaşmaktadır. Geçmişte çok da önemli görülmeyen bu problemler günümüzde işletmelerin çalışmalarını tehlikeye atması ve iş verimini olumsuz etkilemesi sonucu, iş sağlığı ve güvenliği önlemlerini de daha fazla gündeme getirmektedir. İş sağlığı ve güvenliği tedbir ve kurallarına dikkat edilmedikçe, iş kazaları ve meslek hastalıkları artmaya devam edecektir. Bu çalışmada, iş sağlığı ve güvenliğinde tehlikeli sınıfta yer alan Metal Kamp Eşya Üretimi yapan bir tesiste karşılaşılma ihtimali yüksek iş kazaları ve meslek hastalıkları incelenmiştir. Ayrıca; tesiste karşılaşılma iş sağlığı ve güvenliği konusunda oluşan risklerin azaltılması ile ilgili çalışan bireylerin eğitilmesi, kişisel koruyucu donanım kullanımıyla ilgili tedbirler, tesiste çalışma koşullarında oluşan risklere karşı alınacak önlemler, yorgunluk ve dikkatsizlik gibi durumların azaltılmasıyla ilgili alınabilecek tedbirler konusunda önerilerde bulunulmuştur.

**Anahtar Kelimeler:** Metal, Kamp eşyası, İş sağlığı ve güvenliği.

### INVESTIGATION OF METAL CAMPING EQUIPMENT PRODUCTION IN TERMS OF OCCUPATIONAL HEALTH AND SAFETY

### ABSTRACT

Today, occupational health and safety has become a global problem that concerns human life. The costs due to occupational accidents and occupational diseases during working approached 4% of the gross national product (GNP) every year. The metal sector accounts for approximately 3% of the GNP, 2% of the workforce in the industrial sectors and 12% of the total exports. When the metal sector is considered from this point of view, it is seen that it ranks third among the sectors that export the most. In recent years, accident rates have been decreasing with the increase in safety measures in the metal sector. While the metal industry stands out as one of the most important sectors contributing to the development of Turkey, it is among the top 10 sectors in terms of export and competitiveness. Considering the timing of work accidents, it is understood that they occur more frequently, especially in summer and night shifts. In general, it is seen that it occurs in the form of superficial injuries such as cuts and scrapes on the limbs, the use of small hand tools, abnormal movements in the working environment, and also contributes to the formation of work accidents in machines. Due to occupational accidents, material and moral losses reach enormous dimensions

every day. These problems, which were not taken into account in the past, put the occupational health and safety measures on the agenda more as they endanger the work of the enterprises and negatively affect the work efficiency. If occupational health and safety measures and rules are not followed, occupational accidents and occupational diseases will continue to increase. In this study, occupational accidents, and occupational diseases with a high probability of encountering in a facility that produces Metal Camping Equipment, which is in the dangerous class in occupational health and safety, were examined. In addition, recommendations have been made on the training of working individuals to reduce the risks in occupational health and safety encountered in the facility, the precautions regarding the use of personal protective equipment, the measures to be taken against the risks in working conditions in the facility, and the measures that can be taken to reduce the situations such as fatigue and carelessness.

**Keywords:** Metal, Camping equipment, Occupational Health and Safety.

## SOSYO-PSİKOLOJİK VE MEKÂNSAL ETKİLEŞİMLER BAĞLAMINDA TÜRKİYE'DEKİ SURIYELİLERİN SOSYAL UYUMU: HATAY-ANTAKYA ÖRNEĞİ

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### ÖZET

Türkiye'ye sığınan Suriyelilerin sayısı 2011'den günümüze kadar sürekli artmaktadır. Bu artış ekonomik, sosyal, kültürel, mekânsal vb. birçok alanda hayatı doğrudan etkilemektedir. Bu etkinin en yakından hissedildiği yerler Suriyeli sığınmacıların yoğun olarak yaşadığı şehirlerdir. Bu kapsamda, bu çalışmada Suriyeli sığınmacıların yoğun olarak yaşadığı şehirlerden birisi olan Hatay-Antakya'da ortaya çıkan sosyal uyum sorunları ve bu sorunun mekân üzerindeki yansımaları incelenmektedir. Suriyeli sığınmacılar sorunu güncel tartışmalarda önyargılar, ayrımcılık ve siyasi söylemler eksenine sıkışmış durumdadır. Literatürde ise sorun özellikle sığınmacılar ve kentsel uyum bağlamında kapsamlı bir şekilde tartışılmamış ve incelenmemiştir. Bunun temel nedeni Suriyeli sığınmacıların "geçicilik" ya da "misafirlik" algısıyla kalıcı bir sorun alanı olarak görülmemesindedir. Sorunu tam olarak anla(ya)mak, önemsememek ya da geçici görmek ise bugün yaşanan ciddi toplumsal sorunları daha da karmaşık ve içinden çıkılmaz hale getirmektedir. Araştırma kapsamında Antakya'da yoğun olarak kullanılan kentsel kamusal mekânlarda (15 Temmuz Milli İrade Parkı ve Şükrü Balcı Caddesi) Suriyeli sığınmacılar ve yerel halk arasındaki uyum incelenmiştir. Kamusal alan olarak kabul edilen önemli yerlerden biri olan parklar ve caddeler şehirlerin yoğun faaliyetlerin gerçekleştiği buluşma noktalarıdır. Bu mekânlar, kentsel ölçekte geniş kullanıcı profillerinin gereksinimlerini bütüncül bir şekilde, ancak kullanıcı- mekân etkileşimi açısından değil, etkileşim içinde ve bir tüm olarak çevre ile uyum içinde karşılamayı amaçlamaktadır. Bu çalışma Hatay-Antakya örneğinde Suriyeli sığınmacıların sosyo-psikolojik mekânsal etkileşimleri bağlamında sosyal uyumlarını değerlendirerek literatüre katkı sunmayı ve pratikte yaşanan önemli sorunlara çözüm önerileri üretmeyi amaçlamaktadır. Elde edilen veriler ve bulgular doğrultusunda ortaya çıkan olumsuzlukların ortadan kaldırılmasına sosyal uyumu arttıracak nitelikte bir kamusal mekân tasarım önerisi üretilmiştir.

**Anahtar Kelimeler:** *Sosyal uyum, mekânsal etkileşim, Hatay-Antakya*

### SOCIAL COHESION OF SYRIANS IN TURKEY IN THE CONTEXT OF SOCIO-PSYCHOLOGICAL AND SPATIAL INTERACTIONS: THE CASE OF HATAY-ANTAKYA

### ABSTRACT

The number of Syrians who took refuge in Turkey has been increasing continuously since 2011. This increase is economic, social, cultural, spatial, etc. It directly affects life in many areas. The places where this effect is felt most closely are the cities where Syrian refugees live heavily. In this context, in this study, the social cohesion problems that emerged in Hatay-Antakya, one of the cities where Syrian refugees live, and the reflections of this problem on the space are examined. The problem of Syrian refugees is stuck in the axis of prejudices, discrimination and political discourses in current debates. In the literature, on the other hand, the problem has not been extensively discussed and examined, especially in the context of asylum seekers and urban cohesion. The main reason for this is that Syrian refugees are not seen as a permanent problem area with the perception of "temporary" or "guesthood". Understanding the problem fully, ignoring it or seeing it as temporary makes the serious social problems experienced today even more complex and inextricable. Within the scope of the research, the harmony between the Syrian refugees and the local people in the urban public spaces that are used extensively in Antakya (15 July Milli İrade Park and Şükrü Balcı Street) was examined. Parks and streets, one of the important places considered as public spaces, are the

meeting points of cities where intense activities take place. These spaces aim to meet the needs of broad user profiles on an urban scale in a holistic way, not in terms of user-space interaction, but in interaction and in harmony with the environment as a whole. This study aims to contribute to the literature by evaluating the social adaptation of Syrian refugees in the context of socio-psychological spatial interactions in the case of Hatay-Antakya and to produce solutions to important problems in practice. In line with the obtained data and findings, a public space design proposal has been produced that can increase social cohesion in order to eliminate the negativities.

**Keywords:** *Social cohesion, spatial interaction, Hatay-Antakya*

## PANDEMİ SÜRECİNDE KENTSEL KAMUSAL ALANLARDA ORTAYA ÇIKAN DEĞİŞİM VE DÖNÜŞÜM

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### ÖZET

Covid-19 pandemisi sürecinin ortaya çıkmasıyla yoğun yaşam alanları olan kentler süreçten yoğun ve çok boyutlu şekilde etkilenmiş, pandemi sürecinde ve sonrasında kent hayatının mevcut dinamikleri tartışılmaya başlanmıştır. Bu tartışmalar, kamusal alan anlayışının sorgulanmasına ve pandemi gibi kriz süreçlerine uygun planlama ve tasarım fikirlerinin ortaya çıkmasına yol açmıştır. Covid-19 pandemisiyle birlikte kentsel kamusal alanları da kapsayan kısıtlama ve yasakların hayatımıza girmesi, “eski normalde” hayatın rutininde var olan alışkanlıkların yeni normal’de değişmesine, dönüşmesine ve yenilenmesine yol açmıştır. Bu değişim ihtiyacı, kalabalık insan kitlelerinin kullandığı kentsel kamusal alanlarda en yoğun şekilde hissedilmiş ve pandemi sürecinde kentsel kamusal alanların tasarımının “yeni normale” uyumlaştırılması süreci hız kazanmıştır. Kentsel kamusal alanlar, kentsel tasarım ilke ve araçlarına uygun tasarlanmamış ise, pandemi gibi fiziksel mekân kullanımının ve bu mekânların varlığının büyük önem arz ettiği kriz süreçlerinde esneyemeyen, yetersiz ve dirençsiz mekânlara dönüşebilmektedir. Özellikle kriz süreçlerinde kentlerde yaşanan toplumsal ve psikolojik sorunların en aza indirilebilmesinde kentsel kamusal alanların varlığı önemlidir. Pandemi sürecinin başlamasından bugüne kadar geçen sürede elde edilen tecrübe, kentsel kamusal alanların tasarımındaki yetersizlikleri ortaya çıkartmıştır. Kentsel kamusal alan algısı ve tanımı da bu süreçte tartışılmaya başlanmış, kamusal alan kullanımları değişmiş ve dönüşmüştür. Bu kapsamda bu çalışma pandemi sürecinde kentsel kamusal alanlarda ortaya çıkan değişim ve dönüşümü dünya örnekleri üzerinden tartışmayı amaçlamaktadır. Pandemi sonrası dönemde kentsel dirençliliği artıracak uzun vadeli ve kalıcı kentsel kamusal alan tasarımlarına ihtiyaç olduğu söylenebilir.

**Anahtar Kelimeler:** *Pandemi, COVID-19, Kentsel Kamusal Alanlar*

## CHANGE AND TRANSFORMATION IN URBAN PUBLIC SPACES DURING THE PANDEMIC PROCESS

### ABSTRACT

With the emergence of the Covid-19 pandemic process, cities with dense living spaces have been intensely and multidimensionally affected by the process, and the current dynamics of urban life have begun to be discussed during and after the pandemic. These discussions led to the questioning of the understanding of public space and the emergence of planning and design ideas suitable for crisis processes such as pandemics. The introduction of restrictions and prohibitions, including urban public spaces, together with the Covid-19 pandemic, has led to the change, transformation and renewal of the habits that existed in the "old normal" routine of life in the "new normal". This need for change was felt most intensely in urban public spaces used by large masses of people, and the process of adapting the design of urban public spaces to the "new normal" gained momentum during the pandemic process. If urban public spaces are not designed in accordance with the principles and tools of urban design, they can turn into inflexible, inadequate and unresilient spaces during crisis periods such as pandemics, where the use of physical spaces and the existence of these spaces are of great importance. The existence of urban public spaces is important in minimizing the social and psychological problems experienced in cities, especially during crisis processes. The experience gained from the beginning of the pandemic process until today has revealed the inadequacies in the design of urban public spaces. The perception and definition of urban public space also began to be discussed in this process, and

the uses of public spaces changed and transformed. In this context, this study aims to discuss the change and transformation in urban public spaces during the pandemic process through world examples. It can be said that there is a need for long-term and permanent urban public space designs that will increase urban resilience in the post-pandemic period.

**Keywords:** *Pandemic, COVID-19, Urban Public Spaces*

**TÜRK-ALMAN SALDIRMAZLIK PAKTI'NIN TÜRKİYE'DEKİ YANKILARI (18 HAZİRAN 1941)****Dr. Öğr. Üyesi Özlem YILDIRIM KIRIŞ***Recep Tayyip Erdoğan Üniversitesi, ORCID. 0000-0001-8901-4190***ÖZET**

Birinci Dünya savaşının ardından Avrupa'da yaşanan hızlı değişimler dünyayı yeni bir savaşın eşiğine getirmiştir. Mihver ve Müttefik devletlerden oluşan bloklar 1939 yılında başlayacak olan İkinci Dünya Savaşına dâhil olmuşlardır. İkinci Dünya Savaşına katılmayan Türkiye cephelerde fiilen savaşmanın dışında savaş ekonomisi şartlarının tüm ağırlığını üzerinde hissetmiştir. Bu süreçte takip edilen siyaset olası bir savaşa dâhil olmamak üzerine olmuştur. Türkiye, bu dönemde bir yandan İngiltere'yle karşılıklı yardımlaşma antlaşması imzalarken, diğer taraftan Almanya ile Dostluk ve Saldırmazlık Pakti'na dâhil olmuştur. Almanya'nın Avrupa savaşlarında ve özellikle de Balkanlardaki başarısı Türkiye'yi, Almanya ile olan ilişkisini yeniden gözden geçirmeye zorlamıştır. Türk Dışişleri Bakanı Şükrü Saraçoğlu ile Almanya'nın Ankara Büyükelçisi Franz Von Papen arasında devam eden görüşmeler sonucunda bir uzlaşmaya varılmıştır. 18 Haziran 1941'de Türk-Alman Dostluk ve Saldırmazlık Antlaşması Ankara'da imzalanmıştır. Müttefik devletler tarafından 'Türk-Alman Dostluk ve Saldırmazlık Antlaşması' Almanya'nın zaferi olarak görülmüştür. Antlaşmayla taraflar, birbirlerinin toprak bütünlüğüne ve dokunulmazlığına saygı göstereceğini ve birbirlerine karşı herhangi bir hareketten kaçınacaklarını bildirmişlerdir. İki ülkenin ortak çıkarlarıyla ilgili tüm meselelerin çözümünde uzlaşma yoluyla hareket edileceği belirtilmiştir. Dışişleri Bakanı Şükrü Saraçoğlu, Türkiye ve Almanya arasında tarihi ve önemli bir dostluk vesikası olan muahedenin imzasından dolayı memnuniyeti ifade etmiştir. Almanya Büyükelçisi Von Papen de antlaşmanın güven ve dostane ilişkileri teyit ettiğini bildirmiştir. 18 Haziran 1941'de Türkiye Büyük Millet Meclisinde söz alan Dışişleri Bakanı Şükrü Saraçoğlu, antlaşmanın tüm safhalarına dair açıklamalarda bulunmuştur. Antlaşma metnini okumuş ve söz konusu antlaşmanın gayesi üzerine bilgi vermiştir. Bu çalışmada 'Türk-Alman Dostluk ve Saldırmazlık Antlaşması'nın' siyasi sahada nasıl karşılandığı ve Türk basınında nasıl ele alındığı incelenmiştir.

**Anahtar Kelimeler:** *Türkiye, İkinci Dünya Savaşı, Almanya, Şükrü Saraçoğlu.*

**THE REPERCUSSIONS OF THE TURKISH-GERMAN NON-AGGRESSION PACT IN TURKEY****ABSTRACT**

The rapid changes experienced in Europe after the First World War have brought the world to the brink of a new war. The blocs consisting of the Axis and Allied states were involved in the Second World War, which began in 1939. Turkey, which did not participate in the Second World War, felt the full weight of the war economy conditions outside of actually fighting on the fronts. The policy followed in this process has been about not getting involved in a possible war. During this period, Turkey, on the one hand, signed a mutual assistance treaty with Great Britain, and on the other hand, it joined the Friendship and Non-Aggression Pact with Germany. Germany's success in the European wars, and especially in the Balkans, has forced Turkey to reconsider its relationship with Germany. Germany's success in the European wars, and especially in the Balkans, has forced Turkey to reconsider its relationship with Germany. As a result of the on-going negotiations between Turkish Foreign Minister Şükrü Saracoğlu and German Ambassador to Ankara Franz Von Papen, a compromise has been reached Dec. On June 18, 1941, the Turkish-German Friendship and Non-Aggression Treaty was signed in Ankara. The 'Turkish-German Friendship and Non-Aggression Treaty' was seen by the Allied states as a victory for Germany. By the treaty, the parties have declared that they will respect each other's territorial integrity and inviolability and will refrain from any actions against each other. Minister of Foreign Affairs Şükrü Saracoğlu expressed satisfaction with the signature of the Decedent, which is a historical and important certificate of friendship between Turkey and Germany. German Ambassador Von Papen also reported that the treaty confirms trust and friendly relations. It was



stated that all issues related to the common interests of the two countries will be resolved by consensus. Foreign Minister Şükrü Saracođlu, who took the floor in the Turkish Grand National Assembly on June 18, 1941, made statements about all phases of the treaty. He read the text of the treaty and gave information on the purpose of the said treaty. In this study, it was examined how the ‘Turkish-German Friendship and Non-Aggression Treaty’ was received in the political field and how it was covered in the Turkish press.

**Keywords:** *Turkey, The Second World War, Germany, Şükrü Saraçođlu.*

## ANTİK KAYNAKLARA GÖRE PONTOS BÖLGESİ'NDE YETİŞEN ENDEMİK VE TIBBİ BİTKİLER VE BU BİTKİLERİN KULLANIM ALANLARI

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### ÖZET

Genel hatlarıyla, Karadeniz'in güney doğu kıyıları olarak tanımlayabileceğimiz Pontos Bölgesi antikçağda bolluk ve bereketiyle ön plana çıkmıştır. Farklı iklimsel özelliklerinden dolayı bölgede birçok endemik, aromatik ve şifalı bitki yetişmiştir. Bunlardan: acorus (sazlık/Hint ya da şekerkamışı) ve Licuorice (meyankökü) tıbbi alanda kullanılmıştır. Sağlık ve gastronomi alanında kullanılan absinthium (pelinotu), panzehir olarak kullanılan armoracia (bayırturpu), psikolojik rahatsızlıkların tedavisinde kullanılan melampodion (siyah çöpleme) ve rhecoma (çoban değneği) bölgede yetişen/yetiştirilen bitkilerden bazılarıydı. Bunların yanında sağlık ve kozmetik alanında kullanılan Scordotis/scordion (yerpalamudu/meşecik), Asarum (yabani zencefil), aristolochia (lohusa otu) ve amomum/kardamum (? bir tür baharat bitkisi) da bölgede yetişirdi. Cilt hastalıklarından, panzehir yapımına ve parfüm karışımlarına kadar çeşitli alanlarda kullanılan amomum/kardamumun da bölgede yetişen bitkiler arasında sayılabilir. Antikçağda Pontos Bölgesine hükmeden kral Mithradates VI Eupator (MÖ. ca. 120/119-MÖ. 63) Pontos Bölgesi'ni hakimiyeti altına aldıktan sonra bölgeye bilginleri davet etmiştir. Bölgeye gelen bilginler de özellikle burada yetişen ve sağlık ya da gastronomi gibi alanlarda faydalanılan mithridatia ya da mithridation (köpekdişi), eupatorium/eupatoria (sıtma otu) gibi bitkilere krala atıfta bulunan isimler vermişlerdir. Bunlara ek olarak hint sümbülü yağı, balsam ve mastix (türlü sakızlar) de bölgede yetişen/yetiştirilen ve ticareti yapılan ürünler arasındaydı. Antik dünyanın en iyi aşı boyası kabul edilen ve Sinopeli (= Sinōpis [Σινωπίς / Σινωπική]) olarak adlandırılan boya Kappadokia'da imal edilmesine rağmen Sinope limanlarından diğer ticaret merkezlerine ve pazarlara taşınması nedeniyle bu isimle anılmıştır. Bu çalışmada antik kaynaklardan edinilen bilgilere göre antikçağda Pontos (Orta ve Doğu Karadeniz) coğrafyasında yetiştiği tespit edilen endemik ve tıbbi bitkileri ve onların kullanım alanlarını göstermeyi amaçlamaktadır.

**Anahtar Kelimeler:** *Pontos, bitkiler, sağlık.*

### ACCORDING TO ANCIENT SOURCES, ENDEMIC AND MEDICINAL PLANTS GROWING IN THE PONTOS REGION AND THEIR USAGE AREAS

### ABSTRACT

The Pontos region, said to be located in the south east coast of the Black Sea, came to the forefront with its abundance and fertility. Due to the different climatic characteristics, endemic, aromatic and many medicinal plants were grown in the region. Such as: acorus (reeds/or sugarcane) and Licuorice (liquorice) were used in the medical field. Absinthium (wormwood) used in health and gastronomy, armoracia (horseradish horseradish) used as an antidote, melampodion (black litter) and rhecoma (shepherd's wand) used in the treatment of psychological disorders were some of the plants grown in the region. In addition to these, Scordotis/scordion (earth acorn/oak tree), Asarum (wild ginger), aristolochia (postpartum grass) and amomum/kardamum (? a kind of spice plant) used in the field of health and cosmetics were also grown in the region. Amomum/kardamum, which is used in various fields from skin diseases to antidote production and perfume mixtures, can be counted among the plants grown in the region. King Mithradates VI Eupator (BC. ca. 120/119-BC. 63), who ruled the Pontos Region in ancient times, invited scholars to the region after he dominated the Pontos Region. Scholars who came to the region gave names referring to the king, such as mithridatia or mithridation (dog tooth), eupatorium/eupatoria (malaria grass), which are grown here and benefited in areas such as health or gastronomy. In addition to these, Indian hyacinth oil, balsam and mastix (kinds of gums) were among the products grown and traded in the region. Considered the best ocher of the

ancient world and called Sinopeli (= Sinōpis [Σινωπίς / Σινωπική]), the paint was named so because it was transported from the ports of Sinope to other trade centers and markets, although it was manufactured in Kappadokia. In this study, it is aimed to show the endemic and medicinal plants found to be grown in Pontos (Central and Eastern Black Sea) geography in ancient times and their usage areas according to the information obtained from ancient sources.

**Keywords:** *Pontus, plants, medicine.*

## WALES UNDER THREAT: A STUDY ON THE POLITICAL DISCOURSE OF PLAID CYMRU

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### ABSTRACT

'United Kingdom' as a political union has varying degrees of effect on its four constituents. Wales as one of those constituents has constructed a peculiar style of relationship with the Union throughout the history of the UK and sought to define its existence and identity with reference to the nature of this relationship. This peculiar relationship is reflected in both the individual and organisational attitudes and approaches of the Welsh side towards the most dominant constituent England and its political centre Westminster. In this sense, how Plaid Cymru, the main deep-rooted centre left-wing political party in Wales, positions Wales within the UK and how it constructs its political discourse in relation to this positioning is an important research topic to be studied studiously.

Thus, this study aims to analyse fundamental elements of Plaid Cymru's official discourse such as the party manifesto, press releases, campaign texts, election posters and slogans. The research method preferred in the study is discourse analysis. The study thus provides an insight into the main elements of the party's political discourse and helps us to make judgements about the political future of Wales. The study pays particular attention to the perception of threat, anxiety, and uncertainty in Plaid Cymru's political discourse *vis-à-vis* the Union's political centre. Such feelings of threat, anxiety and uncertainty prevent the development of harmony and cohesion between the Union and Wales and encourage regional polarisation and instability in the land.

**Key Words:** *Welsh Politics, Plaid Cymru, Political Communication, Threat Perception*

## ASYA HUNLARINDA KONAR-GÖÇERLİK

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### ÖZET

Erken Türk tarihinin bilinen en eski devleti olan Asya Hunları, pek çok farklı özelliği ile tarihe adını yazdırmış döneminin en büyük gücüdür. Bugün Hunlar denildiğinde başta konar-göçerlik olmak üzere hayvancılık, At kullanımındaki üstün yetenek, savaşçı ruh gibi farklı özellikleri akıllara gelmektedir. Bu kadim uygarlığın tarihine yönelik kaynaklar oldukça sınırlıdır. Bilinen tek yazılı kaynak ise Çin kaynaklarıdır. Sınırlı veriler ışığında Hunların konar-göçer halde yaşadıklarına dâhil bilgiler içermektedir. Han Hanedanı Tarihi'nin Hsiung-nu (Hun) Monografisi'nde, Asya Hunlarının ilk ataları olarak kabul edilen ve M.Ö. 2300'lerle 2200'lerde yaşayan Dağ Jung'ları, Hsien-yün'ler ve Hun-yü'lerin yaşayış tarzları hakkında verilen bilgiler, en eski Türklerin yaşayış tarzları olarak kabul edilebilmektedir. Kaynağa göre "Çin'in Kuzey sınırlarında otururlar, otlakları takip ederek hayvan yetiştirir ve yer değiştirirlerdi. Yetiştirdikleri hayvanların çoğu at, sığır ve koyundu. Su ve otlakları izleyerek hareket ederlerdi. Surlarla çevrili bir şehirleri, sürekli oturdukları bir yer ve tarım yapmak gibi bir uğraşları yoktu. Ancak yine de herkesin kendine ait bir toprağı bulunurdu. Her birinin kendine ait toprağı vardı. Su ve otları takip edip yer değiştirerek göç ederlerdi" bilgisi Motun zamanını (M.Ö. 209 – 174) anlatırken de tekrarlanmaktadır. Bu örnekten de anlaşılacağı üzere Çin gözünden bakıldığında konargöçer olan Hunlar bugün geldiğimiz noktada ise arkeoloji biliminin katkıları ile sadece konargöçer değil derin bir kültürünün olduğunu ortaya koymaktadır. Bu bağlamda arkeoloji bilimi bizlere daha farklı veriler de sunmaktadır. Çalışmamızda Asya Hunlarının konar-göçerliği ve sosyal özellikleri üzerinde durularak farklı bir bakış açısı ile Asya Hunlarının konar-göçerlik ve yarı yerleşikliği arasındaki verileri aktarmaya çalışacağız.

**Anahtar kelimeler;** Asya Hunları, Konar-göçerlik, Sosyal hayat

### KONAR-IMMIGRATION IN ASIAN HUNS

### ABSTRACT

The Asian Huns, the oldest known state in the early Turkish history, are the greatest power of the period, which has written its name in history with many different features. Today, when Huns are mentioned, different characteristics such as animal husbandry, superior skill in horse use, warrior spirit come to mind, especially nomadism. Sources for the history of this ancient civilization are very limited. The only known written source is Chinese sources. In the light of limited data, it contains information about the Huns' nomadic life. In the Hsiung-nu (Hun) Monograph of the Han Dynasty History, they are considered to be the first ancestors of the Asian Huns and date back to the 4th century BC. The information given about the lifestyles of the Mountain Jungs, Hsien-yüns and Hun-yus who lived in the 2300s and 2200s can be considered as the lifestyles of the oldest Turks. According to the source, "They lived on the northern borders of China, raising livestock and moving places, following the pastures. Most of the animals they raised were horses, cattle and sheep. They moved by following the water and grasslands. They did not have a walled city, a permanent place of residence, and no occupation for agriculture. However, everyone still had their own land. Each had its own land. They migrated by following the water and grass and changing places" is also repeated when describing the time of Motun (209 – 174 BC). As can be understood from this example, the Huns, who were nomadic from the perspective of China, reveal that they have a deep culture, not just nomadic, with the solids of archeology at the point we have reached today. In this context, the science of archeology also offers us different data. In our study, we will try to convey the data between the nomadic and semi-settled Asian Huns with a different point of view by emphasizing the nomadic and social characteristics of the Asian Huns.

**Keywords;** Asian Huns, Nomadism, Social life.

## ERKEN DÖNEM TÜRKLERİNİN YAŞADIĞI COĞRAFYA VE ÖZELLİKLERİ

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### ÖZET

Dünyanın en eski kara parçası olan Asya kıtası pek çok medeniyete ev sahipliği yapmıştır. Bu kadim kıta, Erken Türk tarihinin aydınlatılması bakımından oldukça kritik bölgeleri ve kültür miraslarını bünyesinde tutmaktadır. Türkler için Asya coğrafyası, gücünü alıp ve sınırlarına kucak açan bir bölge olmuştur. Dağınık boylar halinde yaşamış olan antik Türk topluluklarının çıkış noktaları hala gizemini korumaktadır. Fakat bilinen odur ki İç Asya'nın derinliklerinden gelen Türklerin anavatanı denilince bugün akıllara ilk olarak Orta Asya tabiri gelmektedir. Türklerin ilk ana yurdunun Altay ve Sayan (Kögmen yış) dağları çevresi ile bu dağların kuzey-batı bölgeleri olduğu fakat yapılan pek çok araştırmalar sonucunda ise Türk anayurdunun bu bölgelerle sınırlı kalmadığı, Türklerin buradan doğuya, batıya ve güneye doğru gittikçe yayıldıkları görülmektedir. Atalarımız tarihi boyunca pek çok bölgede varlıklarını sürdürmüşlerdir. Anayurt konusundaki çalışmaların ise hala devam etmektedir. Arkeolojinin de bu konuların aydınlatılmasında önemli görev gördüğünü söylemekte fayda vardır. Asya'nın çeşitli bölgelerinde S.V Kiselev, P.Tolstov, A.Bernştam, I.Rudenko, P.Oklandnikov gibi uzmanların yaptığı arkeolojik araştırmalar bölgenin tarihine ışık tutan önemli verileri sunmuşlardır. Minusinsk (mengü-su) bölgesindeki Afanasyeva (M.Ö 1700-1200) ile özellikle buraya yakın Andronovo kültüründe (M.Ö 1700-1200) ortaya çıkarılan brakisefal beyaz ırk iskeleti, Türk soyunun proto-tipi olduğunun ortaya koyulması bu duruma verilebilecek en güzel örneklerdendir. Bu ve bunun gibi ortaya konulan pek çok kalıntı ile bölgenin Türk kültürünü etkisinde olduğu ispatlanmaya çalışılmıştır. Fakat esas olarak daha somut verilere dayanarak Türklerin ilk devletleşme dönemine ait elde edilen bilgiler üzerinden konumuzu aktaracağız. Bilindiği üzere ilk Türk devleti olan Asya Hunlarıdır. Ancak bu kadim devletinde kaynaklarının sınırlı olduğu başka bir gerçektir. Ulaşılabilen sınırlı bilgiler ile Hunların yaşadığı coğrafya ve etkileri üzerinden değerlendirilerek dönemin coğrafyasına farklı bir pencereden bakılmaya çalışılacaktır.

**Anahtar Kelimeleri;** Orta Asya, Coğrafya, Asya Hunları

## GEOGRAPHY AND CHARACTERISTICS OF EARLY TURKS

### ABSTRACT

The continent of Asia, which is the oldest land part of the world, has hosted many civilizations. This ancient continent contains very critical regions and cultural heritages in terms of illuminating the Early Turkish history. For the Turks, the Asian geography has been a region that has taken its power and embraced its secrets. The origins of the ancient Turkish communities, which lived in scattered tribes, still remain a mystery. However, it is known that when the homeland of the Turks coming from the depths of Inner Asia is mentioned, the term Central Asia comes to mind first. It is seen that the first homeland of the Turks was around the Altay and Sayan (Kögmen yış) mountains and the north-western regions of these mountains, but as a result of many researches, the Turkish homeland was not limited to these regions, and the Turks were gradually spreading from there to the east, west and south. Our ancestors have survived in many regions throughout their history. The studies on the homeland are still continuing. It is useful to say that archeology plays an important role in illuminating these issues. Archaeological researches carried out by experts such as S.V Kiselev, P.Tolstov, A.Bernstam, I.Rudenko, P.Oklandnikov in various regions of Asia presented important data that shed light on the history of the region. The brachycephalic Caucasian skeleton unearthed in Afanasyeva (1700-1200 BC) in Minusinsk (mengü-su) region and especially in the Andronovo culture near here (1700-1200 BC) is the proto-type of Turkish ancestry. are examples. It has been tried to prove that the region is under the influence of Turkish culture with this and many other remains. However, we will

convey our subject through the information obtained from the first stateization period of the Turks, based on more concrete information. As it is known, the first Turkish state is the Asian Huns. However, it is another fact that the resources of this ancient state are limited. It will be tried to look at the geography of the period from a different window by evaluating the limited information available, the geography where the Huns lived and their effects.

**Keywords;** Central Asia, Geography, Asian Huns

## AVRUPA BİRLİĞİ'NİN GÖNÜLLÜ GERİ DÖNÜŞ POLİTİKALARI

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### ÖZET

Küreselleşen dünya ile birlikte göç, farklı boyutlarıyla incelenmesi gereken bir konu olarak görülmeye başlanmıştır. Bir süreç olarak adlandırdığımız göç boyunca ortaya çıkan değişik problemler sadece hedef ülkeler için değil aynı zamanda transit ve menşe ülkeler üzerinde büyük etkileri olmaktadır. Günümüzde göç konusunda ortaya çıkan durumlardan biri de hiç kuşkusuz gönüllü veya gönülsüz geri dönüş konusudur. Çünkü bir ülkeden başka bir ülkeye göç eden insanların bir kısmı çeşitli sebeplerle gittikleri ülkelerde kalmak istemeyip tekrardan kendi ülkelerine geri dönmek istemekte veya geri dönmek zorunda kalabilmektedir. Bu bakımdan Menşe ülkeye geri dönüş sadece geri dönenleri kapsamaz aynı zamanda gelecekte geri dönecekleri kapsamaktadır. Bu nedenle birçok hedef ülke göçmenlerin kendi ülkelerine geri dönmeleri konusunda bazı politikalar ve stratejiler geliştirmektedirler. Bu noktada göçmenlerin hedef olarak belirledikleri bölgelerden biri olan Avrupa Birliği ülkeleri göçmenlerin kendi ülkelerine dönmeleri konusunda geliştirdikleri politikalara ve stratejilerle ön plana çıkmaktadır. Hazırlanmış olduğumuz bu çalışmada Avrupa Birliği'nin gönüllü geri dönüş konusunda hayata geçirdiği politikaları ve stratejileri ortaya konularak Türkiye, Avrupa Birliği ve Birleşmiş Milletler örgütü arasında bu alanda atılan somut adımlar incelenmiştir.

**Anahtar Kelimeler:** Göç, Gönüllü Dönüş, Avrupa Birliği ve gönüllü dönüş politikaları

## VOLUNTARY RETURN POLICIES OF THE EUROPEAN UNION

### ABSTRACT

With the globalizing world, migration has begun to be seen as a subject that needs to be examined from different dimensions. The different problems that arise during migration, which we call a process, have great effects not only on the destination countries but also on the transit and origin countries. Undoubtedly, one of the emerging situations regarding migration today is the issue of voluntary or involuntary return. Because some of the people who migrate from one country to another country do not want to stay in the countries they go to for various reasons and want to return to their own country again or may have to return. In this respect, repatriation to the country of origin does not only include returnees, but also future returnees. For this reason, many destination countries develop some policies and strategies for the return of immigrants to their own countries. At this point, European Union countries, which are one of the regions that immigrants have determined as a target, come to the fore with the policies and strategies they have developed for the return of immigrants to their own countries. In this study, we have prepared the policies and strategies of the European Union on voluntary return and examined the concrete steps taken between Turkey, the European Union and the United Nations organization in this field.

**Keywords:** Migration, Voluntary Return, European Union and Voluntary Return Policies



## RUSYA'NIN KAFKASYA POLİTİKASINA BİR BAKIŞ: 1913 YILI PETERSBURG "RUS RİVİERASI" FUARI

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### ÖZET

Bu çalışmanın amacı 1913 yılında Petersburg'ta düzenlenen "Rus Rivierası" adlı fuar üzerinden Rusya'nın Kafkasya politikasını ele almaktır. Rusya, 19. yüzyılda Kafkasya coğrafyasına yönelik emperyal planlarını uygulamış, sınırlarını genişletmiş ve bu topraklarda hâkimiyetini tesis etmiştir. Bu ilk adımın ardından, yerel idari yönetimler kurmuş, bölgenin Rusya ile entegrasyonuna dair çalışmalar gerçekleştirilmiştir. Yeraltı ve yerüstü zenginliklerine odaklanan bu araştırmalar arasında tarımsal faaliyetler önemli yer tutmuştur. Zira Kafkasya coğrafyası iklim ve doğa bakımından birçok farklı ürünün yetiştiği bir coğrafyadır. Bu bakımdan kuzeydeki soğuk Rus topraklarının ihtiyacı olan her türlü tarımsal ürünün temin edilebileceği bir merkez potansiyelinde olmuştur. Moskova, Petersburg gibi merkezlerdeki resmi kuruluşların uzmanları bölgeye gelerek yerel tarım ürünlerine ve yetiştirilebilecek yeni ürünlere dair araştırmalar yapmışlar, tarımsal araştırma merkezleri ve botanik bahçeleri kurmuşlardır. Özel sektörün yanında, bizzat Rus hükümetine ait kurumlar da tarım üretim çalışmalarında bulunmuşlardır. Bu faaliyetler neticesinde, yerel ürün üretimi görece artmış, dünyanın farklı bölgelerinden getirilen yeni ürünler Kafkas coğrafyasında yetiştirilmeye başlanmıştır. İkinci adımda ise yerel tarımsal üretimin Rus pazarlarına tanıtılması süreci başlamıştır. Bu amaçla birçok farklı tarım fuarı gerçekleştirilmiş olup bunlardan biri de 1913'te Petersburg'ta "Rus Rivierası" adı altında düzenlenen tarım fuarıdır. Bu organizasyonda temel itibarıyla, Karadeniz kıyısındaki Kafkas topraklarının tarımsal üretimine odaklanılmış; Soçi, Sohum, Artvin, Batum, Tiflis, Özüretti, Kutais, Anapa, Gelencik, Cubga, Poti, Tuaps gibi yerlerdeki ürünler tanıtılmıştır. Böylelikle Kafkasya'ya olan ilginin artması, yeni yerleşimcilerin iskani ve bölgenin Ruslaştırılması amaçlanmıştır.

**Anahtar Kelimeler:** *Tarım, Kafkasya, Karadeniz*

### AN OVERVIEW OF RUSSIA'S CAUCASUS POLICY:1913 PETERSBURG "RUSSIAN RIVIERA" FAIR

### ABSTRACT

The aim of this study is to discuss Russia's Caucasus policy through the fair called "Russian Riviera" took place in Petersburg in 1913. Russia implemented its imperial plans for the Caucasus geography in the 19th century, expanded its borders and established its dominance. After this first step, local administrative administrations were established and studies on the integration of the region with Russia were carried out. Agricultural activities took an important place among these researches, which focused on underground and aboveground riches. Because the Caucasus geography is a geography where many different products are grown in terms of climate and nature. In this respect, it has the potential to be a center where all kinds of agricultural products needed by the cold Russian lands in the north can be obtained; Experts in official institutions in centers such as Moscow and Petersburg came to the region and conducted research on local agricultural products and new products that could be grown, and established agricultural research centers and botanical gardens. In addition to the private sector, institutions belonging to the Russian government have also been involved in agricultural production activities. As a result of these activities, local product production has increased relatively, and new products brought from different parts of the world have been started to be grown in the Caucasus region. In the second step, the process of introducing this local agricultural production to the Russian markets has begun. For this purpose, many different agricultural fairs were held. One of them is the agricultural fair held in Petersburg in 1913 under the name of "Russian Riviera". This organization mainly focused on the agricultural production of the Caucasian lands on the Black Sea coast; Products in places such as Sochi, Sukhum, Artvin, Batumi, Tbilisi, Özüretti, Kutais, Anapa,

Gelencik, Cubga, Poti, Tuaps were introduced. Thus, it was aimed to increase the interest in the Caucasus, to settle new settlers and to Russify the region.

**Keywords:** *Agriculture, Caucasus, Black Sea*

## İVESİ İRKI KOYUNLARDA GEBELİK DÖNEMİ BOYUNCA UMBİLİKAL ARTER KAN AKIMININ DOPPLER İNDEKSLERİ

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### ÖZET

Doppler ultrason kan akış hızı, yönü ve tipi gibi damar hakkında anatomik ve fonksiyonel bilgileri değerlendirmek için kullanılmaktadır. Gebelik sırasında umbilikal arter kan akımının izlenmesi, fetal gelişim hakkında bilgi edinmemizi sağlar. Sunulan çalışma İvesi ırkı koyunlarda gebelik boyunca umbilikal arter kan akımının Doppler indeksleri yönünden değerlendirilmesi amacıyla yapılmıştır. Çalışma 30 adet tekiz gebe İvesi ırkı koyun üzerinde gerçekleştirilmiştir. Koyunların aynı gebelik gününde olması amacıyla aşım sezonunda progesteron esaslı östrüs senkronizasyonu uygulanmıştır. Her grupta aynı sayıda hayvan olacak şekilde sırasıyla gebeliğin 45-60-75-90-105-120 ve 135. günlerinde Doppler ultrason ile umbilikal arter kan akımı izlenmiştir. Alınan bu ölçümlerde; pulsatilite indeksi (PI), rezistans indeksi (RI), diyastol sonu hız (EDV), maksimum sistolik hız (SPV) ve sistol/diyastol (S/D) değerlerinin ölçümleri yapılmıştır. Verilerin istatistiki analizi, tekrarlı ölçümler ANOVA (varyans analizi) kullanılarak incelendi. Umbilikal arter Doppler parametrelerinin gebelik günü ile anlamlı şekilde ilişkili olduğu görüldü ( $p<0.05$ ). Gebeliğin erken dönemlerinde PSV değerinin; gebeliğin sonraki dönemlerine göre önemli ölçüde daha düşük olduğu belirlendi ( $p<0.01$ ). Gebeliğin 50. gününe kadar umbilikal arterlerde EDV değeri saptanmadı. Gebeliğin erken dönemlerinde RI ve PI değerleri gebeliğin sonraki dönemlerine göre anlamlı olarak yüksek bulundu ( $p<0.05$ ). Sonuç olarak umbilikal arter kan akımının Doppler indeksleri gebelik dönemine göre farklılık gösterdiği belirlenmiştir. Bu değerlerinin bilinmesi; ilgili gebelik döneminde fetüsün hayatını tehdit edecek durumların önceden belirlenmesinde büyük katkı sağlanacağı düşünülmektedir.

**Anahtar Kelimeler:** Koyun, doppler, umbilikal arter, gebelik

### DOPPLER INDICES OF UMBILICAL ARTERY BLOOD FLOW DURING PREGNANCY IN AWASSI SHEEP

#### ABSTRACT

Doppler ultrasound is used to evaluate anatomical and functional information about the vessel, such as blood flow velocity, direction, and type. Monitoring umbilical artery blood flow during pregnancy provides information about fetal development. The present study was conducted to evaluate the umbilical artery blood flow in terms of doppler indices during pregnancy in Awassi sheep. The study was carried out on 30 singleton pregnant Awassi sheep. Progesterone-based estrus synchronization was applied in the breeding season to ensure that the sheep were on the same gestational day. Umbilical artery blood flow was monitored by doppler ultrasound on the 45-60-75-90-105-120 and 135th days of pregnancy, respectively, with the same number of animals in each group. In these measurements taken; Pulsatility index (PI), resistance index (RI), end-diastolic velocity (EDV), maximum systolic velocity (SPV) and systole/diastole (S/D) values were measured. Statistical analysis of data was analyzed using repeated measures ANOVA (analysis of variance). Umbilical artery doppler parameters were found to be significantly associated with gestational day ( $p<0.05$ ). PSV value was found to be significantly lower in the early stages of pregnancy compared to the later stages of pregnancy ( $p<0.01$ ). EDV value was not detected in the umbilical arteries until the 50th day of pregnancy. PI and RI values in the early stages of pregnancy were found to be significantly higher than in the later stages of pregnancy ( $p<0.05$ ). As a result, it was determined that Doppler indices of umbilical artery blood flow differ according to the gestational period. Knowing these values; It is thought that it will make a great

contribution to the predetermination of situations that will threaten the life of the fetus during the relevant pregnancy period.

**Keywords:** Sheep, doppler, umbilical artery, pregnancy

## ALABALIK YEMLERİNE FARKLI ORANLARDA İLAVE EDİLEN SİYAH ASKER SİNEĞİ LARVASI (*Hermetia illucens*)'NİN BÜYÜME PERFORMANSI VE BAZI KAN PARAMETRELERİ ÜZERİNE ETKİLERİ

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### ÖZET

Bu çalışmada, Gökkuşuğu alabalığı (*Oncorhynchus mykiss*) yemlerine farklı düzeylerde katılan dondurulmuş siyah asker sineği larvası (*Hermetia illucens*)'nın büyüme performansına ve bazı kan parametreleri üzerine etkileri araştırıldı. Her grupta 20 toplamda 80 adet balık olacak şekilde balıklar tartılıp boyları ölçüldükten sonra 4 gruba ayrıldı. Gruplar şu şekilde oluşturuldu: canlı ağırlığın (CA) % 1.5 'i bazal diyetle beslenen kontrol grubu, CA'nın % 1.5 'i larva ile beslenen larva grubu, CA'nın % 1.125 'i bazal diyet + CA'nın % 0.375 'i larva ile beslenen L1 grubu ve CA'nın % 0.75 'i bazal diyet + CA'nın % 0.75 'i larva ile beslenen L2 grubu. Çalışmanın başında ve 21 günlük süre sonunda ağırlık ve boy ölçümleri yapıldı. Çalışma sonunda bütün balıklar kesilerek kan örnekleri alınıp karkas ağırlıkları ve karkas verimleri belirlendi. L1 ve L2 gruplarının kontrol ve larva gruplarına göre yem tüketimi, canlı ağırlık artışı, yemden yararlanma oranı, karkas ağırlığı ve karkas verimi gibi büyüme parametreleri açısından daha iyi olduğu görülmüştür. Kan analizlerinde % LYM, MID, LYM düzeyleri, MCV, MCH, RDW-SD, RDW-CV ve PLT miktarları anlamlı bulunurken ( $P < 0.05$ ), WBC, GRAN, %MID, %GRAN, RBC, HGB, HCT, MCHC, MPV, PDW, PCT ve P-LCR değerleri ise anlamsız bulunmuştur. Sonuç olarak, alabalıkların bazal diyetle ilave olarak dondurulmuş siyah asker sineği larvası ile beslemenin büyüme performansında anlamlı düzeyde iyileştirmeler yaptığı görülmüştür. Ayrıca, balıkların kan yapımı hücreleri ile ilgili çok belirgin iyileştirmeler yapmamasına rağmen savunma sistemini destekleyici yönde iyileştirmeler yapmıştır. Bu çalışma ile alabalık yetiştiriciliğinde larvaların tek başına kullanımından ziyade, bazal diyetle belli oranlarda karıştırılarak beslemenin daha faydalı olacağı düşünülmektedir.

**Anahtar kelimeler:** Gökkuşuğu alabalığı, Siyah asker sineği larvası, Büyüme performansı.

### THE EFFECTS OF BLACK SOLDIER FLY LARVA (*Hermetia illucens*) ADDED TO TROUT FEED IN DIFFERENT PROPORTIONS ON GROWTH PERFORMANCE AND SOME BLOOD PARAMETERS

### ABSTRACT

In this study, the effects on growth performance and some blood parameters of frozen black soldier fly larva (*Hermetia illucens*) supplemented with different levels in rainbow trout (*Oncorhynchus mykiss*) diets were investigated. A total of 80 fish were divided into 4 groups after weighing and measuring their lengths, with 20 in each group. The groups were formed as follows: 1.5% of live weight (LW) basal diet fed control group, 1.5% of LW larva fed larvae group, 1.125% of LW basal diet + 0.375% of LW L1 group fed larvae and 0.75% of LW basal diet + 0.75% of LW larval fed L2 group. Weight and height measurements were made at the beginning of the study and at the end of the 21-day period. At the end of the study, all fish were slaughtered and blood samples were taken and carcass weights and carcass yields were determined. It was observed that L1 and L2 groups were better than control and larval groups in terms of growth parameters such as feed consumption, live weight gain, feed conversion ratio, carcass weight and carcass yield. While %LYM, MID, LYM levels, MCV, MCH, RDW-SD, RDW-CV and PLT amounts were found significant ( $P < 0.05$ ) in blood analysis, WBC, GRAN, %MID, %GRAN, RBC, HGB, HCT, MCHC, MPV, PDW, PCT and P-LCR values were found to be insignificant. As a result, it was observed that feeding the trout with frozen black soldier fly larvae in addition to the basal diet significantly improved the growth performance. In addition, although it did not make significant improvements in the blood-forming cells of fish, it made improvements to support the defense system. With this study, it is thought that it will be more beneficial to

feed the larvae by mixing them with the basal diet in certain proportions, rather than using the larvae alone in trout farming.

**Keywords:** Rainbow trout, Black soldier fly larva, Growth performance.

## 2021 YILINDA GÜNEY DOĞU KARADENİZ (TRABZON) KIYILARINDA AVLANAN PALAMUT (*Sarda sarda* Bloch, 1793)'LARIN BOY-AĞIRLIK İLİŞKİSİ

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### ÖZET

Boy-ağırlık ilişkileri (LWRS) balıkçılık bilimcilerinin stok değerlendirme modellerinde boy denklemlerindeki büyümeyi ağırlıktaki büyümeye dönüştürmelerine, boy frekans dağılımından biyokütle tahmin etmelerine ve balık durumunu hesaplamalarına olanak sağlar.

Bu çalışma Güney Doğu Karadeniz'de 2021 yılı Ağustos-Kasım ayları arasında Trabzon kıyılarında avlanan palamutların (*Sarda sarda* Bloch, 1793) boy-ağırlık ilişkilerinin belirlenmesi amacıyla yapılmıştır. Araştırmada toplam 166 adet palamut (93 dişi, 73 erkek) üzerinde çalışılmıştır. Örneklenen tüm balıklar için en küçük boy 19.7 cm, en yüksek boy ise 49 cm olup, ortalama boy  $\pm$ Se 33.91 ( $\pm$ 0.39) cm olarak tespit edilmiştir. Dişi, erkek ve tüm bireyler için boy ağırlık ilişkileri sırasıyla;  $W= 0.0016*L^{3.57}$  ( $R^2= 0.98$ ),  $W= 0.0022*L^{3.48}$  ( $R^2=0.97$ ),  $W= 0.0018*L^{3.53}$  ( $R^2 = 0.98$ ) olarak hesaplanmıştır. Elde edilen sonuçlar kullanılarak "b" değerleri Excel Paket programında "t" testi ile analiz edilmiş; dişi, erkek ve tüm bireyler için büyümenin pozitif allometrik ( $P<0.001$ ) olduğu belirlenmiştir.

**Anahtar Kelimeler:** *Sarda sarda*, Boy-Ağırlık İlişkisi, Güney Doğu Karadeniz

### LENGTH-WEIGHT RELATIONSHIPS OF ATLANTIC BONITO (*Sarda sarda* Bloch, 1793), CAPTURED FROM THE SOUTH EASTERN BLACK SEA (TRABZON) IN 2021

### ABSTRACT

Length-weight relationships (LWRS) allow fisheries scientists to convert growth in length equations to growth in weight in stock assessment models, estimate biomass from length frequency distribution and calculate fish stoks.

This study was carried out to determine the length-weight relationships of atlantic bonito (*Sarda sarda* Bloch, 1793) caught off the coast of Trabzon between August and November 2021 in the Southeastern Black Sea. A total of 166 atlantic bonito (93 females and 73 males) were studied. The minimum length was 19.7 cm, the maximum length was 49 cm and the mean length  $\pm$ Se 33.91 ( $\pm$ 0.39) cm for all individuals. Length-weight relationships for females, males and all individuals were as follows;  $W= 0.0016*L^{3.57}$  ( $R^2= 0.98$ ),  $W= 0.0022*L^{3.48}$  ( $R^2=0.97$ ),  $W= 0.0018*L^{3.53}$  ( $R^2 = 0.98$ ). Using the results obtained, "b" values were analyzed with the "t" test in the Excel Package program and it was determined that growth was positively allometric ( $P<0.001$ ) for females, males and all individuals.

**Keywords:** *Sarda sarda*, Length-Weight Relationships, South Eastern Black Sea

## SÜRÜ YÖNETİMİNDE DÖLVERİMİ

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### ÖZET

Bu çalışmada bilimsel kaynaklar dikkate alınarak sürü yönetiminde sürdürülebilir şekilde döl veriminde başarılı olmak amaçlanmıştır. Süt sığırcılığında istenilen verimin elde edilmesi ve sürünün devamı, başarılı bir sürü idaresine bağlıdır. Sürü yönetimi denildiğinde, bir süt sığırı işletmesinden sağlanan geliri en üst seviyeye çıkarmak amacıyla, sürü düzeyinde yapılması gereken uygulamalar anlaşılır. Sürü yönetiminin amacı, hayvanların refah ve konforunu da dikkate alarak sürüyü yönetmektir. Döl verimi sürü yönetiminden büyük ölçüde etkilenir. İyi bir döl veriminin anlamı; daha yüksek günlük süt verimi, yıllara göre daha fazla buzağı üretimi, daha yüksek bir verim için daha fazla seleksiyon imkanı demektir. Bir işletmede döl verim düzeyini gösteren önemli değerler; Buzağılama yaşı , düvelerin damızlıkta kullanılma yaşı, buzağılama aralığı ,servis periyodu, buzağılamadan sonra ilk tohumlama, iki kızgınlık arası süre ve tohumlamalar, hayvanlarda kızgınlık belirtilerini takip etme, gebe kalma oranı , gebelik başına tohumlama sayısı , buzağılama oranı ve üreme etkinliğidir. Bir hayvanın, hayatının her gününe düşen verimin maksimum olabilmesi için, ilk buzağılama yaş ortalamasının 24 ay olması gerekir. Düvelerde ilk tohumlama veya aşım, hayvanlar ergin ağırlıklarının 2/3'üne ulaştıklarında yapılabilir. İyi yönetilen işletmelerde buzağılama oranı % 90' in üzerindedir. % 80-90 oranı orta, % 80'nin altındaki sürülerde sorun olarak kabul edilir. Üreme etkinliği ise bir ineğin gebe kalıp canlı bir buzağı doğurabilme yeteneğine denir. Sığırların her yıl buzağı vermesi ilkesine göre düzenlenmiş bir ölçüttür. Sürüde inek başına yılda ortalama bir canlı buzağı elde ediliyorsa üreme etkinliği % 100' dür. Üreme etkinliği için % 75-85 değeri uygun sayılır. Eğer bir inek yapılan tohumlama veya aşımdan sonra gebe kalmazsa ortalama 21 gün sonra tekrar kızgınlık gösterir . İneklerde gözlenen kızgınlık belirtileri şunlardır; Diğer ineklerin kendisine atlamasına izin verir, -Diğer hayvanların üreme organlarını sık sık koklar, -Sık sık bağırır, huzursuz, sinirli, vulvası şişkin ,kızarık ve nemlidir. İneklerde kızgınlık yaklaşık 18-24 saat sürmektedir. Kızgınlık başlangıcını takip eden 12. ile 18. saatler arasında yapılan tohumlamalar başarılı bir döl verimi için en uygun zamandır. Sonuç olarak, Bir hayvancılık işletmesinin, sürü yönetiminde kazançlı , verimli ve sürdürülebilir olması döl verimi ölçütlerinin doğru şekilde uygulanmasıyla mümkün olacaktır

**Anahtar Kelimeler:** Döl Verimi, Süt Sığırı, Sürü Yönetimi

## FERTILIZATION IN HERD MANAGEMENT

### ABSTRACT

in this study, it is aimed to be successful in progeny in a sustainable way in herd management, taking into account scientific resources. Achieving the desired yield in dairy cattle and the continuation of the herd depend on a successful herd management. When herd management is mentioned, it is understood the practices that should be done at the herd level in order to maximize the income from a dairy cattle business. The aim of herd management is to manage the herd by taking into account the welfare and comfort of the animals. Fertility is greatly affected by herd management. The meaning of a good fertility; higher daily milk yield, more calves production over the years, more selection possibilities for a higher yield. Important values that show the fertility level in a business; Age at calving, age at which heifers are used in breeding, calving interval, service period, first insemination after calving, time between estrus and inseminations, monitoring for signs of estrus in animals, conception rate, number of inseminations per pregnancy, calving rate and reproductive efficiency. In order for an animal to have maximum productivity per day of its life, the average age of first calving should be 24 months. In heifers, the first insemination or breeding can be done when the animals reach 2/3 of their adult weight. The calving rate is over 90% in well-managed enterprises. 80-90% is



considered medium, and a herd below 80% is considered a problem. Reproductive efficiency is the ability of a cow to become pregnant and give birth to a live calf. It is a criterion arranged according to the principle that cattle give calves every year. If an average live calf per cow per year is obtained in the herd, the reproductive efficiency is 100%. A value of 75-85% is considered appropriate for reproductive efficiency. If a cow does not become pregnant after insemination or breeding, it will heat again after an average of 21 days. The signs of estrus observed in cows are as follows; it allows other cows to jump on him. - it often smells the genitals of other animals - it cries often, it is restless, nervous, its vulva is swollen, red and moist. In cows, estrus lasts for about 18-24 hours. Inseminations made between the 12th and 18th hours following the onset of estrus are the most suitable time for a successful reproduction. As a result, it will be possible for a livestock business to be profitable, efficient and sustainable in herd management by applying the fertility criteria correctly.

**Keywords:** Fertility, Dairy Cattle, Herd Management

## SÜRÜ YÖNETİMİNDE MASTİTİS

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### ÖZET

Bu araştırmada bilimsel kaynaklar dikkate alınarak sürü yönetiminde mastitisin sebepleri, çeşitleri , korunma yollarını açıklayıp , sürdürülebilir şekilde sürü yönetiminde mastitisle başarılı bir mücadele amaçlanmıştır. Mastitis çeşitli iritan etkilere karşı meme bezinin vermiş olduğu bir tepkidir. Bu hastalık, ineğin bireysel özellikleri, patojen mikroorganizmalar ve çevre koşulları gibi üç ana faktörün karşılıklı etkileşimi sonucu şekillenmektedir. Olumsuz çevre etkileri hayvanın direnç gücünü aştığı zaman mastitis ortaya çıkmaktadır. Bol süt veren hayvanlardan koyun, keçi ve bilhassa ineklerde büyük ekonomik önem taşır. Hastalıklı meme dokusu tedavi edilmediği takdirde atrofi meydana gelir. Hastalığın uzun süre fark edilmeden devam etmesi veya tedaviye cevap alınmaması, süt veriminde önemli ölçüde kayıp oluşturur. Ayrıca, infekte süt kullanılamaz, ilaç ve veteriner hekim masrafları ile ayıklama (hayvanın damızlıkta kullanılamaması) artar. Mastitis, seyrine göre klinik ve subklinik olmak üzere ikiye ayrılır.Sürü yönetiminde yetersizlik, sağım makinasının yanlış kullanımı veya bakımsız oluşu, uygun olmayan ahır koşulları ve kötü sağım hijyeni gibi etmenler mastitisin yaygınlık düzeyini artırmaktadır. Barınak koşulları memeye çevresel kökenli mikroorganizmaların bulaşma riski bakımından önemlidir. Ayrıca Organik kökenli altlık materyal , inorganik kökenli materyale göre mikroorganizmaların üremesi için daha uygun bir ortam sağlamaktadır. Mastitisi kontrol etmeye yönelik uygulamalar iki ana başlık altında ele alınmaktadır. Bunlardan birincisi yeni enfeksiyonların önlenmesi, diğeri ise mevcut enfeksiyonların giderilmesidir. Sağım makinasının doğru kullanımı, düzenli bakımı , ineklere sürekli temiz, kuru ve havadar barındırma koşullarının sağlanması ise mastitis kontrolünde etkili diğer sürü yönetim uygulamalarıdır. Sürülerde yeni enfeksiyon oluşumlarını azaltmaya yönelik uygulamaların başında sağım hijyeni yer almaktadır. Burada temel amaç özellikle meme başı uçlarındaki patojen mikroorganizma yoğunluğunu en aza indirmek ve mikroorganizmaların bir memeden diğerine bulaşmasını engellemektir. Sağım hijyen uygulamalarında ilk basamak memelerin sağım öncesi temizliğidir.Sürü dışı bırakılan ineklerin ayıklanma nedenlerinin yaklaşık %15'i mastitisten kaynaklanmaktadır. İşletmede ayıklama sebebiyle oluşacak yıllık kaybın %5-24'ünden mastitis sorumlu olmaktadır. Sonuç olarak, işletmedeki hayvanların sağlıklı bir şekilde hayatlarını devam etmesi , verim ve ekonomik kazançların sürdürülebilir olması , sürü yönetiminde başarılı bir şekilde mastitisle mücadeleye bağlıdır.

**Anahtar Kelimeler :** Sürü Yönetimi, Hayvancılık, Mastitis

## MASTITIS IN FLOCK MANAGEMENT

### ABSTRACT

In this research, it is aimed to successfully fight mastitis in herd management in a sustainable way by explaining the causes, types, ways of protection of mastitis in herd management, taking into account scientific resources. Mastitis is a response of the mammary gland to various irritant effects. This disease is shaped as a result of the interaction of three main factors such as the individual characteristics of the cow, pathogenic microorganisms and environmental conditions. Mastitis occurs when adverse environmental effects exceed the animal's resistance strength. It is of great economic importance in sheep, goats and especially cows, which are animals that give abundant milk. If the diseased breast tissue is not treated, atrophy occurs. Continuing the disease undetected for a long time or not responding to the treatment causes a significant loss in milk yield. In addition, infected milk cannot be used, drug and veterinarian costs and weeding (not being able to use the animal in breeding) increase. Mastitis is divided into clinical and subclinical according to its course. Factors such as inadequacy in herd management, misuse or neglect of the

milking machine, unsuitable barn conditions and poor milking hygiene increase the prevalence of mastitis. Shelter conditions are important in terms of the risk of contamination of the udder by microorganisms of environmental origin. In addition, organic-based litter material provides a more suitable environment for the reproduction of microorganisms compared to inorganic-based material. Applications to control mastitis are discussed under two main headings. The first of these is the prevention of new infections, and the other is the elimination of existing infections. Correct use of the milking machine, regular maintenance, and providing cows with clean, dry and airy sheltering conditions are other effective herd management practices in mastitis control. Milking hygiene is at the forefront of practices aimed at reducing the occurrence of new infections in herds. The main purpose here is to minimize the density of pathogenic microorganisms, especially at the nipples, and to prevent the transmission of microorganisms from one udder to the other. The first step in milking hygiene practices is the cleaning of the udders before milking. About 15% of the reasons for weeding out the cows are due to mastitis. Mastitis is responsible for 5-24% of the annual loss due to weeding in the enterprise. As a result, the healthy living of the animals in the enterprise, the sustainability of productivity and economic gains depend on the successful fight against mastitis in herd management.

**Keywords:** Herd Management, Livestock, Mastitis

## KÖPEKLERDE GÖZ HASTALIKLARI

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### ÖZET

Köpeklerde göz hastalıkları kalıtsal olabildiği gibi dış etkenler sebebiyle de oluşabilir. Göz insanlarda olduğu gibi hayvanlarda da en hassas organlardan biridir. Köpeklerde kalıtsal göz hastalıkları körlüğe kadar ilerleyebilir. Dış etkenler ile meydana gelen göz sorunları ise erken müdahale ile genellikle tedavi edilebilmektedir. Köpeklerde göz hastalıklarına sebep olan dış etkenler; sert bir cismin temas etmesi ile kornea yaralanmaları, kirli ortamlardan enfeksiyon bulaşması, bulaşıcı hastalığı olan başka bir köpekten bulaşabilen viral hastalıklar, alerjik durumlardır. Köpeklerde kornea yaralanmaları; kaza veya bir kavga durumunda gözde hasar meydana gelebilir. Özellikle basık yüzlü, gözleri çukurda olan köpek cinslerinde bu tür hasarlar sonucu körlük daha fazla görülmektedir. Kornea yani gözün en dış tabakası hasar aldığı anda şişmeye ve bulanık bir görüntü vermeye başlar. Veteriner hekim müdahalesi ile temizlenir ve antibiyotik tedavisi ile iyileştirilebilir. Çok ciddi vakalarda ameliyat gerekebilmektedir. Köpeklerde Göz Kuruluğu: Gözyaşı üretiminin azalması ile "kuru göz" olarak adlandırılan hastalık meydana gelebilir. Bu genelde bağışıklık kaynaklı bir rahatsızlıktır. Göz kuruluk sebebi ile parlaklığını kaybeder, ilerleyen durumda irinli konjonktivit görülebilir. Erken teşhisi ile tedavisi mümkündür, müdahale edilmemesi ve ilerlemesi durumunda körlüğe sebep olabilir. Köpeklerde kalıtsal göz hastalıkları, köpeklerde kalıtsal yani genetik göz hastalıklarına örnek vermek gerekirse, en yaygın görülen Katarakt ve Progresif Retinal Atrofi örnek verilebilir. Tedavi, birçok göz hastalığının kendine has göz damlası ya da merhemi ile tedavisi mümkündür. Önemli olan erken teşhistir. Bazı ilerleyen rahatsızlıklarda cerrahi müdahale gerekir.

**Anahtar Kelimeler:** Göz, Hastalıklar, Köpek

## EYE DISEASES IN DOGS

### ABSTRACT

Eye diseases in dogs can be hereditary as well as caused by external factors. The eye is one of the most sensitive organs in animals as in humans. Inherited eye diseases in dogs can progress to blindness. Eye problems caused by external factors can usually be treated with early intervention. External factors that cause eye diseases in dogs; Corneal injuries by contact with a hard object, infection from dirty environments, viral diseases that can be transmitted from another dog with an infectious disease, allergic conditions. Corneal injuries in dogs; Eye damage may occur in the event of an accident or a fight. Blindness is more common as a result of such damage, especially in dog breeds with a flat face and hollow eyes. When the cornea, the outermost layer of the eye, is damaged, it begins to swell and give a blurred image. It is cleared by veterinarian intervention and can be cured with antibiotic treatment. In very serious cases, surgery may be required. Dry Eyes in Dogs: With the decrease in tear production, the disease called "dry eye" may occur. This is usually an immune-related disorder. The eye loses its brightness due to dryness, and pus conjunctivitis can be seen in the progressive condition. It is possible to treat with early diagnosis, if not intervened and progress, it can cause blindness. To give an example of hereditary eye diseases in dogs and genetic eye diseases in dogs, the most common examples are Cataract and Progressive Retinal Atrophy. It is possible to treat many eye diseases with specific eye drops or ointments. The important thing is early diagnosis. Some progressive diseases require surgical intervention.

**Keywords:** Eye, Diseases, Dog

## KEDİLERDE ÜROLİTİYAZİS

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### ÖZET

Hastalık, üriner sistemde ve genitoüriner sistem organlarında (böbrek, üreter ve mesane) kum ve taşların varlığı ile karakterizedir. Tüm idrar taşları mineraller (%95) ve mineral olmayan matriksten (%5) kurulu iki ana kısımdan oluşur. Kedilerde oluşan en yaygın mineral kompozisyonu sırasıyla magnezyum amonyum fosfat (strüvit), kalsiyum okzalit, kalsiyum fosfat, amonyum ürat, sistin ve silikadır. Strüvit kristalüride, ürolitin merkezinde bulunan mineral tipi ile dış kabuktaki mineral tipi aynı olmayabilir. Bütün taşlarda, aminoasitler ve karbonhidratlardan yapılmış mukopolisakkarit yapıda organik bir matriksin çekirdek rolü oynadığı ve bunun üzerine idrardaki kalsiyum, okzalit ve fosfat gibi kristalloidlerin de çökerek üriner sistem taşlarını oluşturduğu tespit edilmiştir. Üriner sistem taşlarının organik bileşeni olan matriks ürolit yapısının %5'lik kısmını oluşturur ve organize, düzgün yapıda bir kristal deposudur. İdrarda, çözücü maddelerin (pirofosfat, sitrat, sodyum, aminoasitler) eksikliği ile kristal büyümesi ve kümeleşmesi meydana gelir. Bu maddelerin eriyebilen bileşikler yaptıkları ve kristalloidlerin çökmesini önledikleri ileri sürülmüştür. Ürolitiazise her iki cinsiyette de eşit oranda rastlanır. Fakat üretranın dişilere göre erkeklerde daha uzun ve dar olmasından dolayı, üretral tıkanıklık erkek kedilerde daha sık ortaya çıkar. Hastanın seyrek aralıklarla dışarıya çıkarılması ve buna bağlı idrar çıkışının az olması, yetersiz egzersiz ya da su alımının az olması, kristal ve ürolit oluşumuna hastayı yatkın kılar.

**Anahtar Kelimeler:** Ürolitiazis, Hastalık, Kedi

## UROLITHIASIS IN CATS

### ABSTRACT

The disease is characterized by the presence of sand and stones in the urinary system and genitourinary system organs (kidney, ureter and bladder). All urinary stones consist of two main parts composed of minerals (95%) and non-mineral matrix (5%). The most common mineral compositions formed in cats are magnesium ammonium phosphate (struvite), calcium oxalate, calcium phosphate, ammonium urate, cystine, and silica, respectively. In struvite crystalluria, the mineral type in the center of the urolite may not be the same as the mineral type in the outer shell. It has been determined that an organic matrix in the mucopolysaccharide structure made of amino acids and carbohydrates plays a core role in all stones, and on top of that, crystalloids such as calcium, oxalate and phosphate in the urine precipitate to form urinary system stones. Matrix, which is the organic component of urinary system stones, constitutes 5% of the urolite structure and is an organized, regular crystal storage. In the urine, crystal growth and aggregation occur with the lack of solvents (pyrophosphate, citrate, sodium, amino acids). It has been suggested that these substances make soluble compounds and prevent the precipitation of crystalloids. Urolithiasis occurs equally in both sexes. However, because the urethra is longer and narrower in males than in females, urethral obstruction occurs more frequently in male cats. Infrequent removal of the patient and the resulting low urine output, insufficient exercise or low water intake make the patient predisposed to the formation of crystals and uroliths.

**Keywords:** Urolithiasis, Disease, Cat

## SINIF ÖĞRETMENLERİNİN DEPREM SONRASI ÖĞRENCİLERE YÖNELİK YAKLAŞIM BİÇİMLERİNİN İNCELENMESİ

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### ÖZET

Deprem yer kabuğundaki kırılmalar nedeniyle yeryüzünü sarsma durumudur. Depremler Türkiye’de meydana gelen doğal afetlerden en yıkıcı olanıdır. Depremlerin nerelerde olabileceği bilinirken ne zaman olacağını tahmin etmek mümkün değildir. Araştırma, sınıf öğretmenlerinin deprem sonrasında öğrencilere yönelik yaklaşım biçimlerini belirlemeyi amaçlamaktadır. Yaşamlarının büyük bir kısmını okullarda geçiren çocukların depreme ilişkin travmayı atlatabilmesi, büyük ölçüde, sınıf öğretmenine bağlıdır. Araştırma, sınıf öğretmenlerinin deprem sonrası yaklaşımlarının belirlenmesi açısından büyük önem taşımaktadır. Araştırma, nitel araştırma desenlerinden durum çalışmasıdır. Araştırmada amaçlı örnekleme yöntemlerinden kolay ulaşılabirlik durum yöntemi kullanılmıştır. Araştırmanı çalışma grubunu, 2022-2023 eğitim öğretim yılı bahar yarıyılında Eskişehir ilinde görev yapan 10 sınıf öğretmeni oluşturmaktadır. Araştırma verileri, yarı yapılandırılmış bir formla toplanmış ve içerik analizi ile çözümlenmiştir. Katılımcıların gönüllü olarak katılmaları sağlanmış birebir görüşlerine yer verilerek aktarılabirlik sağlanmış, araştırmanın inandırıcılığını arttırmak için alan uzmanı iki araştırmacı tarafından değerlendirilmiş, ifadeler temalara ayrılmıştır. Araştırma sonucuna göre, sınıf öğretmenleri deprem sonrasındaki davranışlarının daha toleranslı ve şefkatli olduğunu, deprem sonrası toparlanma için kurumsal yönlendirmeleri dikkate aldıklarını, psiko-sosyal desteğin nasıl verileceğine ilişkin eğitim aldıklarını ancak bu eğitimin yeterli olmadığını düşünmektedirler. Bunun yanında deprem travmasının çocuklar üzerindeki duygusal, bilişsel, fiziksel ve davranışsal etkileri konusunda bilgi eksiklikleri olduğu, iyileşmeye yardımcı olacak süreçleri nasıl yöneteceklerini tam olarak bilemedikleri, stres yönetimi konusunda uygulama sorunları yaşadıkları, özel eğitime muhtaç çocuklara yönelik özel bir hazırlıklarının olmadığı belirlenmiştir. Araştırma sonuçları kapsamında, öğretmenlere deprem sonrası müdahale yollarının uygulamalı olarak verilmesi, kaygı ve stres yönetim becerilerinin kazandırılması, travma sonrası grup ve birey yönlendirme tekniklerinin örneklenmesi, depremde okul temelli psikolojik ilk yardım becerilerinin öğretilmesi, özel eğitime muhtaç çocuklara yönelik deprem sonrası danışmanlığının verilmesi önerilmektedir.

**Anahtar Kelimeler:** *Sınıf öğretmeni, doğal afet, deprem,*

### INVESTIGATION OF PRIMARY TEACHER’S APPROACH AFTER EARTHQUAKE

#### ABSTRACT

An earthquake is an event of shaking of the earth surface due to the breakages occurred in the earths’ crust. The earthquakes are the most destructive natural disasters for Türkiye. Nowadays, it is possible to know the location of the future earthquake events whereas it is not possible to predict the time. This research aims to determine the behavioral approaches of the Primary teachers toward the students after an earthquake. For children who spend most of their time in the school, to overcome the traumatic effects of the earthquakes mostly depends on the class teachers. This research has a significant importance on determining the behavioral approaches of the Primary teachers after earthquakes. The research is a case study performed using a qualitative search patterns. Among the purposive sampling methods, the easy accessibility sampling method was used for the purpose of this research. The research group consists of 10 Primary teachers who are working in Eskişehir for the spring semester of 2022-2023 working year. Research data were collected in a semi-structured form and solved by using content analysis. In the research, the opinions of the voluntary

participants were used as it was, thereby the transferability can be satisfied and in order to increase the persuasiveness of the research these opinions were analyzed by two different field experts. According to the results of the research, it is found that the behavioral approaches of the primary teachers are much more tolerant and compassionate after an earthquake. Moreover, the results also show that the Primary teachers follow the institutional guides in terms of the collective meeting points. However, in spite of being educated in terms of socio-social supports, it is thought that said education is not sufficient for the Primary teachers. In addition to these, it is found that; the Primary teachers have not sufficient knowledge about emotional, cognitive, physical and behavioral effects of the post traumatic effects of earthquakes on the children, they do not exactly know how to manage the recovery process, they lack of experience on stress management applications and even more they do not have any special preparation for children with special needs. According to the results of this research, it is suggested that teachers should be studied practically on the quick response applications after an earthquake, anxiety and stress management abilities of the teachers should be improved, post-traumatic group and individual guidance techniques of the teachers should be exemplified, school-based physiological first-aid skills should be studied and teachers should be consulted in terms of post-earthquake situations oriented to the children with special needs.

**Keywords:** *Primary teacher, natural disaster, earthquake*

## YAPISAL OLMAYAN TÜRKÇE METİNLER İÇERİSİNDEN ÜRÜN İSİMLERİNİ ÇIKARMAYA YÖNELİK BİR DERİN ÖĞRENME MODELİ

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### ÖZET

Varlık isimlerinin tanımlanması (NER), e-posta, blog, gazete ve diğer çevrimiçi kaynaklar gibi yapısal olmayan metin kaynaklarından bilgi çıkarmak ve elde etmek için kullanılan bir doğal dil işleme yöntemidir. NER bir paragraf, cümle ya da pasajda geçen isimleri belirlemek amacıyla kullanılır. Bu işlemler için literatürde makine öğrenmesi veya derin öğrenme yöntemleri sıklıkla kullanılmaktadır. Ama bu çalışmaların çoğu kendi modellerini düzgün yapılaraya sahip metin bilgisi üzerinde geliştirmişlerdir. Yapısal olmayan metinler genellikle kurallarla tanımlanmış normal cümle yapılarına sahip değildirler. Herhangi bir noktalama işaretleri kullanılmadığı gibi geçerli bir cümle yapıları olmayabilir. Bu çalışma yapısal olmayan Türkçe metinler içerisinde ürün isimlerini bulmaya yöneliktir. Bu amaç için derin öğrenme tabanlı NER modeli, ürün tanım bilgisi kullanılarak geliştirilmiş ve eğitilmiştir. Bahsi geçen çalışmada Uzun kısa dönemli bellek modeli Şartlı Rastgele Alan katmanı ile beraber kullanılmıştır. Kelime gösterilimi için FastText kullanılmıştır. Bu çalışmadaki modelin performansını ölçmek ve karşılaştırmak için aynı derin öğrenme modeli farklı kelime gösterilimi yaklaşımları (Word2Vec ve Glove) ile geliştirilmiştir. Aynı zamanda bahsi geçen çalışma temel modeller ile de karşılaştırılmıştır. Testler esnasında internetten elde edilen Türkçe e-ticaret verileri kullanılmış ve çalışmamızın temel modellerden daha iyi sonuçlar verdiği görülmüştür.

**Anahtar Kelimeler:** *Varlık isimleri tanımlama, BiLSTM-CRF, FastText, NLP*

### A DEEP LEARNING MODEL FOR EXTRACTING PRODUCT NAMES FROM TURKISH UNSTRUCTURED TEXT

#### ABSTRACT

A natural language processing technology called named entity recognition (NER) extracts information from unstructured text data, such as emails, blogs, newspapers, and other online sources. NER is the process of locating nouns that are mentioned throughout a passage of text, a sentence, or a paragraph, such as persons, places, organizations, or products. In the literature, machine learning and deep learning approaches are NER's most widely used techniques. However, most of these studies use structured text to train and evaluate their models. The unstructured or informal text does not have a formal sentence structure. It does not follow any punctuation rule. Moreover, it may not have regular sentence structures or grammar. This study focused on detecting product names in unstructured Turkish text. For this purpose, a deep learning-based NER model is developed and trained using product title data. The proposed work combines Bidirectional Long-Short Term Memory model with a conditional random field layer (BiLSTM-CRF) and uses FastText embedding. In order to evaluate and compare the performance of the proposed model, different embedding approaches, including Word2Vec and Glove are also used with BiLSTM-CRF model. Moreover, we compare our model with baseline models to evaluate the performance. We conduct experiments using the Turkish e-commerce dataset collected from the internet, and experimental findings show that the suggested work could perform better than the other baseline techniques.

**Keywords:** *Named entity recognition, BiLSTM-CRF, FastText, NLP*



## AFET YÖNETİMİNDE HEMŞİRELERİ GÜÇLENDİRMENİN ANAHTARI: AFET HEMŞİRELİĞİ EĞİTİMİ

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### ÖZET

Afetler etkileri veya sonuçları değerlendirildiğinde halk sağlığını derinden etkileyen olaylardır. Dünya genelinde yaşanan afetlerin çeşitliliği, afet politikalarında değişiklik yaratırken, hemşirelerin de afet müdahalesinin iyileştirilmesine katkı sağlamasını gerektirmektedir. Afet hemşireliği, afet yönetimi aşamalarına aktif katılımı ve afetin tüm aşamalarında birey/toplumun kaliteli ve etkili bakım hizmeti almalarının hedeflendiği, afet sırası ve sonrasında gerekli hemşirelik bakımı dahil, sağlık yönetimi, triyaj, ilk müdahale, sağlık eğitimi hizmetleri, danışmanlık, sağlık bakım hizmetinin verilmesi, koordinasyon sağlanmasıyla olası veya mevcut zararları en aza indirme, insan sağlığını korumaya yönelik tüm rol ve sorumlulukları içermektedir. Bu rol ve sorumlulukların yerine getirilebilmesi için hemşirelere bilgi, beceri ve yeterliliklerin eğitim yoluyla kazandırılması, bu yolla hemşirelerin güçlendirilmesi hedefine ulaşılması gerekmektedir. Bu bağlamda derlemenin amacı, hemşirelerin afet hemşireliği ve yönetimine yönelik eğitimlerle güçlendirilmesi için neler yapılabileceğini literatür ışığında incelemektir. Afet hemşireliği önemli bir kavram olmasına rağmen ulusal ve uluslararası literatürde standart bir çerçevede verilen bir eğitimin olmadığı belirtilmekle birlikte böyle bir eğitimin gerekliliği vurgulanmaktadır. Hemşirelere etkili ekip iletişimi ve iş birliği, hazırlık ve planlama aşamalarına katılım, stres yönetimi becerileri gibi eğitimler verilmeli, bu eğitimler sürekli olmalı ve sadece teorik olarak değil uygulamalı olarak da pekiştirilmelidir. Böylece afet durumlarına hazırlıklı ve donanımlı hemşire iş gücüne ulaşılacak, eleştirel düşünebilen bilgi ve beceri sahibi hemşireler yetiştirilecektir. Hemşirelik hizmetlerinde afetlerle başa çıkabilecek donanıma sahip hemşireler yetiştirmenin gerekliliği ve önemi fark edilmelidir. Hemşireler gerekli yetkinlikleri kazanarak acil durumlara ve afetlere müdahale etmeye daha iyi hazırlanabilirler. Afetlere zamanında müdahale edilmemesi, insan hayatını riske atmaya devam edebilir.

**Anahtar Kelimeler:** Afet Hemşireliği, Eğitim, Hemşirelerin Güçlendirilmesi

### THE KEY TO EMPOWERING NURSES IN DISASTER MANAGEMENT: DISASTER NURSING EDUCATION

### ABSTRACT

Disasters are events that deeply affect public health when their effects or consequences are evaluated. While the diversity of disasters worldwide creates changes in disaster policies, it also requires nurses to contribute to the improvement of disaster response. Providing health management, triage, first response, health education services, consultancy, health care services, including necessary nursing care during and after the disaster, in which it is aimed that the individual / society receive quality and effective care services at all stages of disaster nursing, disaster management and active participation in all stages of the disaster. It includes all roles and responsibilities aimed at minimizing potential or existing damages and protecting human health by ensuring coordination. In order to fulfill these roles and responsibilities, it is necessary to provide nurses with knowledge, skills and competencies through education and to achieve the goal of empowering nurses in this way. In this context, the aim of the review is to examine what can be done to strengthen nurses with trainings on disaster nursing and management in the light of the literature. Although

disaster nursing is an important concept, it is stated that there is no education given in a standard framework in the national and international literature, and the necessity of such an education is emphasized. Trainings such as effective team communication and cooperation, participation in preparation and planning stages, stress management skills should be given to nurses, these trainings should be continuous and reinforced not only theoretically but also practically. Thus, a nurse workforce that is prepared and equipped for disaster situations will be reached, and nurses who can think critically and have knowledge and skills will be trained. The necessity and importance of educating nurses who are equipped to deal with disasters in nursing services should be realized. By gaining the necessary competencies, nurses can be better prepared to respond to emergencies and disasters. Failure to respond to disasters in a timely manner may continue to put human life at risk.

**Keywords:** Disaster Nursing, Education, Nursing Empowerment

## SINIF ÖĞRETMENLERİNİN SIĞINMACI ÇOCUKLARIN AİLELERİ İLE YAŞADIKLARI SORUNLARIN BELİRLENMESİ

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### ÖZET

Göçler, geçmişten günümüze coğrafyamızda sürekli karşılaşılan bir olgudur. Çoğu zaman hazırlıksız ve zorunlu olarak gerçekleşen göçler, bütün dünyada sığınmacı sorununa neden olmuştur. Sığınmacıların kısa vadede temel ihtiyaçları karşılanırsa bile, uzun vadede psiko-sosyal destek ve eğitim ihtiyaçlarını karşılamada bazı sorunlar yaşanabilmektedir. Dilini, kültürünü ve özel sığınmacı statüsünü bilmediğimiz bireylerin eğitimini üstlenmek bazı temel beceri gerektirmektedir. Araştırma, Türkiye’de bulunan sığınmacı çocukların aileleri ile bu çocukların eğitimini üstlenen sınıf öğretmenleri arasındaki sorunların belirlenmesini amaçlamaktadır. Araştırma, sığınmacı çocukların topluma uyumunu sağlamak için sınıf öğretmenlerinin sığınmacı ailelerle sorunlarını tespit edip çözümler üretmek açısından önemlidir. Araştırma, 2022-2023 eğitim öğretim yılı bahar döneminde, Eskişehir ilinde görev yapan 8 sınıf öğretmeninden oluşmaktadır. Çalışma grubu amaçlı örneklem yöntemlerinden ölçüt örnekleme ile belirlenmiştir. Ölçüt, sınıflarında sığınmacı öğrenci olan öğretmenlerin araştırmaya katılmasıdır. Araştırmada, nitel araştırma yöntemlerinden durum çalışması kullanılmıştır. Durum çalışması, güncel bir olay, olgu ve durumun birey veya grupların bütüncül olarak derinlemesine incelenmesidir. Araştırmada sınıflarında sığınmacı öğrenci olan sınıf öğretmenlerine sığınmacı velilerle yaşadıkları sorunlar sorulmuştur. Araştırma verileri, yarı yapılandırılmış görüşme formu ile toplanmıştır. Toplanan veriler içerik analizi ile çözümlenmiştir. Araştırma sonuçlarının inandırıcılığını sağlamak için katılımcı doğrulaması, tutarlılığını sağlamak için uzman incelemesi, aktarılabilişliğini sağlamak için ise örneklem seçimini açıklama aşamaları takip edilmiştir. Araştırma etiği açısından katılımcıların gönüllü katılımı sağlanmış, kod isimler kullanılarak gizlilik esasına bağlı kalınmıştır. Araştırma sonuçlarına göre; sınıf öğretmenleri sığınmacı velilerle yaşadıkları en büyük sorunun dil ve iletişim sorunu olduğunu belirtmişlerdir. Bunun yanında sosyo-kültürel farklılıklardan kaynaklı sorunlar olduğu, velilerin ekonomik yetersizlikten dolayı çocukların okul ihtiyaçlarını karşılayamadıkları, okul derslerinin pekiştirilmesinde, ödev yapılmasında aile desteğinin olmadığı, yaşadıkları çevreyi iyi bilmedikleri için çocuklarını eğitim amaçlı kurumlara götüremedikleri, eğitim sistemimizin işleyişini (sınıf geçme, devam devamsızlık, disiplin kuralları vb) bilmedikleri, kendilerini sığınmacı çocuklar ve aileleri konusunda yetersiz hissettikleri yönünde görüş bildirmişlerdir. Araştırma sonuçlarına göre, sınıf öğretmenlerine yönelik, sığınmacı çocuk aileleri ile kurulacak akademik iletişim kurma eğitimlerinin verilmesi, bu ailelerin eğitim yaşantılarına dahil edilmesi için veli kulüplerine dahil edilmesi, sığınmacı ailelerin sınıf öğretmenleri ile birlikte katılacağı akademik destek programlarının organize edilmesi, sığınmacı aileler ve çocuklarını eğitim sorunları için başında göç uzmanının ve eğitimcinin bulunduğu çözüm merkezlerinin kurulması önerilmektedir.

**Anahtar Kelimeler:** Sığınmacı aileler, sığınmacı öğrenci, sınıf öğretmeni

### ВЫЯВЛЕНИЕ ПРОБЛЕМ, КОТОРЫЕ ВОСПИТАННЫ РУКОВОДИТЕЛЯМИ В СЕМЬЯХ ДЕТЕЙ-БЕЖЕНЦЕВ

#### КРАТКОЕ СОДЕРЖАНИЕ

Миграции постоянное явление в нашей географии от прошлого к настоящему. В большинстве случаев неподготовленные и вынужденные миграции вызывали проблему лиц, ищущих убежища, во всем мире. Даже если основные потребности лиц, ищущих убежища, будут удовлетворены в

краткосрочной перспективе, могут возникнуть некоторые проблемы с их удовлетворением в отношении психосоциальной поддержки и образования в долгосрочной перспективе. Знание языка, культуры и особого статуса беженца требует некоторых базовых навыков для обучения людей. Исследование позволяет измерить их сдерживание между семьями ценков-беженцев в Турции и классными руководителями, которые занимаются обучением этих европейцев. Исследование важно с точки зрения определения того, что классовое сообщество достигает семей беженцев, и выработки решений, чтобы обеспечить интеграцию беженцев в сообщество. Исследование было направлено на критерий применения методов использования учебной группы 2022-2023 гг. Критерием является включение в свои классы учащихся-беженцев. В исследовании был использован кейс-стади, один из методов качественного исследования. Тематическое исследование это наблюдательное исследование текущего события, явления или вещи в целом. В ходе исследования классные группы, в которых учились учащиеся-беженцы, спрашивали о проблемах, которые у них были с родителями-беженцами. Данные исследования были собраны по формуле полуприобретенного интервью. Собранные компоненты анализировали контент-анализом. Он продолжал объяснять аудиторскую проверку для обеспечения достоверности результатов исследования, экспертную оценку для получения сумм и выбор для обеспечения возможности передачи. Участие участников было обеспечено для оценки с точки зрения исследовательской этики, и соблюдался принцип конфиденциальности, используемый лицами кодекса. По данным исследовательских структур; Они заявили, что самые большие проблемы, с которыми сталкиваются учителя начальных классов с родителями-беженцами, это языковые и коммуникативные проблемы. Кроме того, существуют проблемы, вытекающие из социокультурных структур, родители не могут обеспечить потребности детей в школе из-за экономической несостоятельности, отсутствует поддержка семьи в закреплении уроков, выполнении домашних заданий, они не могут взять детей в образовательные учреждения, потому что не знают текущую среду хорошо, и переход образования (проход класса, неуспеваемость, дисциплинарные правила) и т. д.). По данным исследовательских групп, организация обучения в учебных заведениях с семьями детей беженцев для групп классов, включение этих семей в родительские клубы, чтобы включить их в свою образовательную жизнь, организация программ академической поддержки, которые семьи беженцев будут посещать вместе с классами учителей, заботиться и обучать своих детей под их руководством. Он возглавляет создание центров решения с экспертами по миграции и педагогами.

**Ключевые слова:** семьи беженцев, студент-беженец, классный руководитель.

## **DETERMINING THE PROBLEMS THAT CLASS TEACHERS EXPERIENCE WITH THE FAMILIES OF REFUGEE CHILDREN**

### **SUMMARY**

Migration is a phenomenon that is constantly encountered in our geography from past to present. Most of the time, unprepared and forced migrations have caused the problem of asylum seekers all over the world. Even if the basic needs of asylum seekers are met in the short term, there may be some problems in meeting their psycho-social support and education needs in the long term. Undertaking the education of individuals whose language, culture and special refugee status we do not know requires some basic skills. The research aims to determine the problems between the families of refugee children in Turkey and the classroom teachers who undertake the education of these children. The research is important in terms of identifying the problems of classroom teachers with refugee families and producing solutions in order to ensure the integration of refugee children into society. The research consists of 8 classroom teachers working in Eskişehir in the spring term of the 2022-2023 academic year. The study group was determined by criterion sampling, one of the purposive sampling methods. The criterion is that teachers who have refugee students in their classrooms participate in the research. Case study, one of the qualitative research methods, was used in the research. A case study is a holistic in-depth study of a current event, phenomenon, and situation by individuals or groups. In the study, the problems they experienced with the refugee parents were asked to the classroom teachers who are refugee students in their classrooms. Research data were collected with a semi-structured interview form. The collected data were analyzed by content analysis. In order to ensure the

credibility of the research results, participant verification, expert review to ensure consistency, and explanation of the sample selection to ensure transferability were followed. In terms of research ethics, the voluntary participation of the participants was ensured and confidentiality was adhered to by using code names. According to the research results; classroom teachers stated that the biggest problem they experience with refugee parents is language and communication problems. In addition, there are problems arising from socio-cultural differences, parents cannot meet the school needs of their children due to economic inadequacy, there is no family support for reinforcing school lessons, doing homework, they cannot take their children to educational institutions because they do not know the environment they live in. disciplinary rules, etc.), they did not know, and they felt inadequate about the refugee children and their families. According to the results of the research, it has been determined that providing academic communication trainings for classroom teachers to be established with the families of refugee children, including these families in parents' clubs to include them in their educational life, organizing academic support programs that refugee families will attend with their classroom teachers, and education problems of refugee families and their children. For this purpose, it is recommended to establish solution centers with migration experts and educators.

**Keywords:** Refugee families, refugee student, classroom teacher

## ULUSLARARASI SAĞLIK TURİZMİ YÖNETİMİNDE HASTA MAHREMİYETİNİN KORUNMASI

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### ÖZET

Birçok ülke için önemli bir kazanç kaynağı haline gelen sağlık turizmi, sağlık turistleri açısından da ihtiyaç duydukları sağlık hizmetlerine ekonomik, hızlı ve kaliteli bir şekilde ulaşabilme fırsatı olarak değerlendirilmektedir. Farklı ülkelerdeki sağlık hizmetlerinden faydalanmak isteyen sağlık turistleri, kişisel verilerine ilişkin bir çok bilgiyi ise sağlık turizmi çalışanlarıyla paylaşmaktadır. Paylaşılan bu bilgilerin gerek aracı kuruluşlar tarafından, gerekse sağlık tesisleri tarafından özenli bir şekilde gizli tutulması ve saklanması önem taşımaktadır. Bu bilgiler, sağlık turistlerinin özel hayatlarına ilişkin kişisel verileri içermesinin yanında hasta mahremiyetinin korunması açısından da değerlendirilmelidir. Hasta mahremiyeti, kendileri hakkında bir takım bilgiler vererek hem ekonomik hem de nitelikli sağlık hizmeti arayışında olan sağlık turistlerinin yaptığı çevrimiçi görüşmelerden elde edilen verilerin kayıt altına alınması ile başlamaktadır. Bu yönüyle hekim veya başka bir sağlık profesyonelinin sorumlu olduğu tıbbi deontolojinin kapsamı dışına da çıkmaktadır. Uluslararası sağlık turizmi yönetiminde hasta mahremiyetinin korunması, hizmetin sağlandığı ülkenin ulusal mevzuatları kadar taraf olduğu uluslararası sözleşmeleri de kapsamaktadır. Buna rağmen sağlık turistlerinin kendilerini bu konuda daha güvende hissedebilmeleri ise bir takım akreditasyonların devreye girmesi ile mümkün olabilmektedir. Kaldı ki bazı sağlık turistleri, sosyal normları veya sosyal statüleri gereği kendi ülkelerinden almak istemedikleri sağlık hizmetleri için başka ülkelerin sağlık tesislerini tercih edebilmektedir. Bu yönüyle sağlık turistleri için hasta mahremiyetinin korunması beklentisi daha da artmaktadır. Bu bağlamda hasta mahremiyeti kapsamında olan sağlık bilgileri, aile yaşantısı ile ilgili beyanlar, özgeçmiş bilgileri, tedavi sürecindeki her türlü tıbbi ve finansal kayıtlar ile tedavi sonrasındaki iletişim faaliyetleri de dahil olmak üzere tüm süreçler çok yönlü bir şekilde uluslararası sağlık turizmi yönetimi içerisinde değerlendirilmelidir.

**Anahtar Kelimeler:** *Sağlık Turizmi, Sağlık Yönetimi, Hasta Mahremiyeti.*

## PROTECTING PATIENT CONFIDENTIALITY IN INTERNATIONAL MEDICAL TOURISM MANAGEMENT

### ABSTRACT

Medical tourism, which has become an important source of income for many countries, is considered as an opportunity for medical tourists to reach the health services they need in an economical, fast and quality way. Medical tourists who want to benefit from health services in different countries share a lot of information about their personal data with medical tourism workers. It is important that this shared information is carefully kept confidential and archived by both intermediary institutions and health institutions. This information should be evaluated in terms of protecting patient confidentiality as well as containing personal data regarding the private life of medical tourists. Patient confidentiality starts with the recording of data obtained from online interviews of medical tourists who are seeking both affordable and quality health services, by giving some information about themselves. In this respect, it goes beyond the scope of medical deontology that the physician or another health professional is responsible for. The protection of patient confidentiality in international medical tourism management includes the national legislation of the country

where the service is provided, as well as the international agreements to which it is a party. However, with the introduction of some accreditations, it is possible for medical tourists to feel more secure in this regard. In addition, some medical tourists may prefer health facilities of other countries for health services that they do not want to receive from their own country due to their social norms or social status. In this respect, the expectation of protecting patient confidentiality in medical tourists is increasing. In this context, within the framework of international medical tourism management, all processes including health information within the scope of patient confidentiality, statements regarding family life, background information, all kinds of medical and financial records during the treatment process, and communication activities after treatment should be evaluated in a multi-faceted manner.

**Keywords:** *Medical Tourism, Healthcare Management, Patient Confidentiality.*

## ADOLESAN SPORCULARIN REAKTİF DENGE PERFORMANSLARININ İNCELENMESİ- PİLOT ÇALIŞMA

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### ÖZET

**Giriş:** Reaktif denge testi; Y denge testinin sporun dinamik doğasına daha uygun hale getirilmesi amacıyla oluşturulmuş nörobilişsel bir testtir. Bu çalışma adolesan sporcuların reaktif denge performanslarının incelenmesi amacıyla yapılmıştır.

**Metot:** Çalışmaya yaş ortalamaları  $13.72 \pm 1.72$  olan 47 sporcu dahil edilmiştir. Katılımcılara reaktif denge testi gerçekleştirilmiştir. Test sırasında Y denge test platformunda kişilerin maksimum uzanma mesafelerinin %80'ine led ışıklar yerleştirilmiş ve telefonla eş zamanlı yanan led ışığı söndürmeleri istenmiştir. Rastgele yanan 45 ışık sonrasında sonuç ölçütleri olarak görsel-motor tepki süresi (ms) ve doğruluk (%) alınmıştır.

**Bulgular:** Çalışmaya katılan 47 sporcu arasından 14'ünün alt ekstremitte yaralanma öyküsü bulunmaktadır. Katılımcıların sağ bacak reaksiyon süresi  $132.69 \pm 12.14$  sn, sol bacak reaksiyon süresi  $131.16 \pm 9.60$  sn, sağ bacak doğruluk yüzdesi  $93.00 \pm 6.15$ , sol bacak doğruluk yüzdesi  $97.70 \pm 6.17$ 'dir.

**Sonuç:** Çalışma adolesan sporcularda reaktif denge testi için normatif veri oluşturmak için yapılan ilk çalışmadır.

**Anahtar Kelimeler:** Reaktif denge, sporcu, reaksiyon süresi

## INVESTIGATION OF REACTIVE BALANCE PERFORMANCES OF ADOLASCENT ATHLETES-PILOT STUDY

### ABSTRACT

**Introduction:** Reactive equilibrium test; It is a neurocognitive test created to make the Y balance test more suitable for the dynamic nature of sports. This study was conducted to examine the reactive balance performance of adolescent athletes.

**Method:** 47 athletes with a mean age of  $13.72 \pm 1.72$  were included in the study. Reactive balance test was performed on the participants. During the test, LED lights were placed at 80% of the maximum reach distance of the people on the Y balance test platform and they were asked to turn off the simultaneously lit LED light with the phone. After 45 randomly flashing lights, visual-motor response time (ms) and accuracy (%) were taken as outcome measures.

**Results:** Among the 47 athletes participating in the study, 14 had a history of lower extremity injury. Participants' right leg reaction time was  $132.69 \pm 12.14$  sec, left leg reaction time was  $131.16 \pm 9.60$  sec, right leg accuracy percentage was  $93.00 \pm 6.15$ , left leg accuracy percentage was  $97.70 \pm 6.17$ .

**Conclusion:** The study is the first to generate normative data for reactive balance testing in adolescent athletes.

**Keywords:** Reactive balance, athlete, reaction time



## ÜNİVERSİTE ÖĞRENCİLERİNİN YATIRIM DAVRANIŞLARI: BİR YAPISAL MODEL ÖNERİSİ

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### ÖZET

Bu çalışmada üniversite öğrencilerinin finansal okuryazarlık (F- Financial literacy) , öz kontrol (SC- Self-control ) ve akran etkisinin ( PI- Peer-influence) yatırım davranışlarını (IB- Investment behaviour) etkisi önerilen bir yapısal model ile incelenmiştir. Veriler, Eskişehir Osmangazi Üniversitesi (ESOGÜ) İİBF öğrenim gören öğrencilerden 2022-2023 Güz döneminde online anket yardımıyla toplanmıştır. Analiz, kısmi en küçük kare yapısal eşitlik modeli (PLS-SEM) kullanılarak gerçekleştirildi (n=258). PLS-SEM’de iki aşama söz konusudur. Analizler genel olarak, (1) ölçüm modeli, (2) yapısal modele ilişkin değerlendirmeleri içerir. Ölçüm modeli için, dış faktör yükleri iç güvenilirlik ve yakınsak güvenilirliğin değerlendirilmesi yapılmıştır. Yapısal modelin analizinde ise model uyumu değerlendirilmiş ve hipotez testleri yapılmıştır. Analiz sonucunda modelin uyumlu olduğu ve özellikle akran etkisinin öğrencilerin yatırım davranışlarını etkilediği ortaya çıkmıştır.

**Anahtar Kelimeler:** Yatırım Davranışı, Akran Etkisi, Finansal Okuryazarlık, Üniversite Öğrencileri

### INVESTMENT BEHAVIOR OF UNIVERSITY STUDENTS: A STRUCTURAL MODEL PROPOSAL

#### ABSTRACT

In this study, the effect of university students' financial literacy (F-Financial Literacy), Self-control (SC-Self-Control) and peer effect (PI-Peer-Influence) was examined with a proposed structural model. The data was collected from the online survey in 2022-2023 fall semester of the students studying İİBF. The analysis was performed using the partial smallest square structural equality model (PLS-SEM) (n = 258). There are two stages in PLS-SEM. In general, (1) Measurement model includes (2) evaluated for the structural model. For the measurement model, external factor loads internal reliability and convergence reliability were evaluated. In the analysis of the structural model, model compliance was evaluated and hypothesis tests were performed. As a result of the analysis, it was found that the model is compatible and especially the peer effect affects students' investment behaviors.

**Keywords:** Investment Behavior, Peer Effect, Financial Literacy, University Students

## SINIF ÖĞRETMENLERİNİN DEPREME HAZIRLIK DÜZEYLERİNİN BELİRLENMESİ

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### ÖZET

Türkiye, dünyanın en aktif deprem kuşağında bulunmaktadır. Tektonik konumu nedeniyle topraklarının büyük bir bölümü deprem riski altındadır. Nüfusunun neredeyse %70'inden fazlası deprem bölgesinde yaşamaktadır. Araştırmanın amacı, gün içerisinde çocuklarla en çok vakit geçiren sınıf öğretmenlerinin depreme hazırlık düzeylerinin belirlenmesidir. Araştırma, sınıf öğretmenlerinin depreme yönelik mevcut hazırlıklarını, çocukların güvenliklerini sağlama becerilerini, deprem anı ve sonrasında üstlendikleri rol ve sorumluluklarını ve ihtiyaç duydukları eğitimleri belirlemek açısından önemlidir. Araştırma, nitel araştırma yöntemlerinden bir durum çalışmasıdır. Çalışma evreni, Konya ilinde iki resmi okulda görev yapan 10 öğretmenden oluşmaktadır. Araştırmanın örneklem grubunun belirlenmesinde amaçlı örnekleme yöntemlerinden kolay ulaşılabilirlik örnekleme yöntemi kullanılmıştır. Araştırma verileri, 2022-2023 eğitim öğretim yılı bahar yarıyılında, yarı yapılandırılmış görüşme formu ile toplanmıştır. Elde edilen veriler içerik analizi yoluyla temalara ayrılarak kodlanmıştır. Araştırma sonuçlarının inandırıcılığını sağlamak için katılımcı doğrulaması, tutarlılığını sağlamak için uzman incelemesi, aktarılabirliğini sağlamak için ise örneklem seçimini açıklama aşamaları takip edilmiştir. Araştırma etiği açısından katılımcıların gönüllü katılımı sağlanmış, kod isimler kullanılarak gizlilik esasına bağlı kalmıştır. Araştırma sonuçlarına göre; bazı sınıf öğretmenleri afetlerle ilgili bir eğitim aldıklarını, bazıları ise böyle bir eğitim almadıklarını, ancak okul afet ve acil durum planının varlığından haberdar olduklarını belirtmişlerdir. Öğretmenler deprem anındaki sorumluluklarını bildiklerini, deprem sonrası psiko-sosyal destek eğitimlerini incelediklerini bildirmişlerdir. Ancak deprem ve depremle ilgili mücadele konusunda teknik bilgilerinin yetersiz olduğunu, okul afet planındaki yerlerini bilmekte ancak ne yapacaklarını detaylı olarak bilmediklerini, deprem risklerini yönetmeyi deneyimlemediklerini ve deprem sonrası psiko-destek yaklaşımlarını sadece teorik olarak bildikleri belirtmişlerdir. Öğretmenlere acil durum yönetim kurulundaki yerleri ve görevlerinin detaylandırılarak anlatılması, fiziksel ve çevresel riskleri azaltmaya yönelik risk yönetim eğitimlerinin verilmesi, sınıf düzeyinde deprem çantalarının bulundurulması, deprem de okul temelli psikolojik ilk yardım becerilerinin öğretiminin yapılması, öğrenci yönlendirme ve teslim prosedürlerinin belirlenmesi, okullardaki deprem tatbikatlarının farklı senaryolarla gerçekleştirilmesi önerilmektedir.

**Anahtar Kelimeler:** *Afet bilinci, deprem hazırlığı, sınıf öğretmeni,*

### DETERMINING OF PRIMARY TEACHER ABOUT EARTHQUAKE PREPARATION

#### ABSTRACT

Türkiye is located in the most active earthquake zone of the world. A long part of its territory is under the risk of earthquakes by reason of its tectonic position. The aim of the search is to determine the earthquake preparation degrees of primary teachers who spend the most time with students during the day. The research is significant in terms of determining the current preparations of the primary teacher the earthquake, providing the safety of the children, the roles and responsibilities they undertake during and after the earthquake, and their education that they need. The research is a case study of qualitative research methods. The target population of the study consist of 10 teachers working in two official schools in Konya. The research data have been collected with a semi-structured interview form in the spring semester of 2022-2023 academic year. The data obtained have been coded by dividing them into themes through content analysis. In order to ensure the credibility of the research results, participant verification expert review to ensure consistency and

explanation of the research ethics. According to the results of the research some teachers stated that they received of training on disaster and some stated that they did not receive such training, but they were aware of the existence of a school disaster and emergency plan. The teachers reported that they knew their responsibilities of the time of the earthquake and that they examined psycho-social support trainings after the earthquake. However, they stated that their technical knowledge about earthquakes and its recovery is insufficient, they know place in school disaster plan, but they do not know what to do in detail. Explaining in detail to teachers their place and duties in emergency management board, providing rule management training to reduce physical and environmental risks, keeping earthquake bags, teaching school-based psychological first aid skills, determining student orientation and delivery procedures using earthquake drills with different scenarios is recommended to be performed.

**Keywords:** *Disaster awareness, earthquake preparedness, primary teacher*

## OKUL REDDİ

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### ÖZET

Okul hayatının başlaması ile birlikte evlerinden ilk kez uzun süreli ayrı kalan çocukların birçoğu çeşitli derecelerde okula uyum problemleri yaşamaktadır. Bu uyum problemleri okul hayatına alışma ile birlikte çocukların büyük bir kısmında ortadan kalkarken bazı çocuklar çeşitli nedenlerle bu problemlerin üstesinden gelememektedir. Eğitimin tüm kademelerinde gözlemlenebilen okul reddi, okula gitme, tüm gün okulda kalma veya okulda kendini iyi hissetmede zorluklarla karakterize şekilde kendini gösteren bir bozukluktur. Özellikle yakın zamanda gerçekleşen Covid 19 pandemisi çocuğun okula karşı istek, arzu ve motivasyonunu olumsuz yönde etkilemektedir. Okul reddinin yaygın nedenlerinden arasında ayrılık kaygısı bozukluğu, sosyal anksiyete bozukluğu, dikkat eksikliği ve hiperaktivite bozukluğu yer almaktadır. Okul reddinin yaygınlığı ile ilgili çalışmalarda farklı bulgular bildirilmektedir. Ancak genel olarak okul reddinin kliniğe sevk edilen tüm çocukların yaklaşık %5'ini ve okul çağındaki tüm çocukların %1'ini etkilediği belirtilmektedir. Okul reddi her yaşta görülebilse de beş, altı, on ve on bir yaşındaki çocuklarda daha sık görülmektedir. Okul reddine sıklıkla anksiyete ve depresyon gibi psikiyatrik bozukluklar eşlik edebilmektedir. Okul reddi ek olarak panik bozukluk, karşı olma karşı gelme bozukluğu, sosyal fobi ve ayrılık kaygısı ile ilişkilidir. Ergenlikte ise kaygı ve duygudurum bozuklukları ile ilişkilidir. Okul reddi bozukluğunun sağaltımında bilişsel davranışçı terapi sıklıkla kullanılmaktadır. Bilişsel davranışçı yaklaşım çocuk ya da gençte okul reddine neden olan işlevsel olmayan düşünceleri belirleyip olumlu yönde değiştirmeyi ve okula devam etme yönünde çocuğu harekete geçirmeyi amaçlar. Bilişsel davranışçı terapi kapsamında sıklıkla bilişsel terapi, gevşeme egzersizleri, maruz bırakma ve sosyal beceri eğitimi gibi müdahale yöntemlerine başvurulmaktadır.

**Anahtar Kelimeler:** *Okul reddi, Okula uyum problemi, Bilişsel davranışçı terapi*

## SCHOOL REFUSAL

### ABSTRACT

While these adaptation problems disappear in most of the children as they get used to school life, some children cannot overcome these problems for various reasons. School refusal, which can be observed at all levels of education, is a disorder characterized by difficulties in going to school, staying at school all day, or feeling good at school. Especially the recent Covid 19 pandemic negatively affects the child's desire, desire and motivation towards school. Separation anxiety disorder, social anxiety disorder, attention deficit and hyperactivity disorder are among the common causes of school refusal. In general, it is stated that school refusal affects approximately 5% of all children referred to the clinic and 1% of all school-age children. Although school refusal can occur at any age, it is more common in children aged five, six, ten and eleven. School refusal can often be accompanied by psychiatric disorders such as anxiety and depression. School refusal is also associated with panic disorder, oppositional defiant disorder, social phobia, and separation anxiety. In adolescence, it is associated with anxiety and mood disorders. Cognitive behavioral therapy is frequently used in the treatment of school refusal disorder. The cognitive-behavioral approach aims to identify and change the dysfunctional thoughts that cause school refusal in a child or young person, and to activate the child to continue school. Within the scope of cognitive behavioral therapy, intervention methods such as cognitive therapy, relaxation exercises, exposure and social skills training are frequently used.

**Keywords:** *School refusal, School adjustment problem, Cognitive behavioral therapy*

## ÖĞRETMEN ADAYLARININ BAŞARI AMAÇ YÖNELİMLERİNİN İNCELENMESİ

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### ÖZET

Başarı amaç yönelimleri bireyin sadece başarılı olmak için sorumluluklarını yerine getirmesini içermemektedir. Burada başarılı olmada var olan kıstaslar ele alınmaktadır. Başarı amaç yönelimleri öğrenme ve performans yönelimi olarak iki alt boyutta ele alınmaktadır. Öğrenme yönelimi alt boyutu bireyin öğrenme ile ilgili olarak başarılı olma konusunda gereken çabayı göstermedeki yaklaşma ve kaçınma durumlarını içermektedir. Bireyin bilgiyi içselleştirmesi, bilginin hâkimiyetini elde etmesine yöneliktir. Performans alt boyutu ise bireyin başarı konusunda sergileyeceği davranışlarını kapsamakta ve yine bu davranışlara yaklaşma ve kaçınma durumlarını içinde barındırmaktadır. Bu alt boyutta bireyin davranışlarını kontrol etmesi, amacı doğrultusunda gerekenleri yapması ele alınmaktadır. Bu çalışmada öğretmen adaylarının başarı amaç yönelimlerinin deseni kullanılmıştır. Araştırmanın örneklem grubunu 2022-2023 akademik yılı güz döneminde İç Anadolu Bölgesinde yer alan bir üniversitenin Eğitim Fakültesinde öğrenimlerini sürdüren 322 kadın, 104 erkek olmak üzere toplamda 426 öğrenci oluşturmaktadır. Araştırmada veri toplama aracı olarak Elliot ve Murayama (2008) tarafından geliştirilen, Türkçeye uyarlaması Arslan ve Akın (2015) tarafından yapılan 12 maddelik “Başarı Amaç Yönelimleri Ölçeği” kullanılmıştır. Söz konusu ölçek Öğrenme-Yaklaşma Yönelimi (ÖYY), Öğrenme-Kaçınma Yönelimi (ÖKY), Performans-Yaklaşma Yönelimi (PYY) ve Performans-Kaçınma Yönelimi (PKY) şeklinde adlandırılan dört alt boyuttan oluşmaktadır. Bu çalışmada, iç tutarlılığa dayalı güvenilirlik katsayısı ÖYY için 0.861 olarak, ÖKY için 0.769 olarak, PYY için 0.891 olarak, PKY için ise 0.8181 olarak hesaplanmıştır. Verilerin analizinde istatistiksel yöntem olarak frekans ve yüzde analizi, aritmetik ortalama, standart sapma, bağımsız örneklem t testi ve varyans analizi yöntemleri kullanılmıştır. Yapılan analizler sonucunda, araştırmaya katılan öğretmen adaylarının genel başarı amaç yönelimi ortalama puanlarının ve alt boyut ortalamalarının tamamının yüksek düzeyde olduğu gözlenmiştir. Aynı zamanda, araştırmaya katılan öğretmen adaylarının başarı amaç yönelimi ortalama puanlarının katılımcıların cinsiyetine, sınıf düzeyine, aylık gelir düzeyine, anne eğitim düzeyine ve baba eğitim düzeyine göre istatistiksel olarak anlamlı bir farklılık göstermediği sonucuna varılmıştır.

**Anahtar Kelimeler:** *Öğretmen adayı, Başarı yönelimi, Üniversite*

## INVESTIGATION OF TEACHER CANDIDATES' SUCCESS GOAL ORIGINS

### ABSTRACT

Achievement goal orientations do not only include fulfilling the responsibilities of the individual to be successful. Here, the criteria for success are discussed. Achievement goal orientations are discussed in two sub-dimensions as learning and performance orientation. The learning orientation sub-dimension includes the approach and avoidance of the individual in making the necessary effort to be successful in learning. The individual's internalization of knowledge is aimed at obtaining dominance of knowledge. The performance sub-dimension covers the behaviors that the individual will exhibit about success and also includes the situations of approaching and avoiding these behaviors. In this sub-dimension, controlling the behavior of the individual and doing what is necessary in line with his purpose are discussed. In this study, the pattern of success-goal orientations of teacher candidates was used. The sample group of the research consists of a total of 426 students, 322 women and 104 men, who continue their education in the Faculty of Education of a university located in the Central Anatolia Region in the fall semester of the 2022-2023 academic year. The

12-item “Achievement Goal Orientations Scale” developed by Elliot and Murayama (2008) and adapted into Turkish by Arslan and Akin (2015) was used as a data collection tool in the study. The scale in question consists of four sub-dimensions, namely Learning-Approach Orientation (LMS), Learning-Avoidance Orientation (SBM), Performance-Approach Orientation (PYY), and Performance-Avoidance Orientation (PKY). In this study, the reliability coefficient based on internal consistency was calculated as 0.861 for TBM, 0.769 for OKY, 0.891 for PYY, and 0.8181 for PKY. Frequency and percentage analysis, arithmetic mean, standard deviation, independent sample t-test and analysis of variance methods were used as statistical methods in the analysis of the data. As a result of the analyzes made, it was observed that the general achievement-goal orientation average scores and sub-dimension averages of the teacher candidates participating in the research were all at high levels. At the same time, it was concluded that the achievement goal orientation average scores of the teacher candidates participating in the research did not show a statistically significant difference according to the gender, class level, monthly income level, mother's education level and father's education level.

**Keywords:** Teacher candidate, Achievement orientation, University

## ÖĞRETMEN ADAYLARININ ÖZ-DÜZENLEMELİ ÖĞRENME UYGULAMALARI ÖĞRETMEN ÖZ-YETERLİKLERİNİN İNCELENMESİ

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### ÖZET

Öz-düzenleme, öz-düzenlemeli öğrenme kavramları üst düzey becerilerinin gelişmesiyle birlikte 1980'lerde ortaya çıkan bir kavramdır. Öz-düzenlemeli öğrenme, akademik öğrenme kapsamında yer almaktadır. Öz-düzenlemeli öğrenme bilişsel bir yetenek veya akademik performans olmayıp öğrencilerin zihinsel yeteneklerini akademik becerilere dönüştürmelerinde kendi performanslarını yönetmeleri olarak tanımlanmaktadır. Ayrıca öğrencilerin öğrenme sürecini diğer kişilere ya da çevresine bağımlı olmadan kontrol altına alma yeteneği olarak da ifade edilmektedir. Öz-düzenlemeli öğrenme, akademik başarı ve bilişüstü becerileri olumlu etkilemektedir. Öğrencilerin öz-düzenlemeli öğrenmeleri üzerinde öğretmenlerin sergiledikleri davranışların olumlu etkisinin olduğu belirtilmektedir. Burada öğrencilerin öz-yeterliklerinin geliştiği ifade edilmektedir. Bu bağlamda öz-düzenlemeli öğrenme uygulamaları öğretmen öz-yeterlikleri şeklinde yeni bir kavram ortaya çıktığı görülmektedir. Bu çalışmada öğretmen adaylarının öz-düzenlemeli öğrenme uygulamalarına ilişkin öz-yeterliklerinin belirlenmesi amaçlanmıştır. Araştırmada tarama modelleri içinde yer alan betimsel araştırma deseni kullanılmıştır. Araştırmanın örneklem grubunu 2022-2023 akademik yılı güz döneminde İç Anadolu Bölgesinde yer alan bir üniversitenin Eğitim Fakültesinde öğrenimlerini sürdüren 329 kadın, 106 erkek olmak üzere toplamda 435 öğrenci oluşturmaktadır. Araştırma verileri Kurt ve Özpolat'ın (2021) geliştirdiği "Öz-Düzenlemeli Öğrenme Uygulamaları Öğretmen Öz-Yeterlik Ölçeği" kullanılarak elde edilmiştir. 22 maddeden oluşan ölçeğin iç tutarlığı orijinal çalışmada 0.962 olarak, bu çalışmada ise 0.946 olarak hesaplanmıştır. Verilerin istatistiksel analizinde frekans analizi, aritmetik ortalama, standart sapma, çarpıklık ve basıklık gibi betimleyici istatistiklerle birlikte bağımsız gruplar t testi ve tek yönlü varyans analizi yöntemleri kullanılmıştır. Analizler sonucunda, araştırmaya katılan öğretmen adaylarının öz-düzenlemeli öğrenme uygulamaları öğretmen öz-yeterlikleri düzeylerinin yüksek olduğu belirlenmiştir. Ayrıca katılımcıların öz-düzenlemeli öğrenme uygulamaları öğretmen öz-yeterlikleri ortalama puanlarının cinsiyet, öğrenim görülen sınıf düzeyi, anne eğitim düzeyi ve baba eğitim düzeyi değişkenlerine göre anlamlı bir farklılık göstermediği, ailenin aylık geliri değişkenine göre ise anlamlı bir farklılık gösterdiği tespit edilmiştir.

**Anahtar Kelimeler:** *Öğretmen adayı, Öz-düzenleme, Öz-yeterlik*

## INVESTIGATION OF TEACHER SELF-EFFICIENCY OF TEACHERS' SELF-REGULATED LEARNING PRACTICES

### ABSTRACT

Self-regulation and self-regulated learning concepts emerged in the 1980s with the development of high-level skills. Self-regulated learning is included in academic learning. Self-regulated learning is not a cognitive ability or academic performance, but is defined as the way students manage their own performance in transforming their mental abilities into academic skills. It is also expressed as the ability of students to control the learning process without being dependent on other people or their environment. Self-regulated learning positively affects academic achievement and metacognitive skills. It is stated that the behaviors exhibited by the teachers have a positive effect on the self-regulated learning of the students. Here, it is stated that students' self-efficacy develops. In this context, it is seen that a new concept in the form of self-regulated learning practices and teacher self-efficacy has emerged. In this study, it was aimed to determine

the self-efficacy of teacher candidates regarding self-regulated learning practices. The descriptive research design, which is included in the survey models, was used in the research. The sample group of the research consists of a total of 435 students, 329 females and 106 males, who continue their education in the Faculty of Education of a university located in the Central Anatolia Region in the fall semester of the 2022-2023 academic year. The research data were obtained by using the "Self-Regulated Learning Practices Teacher Self-Efficacy Scale" developed by Kurt and Özpölat (2021). The internal consistency of the 22-item scale was calculated as 0.962 in the original study and as 0.946 in this study. In the statistical analysis of the data, descriptive statistics such as frequency analysis, arithmetic mean, standard deviation, skewness and kurtosis, as well as independent groups t-test and one-way analysis of variance methods were used. As a result of the analyzes, it was determined that the teacher candidates participating in the research had high levels of self-regulated learning practices teacher self-efficacy. In addition, it was determined that the participants' self-regulated learning practices teacher self-efficacy average scores did not show a significant difference according to the variables of gender, grade level, mother's education level and father's education level, but showed a significant difference according to the monthly income of the family.

**Keywords:** *Teacher candidate, Self-regulation, Self-efficacy*



## GEBELİKTE DEMİR EKSİKLİĞİ ANEMİSİ VE OKSİDATİF STRES İLİŞKİSİ

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### ÖZET

Gebelikte görülen komplikasyonlardan biri de demir eksikliği anemisidir. Gebelik döneminde sıklıkla görülen demir eksikliği anemisi genellikle diyet alım yetersizliğine bağlıdır ve doğum öncesi demir ve folat eksikliğine bağlı megaloblastik anemi görülür. Kansızlığın şiddeti anne ve fetus üzerine olumsuz etkiler oluşturabilir. Demir eksikliği anemisi olan gebe kadınlarda azalmış zihinsel ve fiziksel performans ve yorgunluk görülmektedir. Daha şiddetli anemilerde zayıf yara iyileşmesi, zayıf maternal tiroid durumu, preeklampsi, plasental aşınma, perinatal kanama, transfüzyon, sezaryen riskinde artış, kardiyak yan etkiler ve hatta ölüm riski artışı ortaya çıkabilir. Ayrıca yeni doğanlarda, fetus durumunda veya düşük doğum ağırlığı gibi olumsuz etkiler demir eksikliği anemisi ile ilişkili olabilmektedir. Yapılan çalışmalar demir eksikliği anemisi olan hastaların genelinde oksidatif stres artışını bildirilmektedir. Metabolizmada antioksidanların azalması ve oksidanların artışı oksidatif hasarın göstergesi olarak iki sistem arasındaki dengenin bozulması ile açıklanmaktadır. Bu denge gebelik süresince oksidatif stres parametrelerinin ölçülmesi ile demir eksikliği anemisi patogenezinin araştırılması arasındaki ilişkinin aydınlatılması konusunda ipuçları sağlayabilir. İlk, ikinci ve üçüncü trimester gebeliklerde demir eksikliği anemisi olan ve olmayan kadınların serum oksidan/antioksidan düzeylerinin dinamik tiyol/disülfid dengesi gibi ölçümlerle birlikte demir eksikliği anemisinin mekanizmasını aydınlatmak için ön çalışmalar yapmak gereklidir. Antioksidan sistem, serbest radikaller ve oksidatif stres arasındaki dengenin bozulması hücre ve dokularda ortaya çıkan çeşitli hastalıklara neden olur. Gebelikte anemi şiddeti ile sistemik etkilerin arttığı düşünüldüğünde oksidatif stres ilişkisinin aydınlatılması homojen hasta grupları ile anemi şiddeti dikkate alındığında oksidatif stres biyobelirteçlerinin farklı bulunması olası görülmektedir.

**Anahtar Kelimeler:** Demir Eksikliği Anemisi, Gebelik, Oksidatif Stres

### THE RELATIONSHIP OF IRON DEFICIENCY ANEMIA AND OXIDATIVE STRESS IN PREGNANCY

### ABSTRACT

One of the complications seen in pregnancy is iron deficiency anemia. Iron deficiency anemia, which is frequently seen during pregnancy, is usually due to inadequate dietary intake, and megaloblastic anemia due to prenatal iron and folate deficiency is observed. The severity of anemia can have negative effects on the mother and fetus. Pregnant women with iron deficiency anemia have decreased mental and physical performance and fatigue. In more severe anemia, poor wound healing, poor maternal thyroid status, preeclampsia, placental abruption, perinatal bleeding, transfusion, increased risk of cesarean section, cardiac side effects, and even increased risk of death may occur. In addition, adverse effects such as newborns, fetal status or low birth weight may be associated with iron deficiency anemia. Studies have reported an increase in oxidative stress in patients with iron deficiency anemia. The decrease in antioxidants and increase in oxidants in metabolism are explained by the deterioration of the balance between the two systems as an indicator of oxidative damage. This balance may provide clues about the relationship between measuring oxidative stress parameters during pregnancy and investigating the pathogenesis of iron deficiency anemia. It is necessary to carry out preliminary studies to elucidate the mechanism of iron deficiency anemia, together with measurements such as dynamic thiol/disulfide balance of serum oxidant/antioxidant levels in women with and without iron deficiency anemia in first, second and third trimester pregnancies. Disruption of the balance between the antioxidant system, free radicals and oxidative stress causes various diseases that occur in cells and tissues. Considering that the severity of anemia and systemic effects increase in pregnancy, it is

possible to clarify the relationship between oxidative stress and to find different oxidative stress biomarkers when homogeneous patient groups and anemia severity are taken into account.

**Keywords:** Iron Deficiency Anemia, Pregnancy, Oxidative Stress

## PSİKİYATRİK BOZUKLUKLAR VE MİKROBİYOTA

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### ÖZET

Bağırsak mikrobiyotası ile anksiyete, depresyon, otizm, şizofreni gibi neuropsikiyatrik bozukluklar arasında güçlü bağlantılar vardır. Genel olarak beyin-bağırsak-enterik mikrobiyota eksenini merkezi sinir sistemini, nöroendokrin ve nöroimmün sistemleri, otonomik sinir sisteminin sempatik ve parasempatik kollarını, enterik sinir sistemini, hipotalamo-hipofizeradrenal eksenini ve intestinal mikrobiyotayı kapsamaktadır. İletişim, salınan nöropeptidler, nörohormonlar, nörotransmitterler, kemokinler, sitokinler büyüme faktörleri ve diğer düzenleyici moleküller tarafından yürütülür. Bağırsak mikrobiyotası ve bakterilerin insan sağlığı üzerine etkilerinin gelecekte nörobilimde ilgi odağı olacağı düşünülmektedir. Bağırsak epitel ve bağışıklık sistemi hücreleri ile bağırsaklarda yaşayan mikroorganizmalar iletişim kurarlar. Bu iletişim ile birlikte otoimmün hastalıklar, nöropsikiyatrik ve metabolik bir çok hastalığın seyrinde beslenme şekilleri ve bağırsak mikroorganizmalarının varlığının etkili olduğu düşünülmektedir. Yapılan çalışmalar hayvan deneyleri ve klinik çalışmalarda beyin ile bağırsak arasında güçlü bir bağlantıya işaret etmektedir. Dolayısıyla bağırsak mikrobiyotasının psikiyatrik hastalıkların tedavi süreçlerine olası katkıları günümüzde araştırma konusu olmuştur. Bağırsak mikrobiyotası davranışsal beyin fonksiyonları ve diyetle ilgili gelişen metabolik bozukluklar gibi değişiklikler ile ilişkili olabilir. Besinsel destek veya müdahaleler psikiyatrik rahatsızlıkların tedavisinde beyin-bağırsak koordinasyon bozukluğunu gidermeye yardımcı olabileceği fikri giderek artmıştır. Modern dünyada, beyin-bağırsak-enterik mikrobiyota ekseninin nöropsikiyatrik bozuklukların tam olarak anlaşılması ve tedavi edilmesini kolaylaştıracak bir mekanizma olması beklenmektedir. Bu hedefler doğrultusunda besin destekli beyin-bağırsak-enterik mikrobiyota ekseninin sağlığı ve korunması psikiyatrik hastalıklarda tedaviye destek sağlayabilecek alternatif tedavi protokolleri olabilir.

**Anahtar Kelimeler:** Beyin İşlevleri, Mikrobiyota, Psikiyatrik Hastalıklar

## PSYCHIATRIC DISORDERS AND MICROBIOTA

### ABSTRACT

There are strong links between the gut microbiota and neuropsychiatric disorders such as anxiety, depression, autism, and schizophrenia. In general, the brain-gut-enteric microbiota axis includes the central nervous system, neuroendocrine and neuroimmune systems, sympathetic and parasympathetic branches of the autonomic nervous system, enteric nervous system, hypothalamo-pituitary-adrenal axis and intestinal microbiota. Communication is driven by released neuropeptides, neurohormones, neurotransmitters, chemokines, cytokines, growth factors, and other regulatory molecules. It is thought that the effects of gut microbiota and bacteria on human health will be the focus of interest in neuroscience in the future. Microorganisms living in the intestines communicate with intestinal epithelial and immune system cells. Along with this communication, it is thought that nutritional patterns and the presence of intestinal microorganisms are effective in the course of many autoimmune diseases, neuropsychiatric and metabolic diseases. Studies indicate a strong connection between the brain and the gut in animal experiments and clinical studies. Therefore, the possible contributions of the gut microbiota to the treatment processes of psychiatric diseases have been the subject of research today. Intestinal microbiota may be associated with changes in behavioral brain functions and diet-induced metabolic disorders. The idea that nutritional support or interventions can help relieve brain-intestinal coordination disorder in the treatment of psychiatric disorders has been increasing. In the modern world, the brain-gut-enteric microbiota axis is expected to be a mechanism that will facilitate the full understanding and treatment of neuropsychiatric disorders. In line with

these goals, the health and protection of the nutrient-supported brain-gut-enteric microbiota axis may be alternative treatment protocols that can support treatment in psychiatric diseases.

**Keywords:** Brain Functions, Microbiota, Psychiatric Diseases

**KURKUMİNOİDLERİN ANTI-ALZHEİMER ETKİLERİNİN *in silico* ARAŞTIRILMASI****Füreyra Elif Öztürkkan<sup>1\*</sup>, Giray Buğra Akbaba<sup>2</sup>**<sup>1</sup>*Kafkas Üniversitesi, Kimya Mühendisliği Bölümü, Kars, 36100, Türkiye., ORCID: 0000-0001-6376-4161*<sup>2</sup>*Kafkas Üniversitesi, Biyomühendislik Bölümü, Kars, 36100, Türkiye., ORCID: 0000-0002-1413-9498***ÖZET**

*Curcuma longa* Linn.'in kurutulmuş öğütülmüş köksapı olan kurkumin, Türkçe'de zerdeçal, Hintçe'de Haldi, İngilizce'de zerdeçal ve Japonca'da ukon olarak bilinmektedir. Asya tıbbında yaygın olarak kullanılan bu bitkinin birçok biyolojik aktif özelliği bilinmektedir. Ticari olarak bilinen kurkumin, %77 kurkumin % 17 demetoksikurkumin ve % 3 bis-demetoksikurkumin içermektedir. Yapılan birçok çalışmada zerdeçalın Alzheimer hastalığına karşı koruyucu olduğu rapor edilmiştir. Bu amaçla bu çalışmada, kurkumin, demetoksikurkumin ve bis-demetoksikurkumin'in önemli Alzheimer hedefleri olan asetilkolinesteraz enzimi, apolipoprotein E4, amiloid beta peptid, histon asetilasyon bromodomain proteini, tau proteini ve butirilkinesteraz enzimi üzerindeki etkileri Moleküler Docking çalışmaları yardımıyla incelenmiştir. Elde edilen sonuçlara göre, kurkuminoidler, asetilkolinesteraz enzimi ile sırasıyla -9,9 kcal/mol, -9,8 kcal/mol ve -9,7 kcal/mol gibi yüksek bağlanma enerjisine sahiptir. Ayrıca kurkumin, demetoksikurkumin ve bis-demetoksikurkumin butirilkinesteraz enzimi ile arasındaki bağlanma enerjisi de yüksek değerlere sahiptir (sırasıyla -9,2 kcal/mol, -8,9 kcal/mol ve -8,8 kcal/mol). Bu üç bileşiğin, diğer hedefler ile bağlanma enerjisi -3,3 kcal/mol ila -6,1 kcal/mol aralığında değişkenlik göstermektedir. Kurkuminoidler hedef proteinlerin aktif bölgelerinde yer alan amino asitler ile hidrojen bağı, karbon hidrojen bağı,  $\pi$ -donor hidrojen bağı,  $\pi$ - $\pi$  istiflenmesi,  $\pi$ - $\pi$  T-şekilli etkileşimleri,  $\pi$ - alkil,  $\pi$ - anyon,  $\pi$ - katyon,  $\pi$ - sigma, amid- $\pi$  ve alkil etkileşimleri vasıtasıyla bağlanmaktadır. Kurkumin, demetoksikurkumin ve bis-demetoksikurkumin'in hedef proteinler ile hidrojen bağı, elektrostatik etkileşimler ve hidrofobik etkileşimler yoluyla etkileşime girdiği belirlenmiştir. Moleküler yerleştirme sonuçları, kurkuminoidlerin asetilkolinesteraz enzimi, apolipoprotein E4, amiloid beta peptid, histon asetilasyon bromodomain proteini, tau proteini ve butirilkinesteraz enzimine karşı inhibitör aktivite gösterebileceğini ve Alzheimer hastalığına karşı potansiyel ilaç olarak değerlendirilebileceğini göstermektedir.

**Anahtar kelimeler:** Kurkumin, demetoksikurkumin ve bis-demetoksikurkumin, Alzheimer Hastalığı, Moleküler Docking.

**IN SILICO INVESTIGATION OF THE ANTI-ALZHEIMER EFFECTS OF CURCUMINOIDS****ABSTRACT**

Curcumin, also known as kurkumin in Turkish, haldi in Hindi, turmeric in English, and ukon in Japanese, is the dried powdered rhizome of *Curcuma longa* Linn. There are several biologically active qualities of this plant, which is widely employed in Asian medicine. Commercially known curcumin contains 77% curcumin, 17% demetoxycurcumin and 3% bis-demethoxycurcumin. Many studies have demonstrated that turmeric can help prevent Alzheimer's disease. For this purpose, in this study, the effects of curcumin, demetoxycurcumin and bis-demethoxycurcumin compounds on acetylcholinesterase enzyme, apolipoprotein E4, amyloid beta peptide, histone acetylation bromodomain protein, tau protein and butyrylcholinesterase enzyme, which are important Alzheimer's targets, were investigated with the help of Molecular Docking studies. According to the results obtained, the binding energies between curcuminoids and acetylcholinesterase enzyme are -9.9 kcal/mol, -9.8 kcal/mol and -9.7 kcal/mol, respectively. In addition, the binding energies of curcumin, demetoxycurcumin and bis-demethoxycurcumin with the butyrylcholinesterase enzyme have high values (-9.2 kcal/mol, -8.9 kcal/mol and -8.8 kcal/mol, respectively). The binding energy of these three compounds with other targets varies in the range of -3.3 kcal/mol to -6.1 kcal/mol. Curcuminoids interact with amino acids in the active sites of target proteins via hydrogen bonds, carbon hydrogen bonds,  $\pi$ -donor hydrogen bonds,  $\pi$ - $\pi$  stacking,  $\pi$ - $\pi$  T-shaped interactions,  $\pi$ -alkyl,  $\pi$ -anion,  $\pi$ -cation,  $\pi$ - sigma bonds via amide- $\pi$  and

alkyl interactions. That is, it was determined that Curcumin, demethoxycurcumin and bis-demethoxycurcumin interact with target proteins through hydrogen bonding, electrostatic interactions and hydrophobic interactions. Molecular docking results show that curcuminoids can show inhibitory activity against acetylcholinesterase enzyme, apolipoprotein E4, amyloid beta peptide, histone acetylation bromodomain protein, Tau protein and butyrylcholinesterase enzyme and can be evaluated as a potential drug against Alzheimer's disease.

**Keywords:** Curcumin, demethoxycurcumin and bis-demethoxycurcumin, Alzheimer's Disease, Molecular Docking.

## NAFİLE BAKIM VE HEMŞİRELİK

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### ÖZET

Nafile bakım; hastanın iyileşmesine katkı sağlamaz, yaşam kalitesini arttırmaz fakat sahip olduğu hastalığın meydana getirmiş olduğu ağrı ve ıstırabı dindirmek için uygulanan semptomatik tedavileri içermektedir. Nafile bakım; hastalığın getirmiş olduğu ağrı ve ıstırabı dindirirken, yapılan her invaziv girişimle de lokal olarak acı duymaktadır. Yapılan bu invaziv girişimler vücudunda morluklara, sertliklere neden olmakta ve hastanın beden imajında bozulmalara sebebiyet vermektedir. Bununla beraber tedaviden olumlu yanıt alamamak hastanın umudunu tüketmekte ve yaşam kalitesini olumsuz yönde etkilemektedir. Hasta yakınları ise; uygulama süresince, her yapılan girişimde, iyileşme umutları beslemekte, olumsuz sonuçlanan her tedavi ile hüsrana yaşamaktadırlar. Umutla beklenen bu süreç genellikle hastanın ölümü ile sonuçlanmaktadır. Bu durum hasta ve ailesinin sağlık çalışanlarına, tıbbi olan güven ve inançlarını olumsuz yönde etkilemektedir. Sağlık çalışanları bir bakım ya da uygulama yaptığında olumlu sonuçlanmasını beklemektedirler. Sağlık çalışanlarının yapmış oldukları tedavilerin ya da uygulamaların hastada istenen ve beklenen olumlu sonucu vermemesi, sağlık çalışanlarının da hayal kırıklığı, umutsuzluk ve tükenmişlik duygusu yaşamalarına neden olmaktadır. Bununla beraber, sağlık çalışanlarının nafile tedaviyi uygulamalarında birçok farklı etken olduğu yapılan çalışmalarda görülmektedir. Bu etkenler sıklıkla; ölümle ilgili deneyimler, rahatsızlıklar, yasal sorun yaşama endişesi, inanç, kültür, ahlaki değerler, duygusal durumlar, hasta ve ailesinin kişisel değer ve yargıları, hastanın klinik durumu, sağlık ekibi üyelerinin kişisel değer ve inançları, iletişim sorunları olarak görülmektedir. Aynı zamanda tüm bu durumlar sağlık çalışanlarının nafile bakım uygulamalarını da etkilemektedir. Bununla beraber nafile bakım, sadece hemşireler ve hekimlerin kararıymış gibi görünse de aslında ailenin de konu ile ilgili tutumları göz önünde bulundurulmalıdır. Hasta ve ailesinin acı ve ıstırabını hafifletmek, duygusal yıkımları ve hezeyanları engellemek amacıyla da bazen hekimler ve hemşireler nafile tedavi uygulamak durumunda kalabilmektedirler.

**Anahtar Kelimeler:** Bakım, Hemşirelik, Nafile Bakım

## FUTILE CARE AND NURSING

### ABSTRACT

Futile care; It does not contribute to the recovery of the patient, does not increase the quality of life, but includes symptomatic treatments applied to relieve the pain and suffering caused by the disease he has. Futile care; while it relieves the pain and suffering caused by the disease, it also suffers locally with every invasive intervention. These invasive procedures cause bruises and stiffness in the body and cause deterioration in the patient's body image. However, not getting a positive response from the treatment exhausts the patient's hope and negatively affects the quality of life. Relatives of the patients; during the application, they hope for recovery in every attempt made, and they experience frustration with every treatment that results in a negative result. This process, which is expected with hope, usually results in the death of the patient. This situation negatively affects the trust and belief of the patient and his family in healthcare professionals and medicine. Health workers expect a positive result when they perform a care or application. The fact that the treatments or practices performed by the healthcare professionals do not give the desired and expected positive result in the patient causes the healthcare professionals to experience feelings of disappointment, hopelessness and burnout. However, it is seen in the studies that there are many different factors in the use of futile treatment by healthcare professionals. These factors are often; Experiences related to death, discomfort, fear of legal problems, belief, culture, moral values, emotional states, personal values and judgments of the patient and his family, clinical status of the patient, personal values and beliefs of healthcare team members, communication problems. At the same time, all these situations affect the futile

care practices of health workers. However, although futile care seems to be the decision of only nurses and physicians, the attitudes of the family on the subject should also be taken into consideration. Sometimes doctors and nurses have to apply futile treatment in order to alleviate the pain and suffering of the patient and his family, and to prevent emotional destruction and delusions.

**Keywords:** *Care, Nursing, Futile Care*



## GENÇLERDE PSİKOLOJİK İYİLİK HALİNİN, ÖZ YETERLİLİK VE GENEL SAĞLIK DURUMU ALGISIYLA İLİŞKİSİNİN İNCELENMESİ

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### ÖZET

Psikolojik iyilik hali, bireyin hayatındaki olumlu duyguları, deneyimleri ve işlevleri tanımlar. Aynı zamanda öz saygısının yüksek olması ve yaşamın zorluklarına karşı başa çıkabilme kapasitesinin gelişmiş olma durumunu da içine alır. Öz yeterlilik ise, bir bireyin kendine güvenme, kendi becerilerine güven duyma ve hedeflerine ulaşma kapasitesidir. Öz yeterliliği yüksek olan insanların, başarılarını ve başarısızlıklarını daha doğru bir şekilde değerlendirdikleri bilinmektedir. Bu durumun psikolojik iyilik haline olumlu etkileri olduğu düşünülmektedir. **Amaç:** Çalışmamızda gençlerde psikolojik iyilik halinin, öz yeterlilik ve genel sağlık durumu algısıyla ilişkisini incelenmek amaçlanmıştır. **Yöntem:** Çalışmaya 18-25 yaş arası 54 birey dahil edildi. Katılımcıların demografik verileri kaydedildi ve katılımcılara WHO (Beş) İyilik Durumu İndeksi ve Genel Özyeterlilik Ölçeği (GÖÖ) uygulandı. Genel sağlık durumunu değerlendirmek için katılımcılara genel sağlık durumlarını 'mükemmel, çok iyi, orta, kötü, zayıf' şeklinde değerlendirmeleri istendi. Çalışmamızın sonuçları SPSS 21.0 ile analiz edilmiştir. **Bulgular:** Katılımcıların WHO İyilik Durumu İndeksi toplam skoru ile GÖÖ skoru ve kişilerin genel sağlık durumu değerlendirmeleri arasında pozitif yönde anlamlı bir ilişki bulundu ( $p<0.05$ ). Bununla birlikte cinsiyete göre iyilik hali ve öz yeterlilik durumlarında gruplar arası anlamlı bir farklılık bulunmadı ( $p>0.05$ ). **Sonuçlar ve Tartışma:** Çalışmamızın sonuçları psikolojik iyilik hali ile öz-yeterlilik ve bireyin genel sağlık algısı arasında bir ilişki olduğunu göstermiştir. Öz-yeterliliği yüksek olan bireylerin psikolojisinin daha iyi olması, bu bireylerin problemlerle başa çıkabilmesini kolaylaştırmaktadır. Sonuçlarımız öz-yeterliliğin ve psikolojik iyilik halinin artması, bireylerin sağlık algısını etkileyebileceği gibi bireylerin zihinsel ve fiziksel sağlıklarını etkileyen birçok faktöre olumlu etki edebileceğini göstermektedir.

**Anahtar Kelimeler:** *psikolojik iyilik durumu, öz yeterlilik, genel sağlık durumu*

### INVESTIGATION OF THE RELATIONSHIP OF PSYCHOLOGICAL WELLNESS IN YOUTH WITH SELF-EFFICIENCY AND PERCEPTION OF GENERAL HEALTH STATUS

#### ABSTRACT

Psychological well-being describes positive emotions, experiences, and functions in an individual's life. It also includes the state of having high self-esteem and a developed capacity to cope with life's challenges. Self-efficacy, on the other hand, is an individual's capacity to be self-confident, confident in their own abilities, and reach their goals. It is known that people with high self-efficacy evaluate their successes and failures more accurately. It is thought that this situation has positive effects on psychological well-being. **Objective:** In our study, it was aimed to examine the relationship of psychological well-being in young people with the perception of self-efficacy and general health status. **Method:** 54 individuals between the ages of 18-25 were included in the study. The demographic data of the participants were recorded and the WHO (Five) Well-Being Index and the General Self-Efficacy (GSE) Scale were applied to the participants. To assess their general health status, the participants were asked to rate their general health status as 'excellent, very good, moderate, poor, poor'. The results of our study were analyzed with SPSS 21.0. **Results:** A positive and significant correlation was found between the WHO (Five) Well-Being Index total score of the participants and the WHO score and the general health status evaluations of the individuals ( $p<0.05$ ). However, there was no significant difference between the groups in terms of well-being and self-

efficacy according to gender ( $p>0.05$ ). **Conclusion and Discussion:** The results of our study showed that there is a relationship between psychological well-being, self-efficacy and the individual's general health perception. The psychology of individuals with high self-efficacy makes it easier for these individuals to cope with problems. Our results show that increasing self-efficacy and psychological well-being can affect individuals' perception of health as well as positively affect many factors that affect individuals' mental and physical health.

**Keywords:** psychological well-being, self-efficacy, general health status

## SAĞLIKLI GENÇ YETİŞKİNLERDE YAŞAM KALİTESİ İLE HASTALIĞA KARŞI SAVUNMASIZLIK İLİŞKİSİNİN İNCELENMESİ

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### ÖZET

Yaşam kalitesi, bir kişinin genel sağlık durumunu, mutluluğunu ve refahını yansıtan bir kavramdır. Bireylerin günlük aktivitelerini yerine getirme, fiziksel ve zihinsel sağlıkları, sosyal ilişkileri ve genel mutluluk düzeyleri gibi faktörlerle ilgilidir. Sağlıklı bir yaşam sürdürmek, hastalıklardan korunmak için önemli bir etkidir. Ancak, sürekli mikroptan kaçınma ve aşırı hijyen alışkanlıkları, bağışıklık sisteminin zayıflamasına neden olabilir ve hastalıklara karşı savunmasız hale gelmesine sebep olabilir. Bu durum ise yaşam kalitelerini olumsuz etkileyebilir. **Amaç:** Çalışmamız sağlıklı genç yetişkinlerde yaşam kalitesi ile hastalığa karşı savunmasızlık arasındaki ilişkiyi incelemek amaçlanmıştır. **Yöntem:** Çalışmaya 18-25 yaş arası 122 sağlıklı birey dahil edilmiştir. Katılımcıların demografik verileri kaydedilmiş ve katılımcılara Hastalığa Karşı Algılanan Savunmasızlık Ölçeği (HKASÖ) ve Nottingham Sağlık Profili (NHP) anketi uygulanmıştır. Çalışmamızın sonuçları SPSS 21.0 ile analiz edilmiştir. **Bulgular:** Katılımcıların HKASÖ toplam skoru ile NSP-uyku arasında anlamlı bir ilişki bulundu. Bunun yanında HKASÖ-mikroptan kaçınma alt bölümü ile NSP-uyku alt maddeleri arasında ve HSKÖ-algılanan bulaşıcılık bölümü ile NSP-uyku, enerji arasında alt maddeleri arasında anlamlı bir ilişki bulundu ( $p<0.05$ ). Fakat HKASÖ toplam skoru ile NSP toplam skoru arasında anlamlı bir ilişki bulunmadı ( $p>0.05$ ). **Sonuçlar ve Tartışma:** Çalışmamızın sonuçları hastalığa karşı savunmasızlık ile uyku ve enerji ilişkili yaşam kaliteleri arasında bir ilişki olduğunu göstermiştir. Stresli bir yaşam tarzı, yetersiz uyku, yetersiz beslenme ve düzenli fiziksel aktivite eksikliği gibi faktörler kişilerin bağışıklık sistemini düşürebildiği gibi hastalığa karşı savunmasız hale helmesine veya savunmasız hissetmesine neden olabilir. Sağlıklı bir yaşam tarzı, egzersiz yapmak, sağlıklı beslenme, stres yönetimi ve yeterli uyku almak hastalıklara karşı direnci arttırırken yaşam kalitesine de olumlu etkileri vardır.

**Anahtar Kelimeler:** hastalığa karşı savunmasızlık, yaşam kalitesi, mikroptan kaçınma

### EXAMINATION OF THE RELATIONSHIP OF QUALITY OF LIFE AND VULNERABILITY TO DISEASE IN HEALTHY YOUNG ADULTS

#### ABSTRACT

Quality of life is a concept that reflects a person's general state of health, happiness and well-being. It is related to factors such as performing daily activities of individuals, their physical and mental health, social relationships and general happiness levels. Maintaining a healthy life is an important factor in preventing diseases. However, constant germ avoidance and excessive hygiene habits can weaken the immune system and make it vulnerable to diseases. This can negatively affect their quality of life. **Objective:** Our study aimed to examine the relationship between quality of life and vulnerability to disease in healthy young adults. **Method:** 122 healthy individuals between the ages of 18-25 were included in the study. The demographic data of the participants were recorded, and the Perceived Vulnerability to Disease (PVD) and Nottingham Health Profile (NHP) questionnaires were administered to the participants. The results of our

study were analyzed with SPSS 21.0. **Results:** A significant correlation was found between the participants' total score on PVD and NHP-sleep. In addition, a significant correlation was found between the HSQ- germ avoidance sub-item and NHP-sleep sub-items, and between the PVD-perceived contagiousness sub-item and NHP-sleep, energy ( $p < 0.05$ ). However, no significant correlation was found between the PVD total score and the NSP total score ( $p > 0.05$ ). **Conclusion and Discussion:** The results of our study showed that there is a relationship between vulnerability to disease and sleep and energy-related quality of life. Factors such as a stressful lifestyle, insufficient sleep, malnutrition, and lack of regular physical activity can lower a person's immune system and make them vulnerable to disease or feel vulnerable. A healthy lifestyle, exercise, healthy diet, stress management and adequate sleep increase resistance to diseases and have positive effects on quality of life.

**Keywords:** vulnerability to disease, quality of life, germ avoidance

## YAŞAM SONU DÖNEMDE KANITA DAYALI HEMŞİRELİK UYGULAMALARI

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### ÖZET

Yaşam sonu bakım; yaşamın son döneminde olan bireyin ve yas sürecindeki ailenin gereksinimlerinin belirlenmesi ve karşılanmasıdır. Daha çok ağrı ve diğer semptomların yönetimi, psikolojik, sosyal ve manevi bakımı içerir. Yaşam sonu bakımın amacı; yaşam sonu dönemde olan bireylere destekleyici bakım vererek onurlu ölümü sağlamak, hastaların kalan hayatlarındaki yaşam kalitesini arttırmak ve hasta ailesine duygusal destek vermektir. Yaşam sonu bakıma yönelik geliştirilen çeşitli rehberler vardır. Geliştirilen tüm rehberlerde ortak amaç aynıdır: yaşamın son anlarındaki birey ve ailelerine en iyi bakımı verebilmektir. Hemşireler, yaşamın son gün ve saatlerinde yaygın olarak görülen belirti ve bulguları genel durum bozukluğu, ilerleyen güçsüzlük, uzun süren uyku hali, besin ve sıvı alımında azalma, idrar çıkışında azalma ve renginde koyulaşma, disfaji, geri dönüşsüz deliryum, farklı etkenlere bağlı olmayan bilinç düzeyinde azalma, hırıltılı solunum/artan solunum yolu sekresyonu, solunum şeklindeki değişiklik (Cheyne-Stokes solunum ve apne süresi takip edilmeli), ekstremitelerde soğuma ve renk değişikliği gibi bulgularla sınırlı olmayan, yaygın olan belirtileri tanıyabilmelidir. Yaşam sonu dönemde bireylere ve ailelerine bazı eğitimler verilmelidir. Verilebilecek bu eğitimlerden bazıları şu şekilde olabilir; normal bir süreç olarak ölü ve ölümün sosyal ve kültürel içeriği, ailenin bakımı, keder ve yas süreci, palyatif bakımın genel ilkeleri, ağrı ve diğer bulguların yönetimi, etik konular, etkili ve şefkatli iletişim, terapötik ilişki kurma ve savunma gibi ilgili mevzuat bilgilerini içermelidir. Yaşam sonu bakım, hem hastaların hem de ailelerinin ihtiyaçlarını içeren holistik bir süreçtir. Bu süreçte hasta ve ailesinin tüm gereksinimleri bütüncül olarak ele alınmalıdır. Bu ihtiyaçların en kısa sürede giderilmesi önemlidir.

**Anahtar Kelimeler:** Bakım, Hemşirelik, Kanita Dayalı Uygulamalar

### EVIDENCE-BASED NURSING PRACTICES IN THE END OF LIFE PERIOD

#### ABSTRACT

End-of-life care; it is the determination and meeting of the needs of the individual in the last period of life and the family in the grieving process. It mostly includes the management of pain and other symptoms, psychological, social and spiritual care. The purpose of end-of-life care; to provide an honorable death by providing supportive care to individuals in the end-of-life period, to increase the quality of life of the patients in their remaining lives, and to provide emotional support to the patient's family. There are several guidelines developed for end-of-life care. The common goal of all guides developed is the same: to provide the best care to individuals and their families in the last moments of life. Nurses reported that the signs and symptoms, which are common in the last days and hours of life, are deterioration of general condition, progressive weakness, prolonged sleepiness, decrease in food and fluid intake, decrease in urine output and darkening in color, dysphagia, irreversible delirium, at a level of consciousness not due to different factors. Recognition of common signs and symptoms such as decreased wheezing/increased airway secretion, change in respiratory pattern (Cheyne-Stokes respiration and apnea duration should be monitored), cooling of extremities and discoloration. In the end-of-life period, some training should be given to individuals and their families. Some of these trainings that can be given may be as follows; The social and cultural content of the dead and death as a normal process, the care of the family, the grief and mourning process, the general principles of palliative care, the management of pain and other symptoms, ethical issues, effective and compassionate communication, therapeutic relationship building and advocacy. End-of-life care is a holistic process that includes the needs of both patients and their families. In this process, all the needs of the patient and his family should be considered holistically. It is important to meet these needs as soon as possible.

**Keywords:** Care, Evidence-Based Practices, Nursing

## THERMO-ELECTRICAL PROPERTIES OF Sb-BASED AlMgSb

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### ABSTRACT

Magnesium-based alloys have been studied significantly due to their low density, recycling characteristics and good damping capacities and have found applications in automotive, biomedical, aerospace and aviation fields. However, the disadvantages such as relatively low strength, poor formability, low corrosion, high temperature oxidation resistance have prevented the widespread application of Mg-based alloys. Due to their low cost and good castability, Al-Mg alloys are commercially used in automotive components, but they limit their moderate operating temperature. However, the creep resistance and strength levels of Mg-Al alloys are still insufficient due to the unstable precipitation of  $\gamma$ -Mg<sub>17</sub>Al<sub>12</sub> distributed at the grain boundary at high temperature. Therefore, most studies have been done to improve weak creep resistances by adding alloying elements such as Ca, Sr, Bi, Sn, Sb, Si or Rare Earths (RE). Particularly, the contribution of Bi, Sn and Sb alloying elements in Mg alloys is of great interest for the formation of high temperature stable phase's  $\alpha$ -Mg<sub>3</sub>Bi<sub>2</sub>, Mg<sub>2</sub>Sn and  $\alpha$ -Mg<sub>3</sub>Sb<sub>2</sub>. In addition, Mg-Al-Sb ternary alloys have attracted attention as new types of materials for thermoelectric applications in recent years.

In this study, Sb-based AlMgSb ternary alloy was produced by casting. Structural features, composition and surface morphology of the sample were analyzed by XRD, EDX and FESEM, respectively. Temperature-dependent electrical conductivity values were obtained with the four-point probe method, and the thermal conductivities of solid phase were obtained with the Wiedeman-Franz Law. The electrical resistivity values between 323 K and 573 K increase with increasing temperature, between  $4.05 \times 10^{-6} \Omega\text{m}$  and  $1.83 \times 10^{-5} \Omega\text{m}$ . The thermal conductivities of solid phase are between 84.46 W/Km and 57.06 W/Km, decreasing with increasing temperature.

**Keywords:** AlMgSb Alloy, Electrical Resistivity, Ternal Conductivity, Wiedeman-Franz Law

## METAL OXIDE ELECTRODES FOR SUPERCAPACITORS

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### ABSTRACT

The high increases demand on chemical energy around the world, due to speedy growth of economy, results in two major problems. The first one is fast depletion or exhaustion of fossil fuel reserves whereas, the second one is associated environmental pollution like general water and air pollution as well as enhancement in greenhouse gas emissions. One of the most difficult challenges of this century is the storage system of energy. Therefore, new eco-friendly as well as cost-efficient energy storage systems should be developed, in order to achieve both requirements of emerging ecological concerns and modern society. High power density, excellent cycle stability, and a fast charge/discharge process make super capacitors a promising energy device. However, the energy density of super capacitors is still less than that of ordinary batteries due to electrochemical performance of super capacitors is largely relying on electrode materials. Therefore, in order to solve this issue of low energy density, one of the most intensive approaches is to develop of new materials for super capacitor electrodes. Most explored materials today are carbon particle materials, which have high surface areas for charge storage. However, in spite of these large specific surface areas, the charges physically stored on the carbon particles in porous electrode layers are still limited.

As result of this, advanced super capacitors using nanostructure metal oxides electrodes are considered the most promising material for the next generation of super capacitors due to their unique physical and chemical properties. In this work, the rational design and fabrication of metal oxide nanostructures for super capacitor applications will be briefly addressed.

**Keywords:** Nanostructure, Metal Oxide, Electrode, Supercapacitor, Energy Storage

## YÜZEY AKTİF MADDELERİ İYON YAPILARININ PÜSKÜRTME SIVISI ÖZELLİKLERİNE ETKİLERİ

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### ÖZET

Tarımsal üretimde bitki sağlığını koruyarak verim artışı sağlamak için pestisit kullanılması yaygındır. İlaçlama etkinliğini arttırmak için püskürtme tekniği, meme çeşidi, formülasyon özellikleri gibi farklı tekniklerden yararlanılmaktadır. Pestisit etkinliğini arttırmak için ayrıca birçok katkı maddesi kullanılmaktadır. Bu katkı maddeleri arasında yüzey aktif maddeler bulunmaktadır. İyon yapıları farklı olan yüzey aktif maddeler, püskürtme sıvısının fiziksel özelliklerini değiştirerek, ilaç uygulama etkinliğini arttırmırlar. Aniyonik ve noniyonik yapılarına sahip yüzey aktif maddeler ile yapılan çalışmada püskürtme sıvısının yüzey gerilimi, püskürtme paterni, damla çapı, köpük oluşumu gibi etkileri incelenmiştir. Tavsiye edilen dozlarda hazırlanan karışımların yüzey gerilim değişimleri olarak, aniyonik yüzey aktif maddeler,  $73,21 \text{ mNm}^{-1}$  yüzey gerilimine sahip suyun değerini  $52,64 \text{ mNm}^{-1}$ 'ye, noniyonik yüzey aktif maddeler  $27,78 \text{ mNm}^{-1}$ 'ye düşürmüştür. Ortalama hacimsel çap  $Dv0.5$  değerleri sırasıyla su için  $157 \mu\text{m}$ , noniyonik yüzey aktif maddeler için  $147,98 \mu\text{m}$ , aniyonik yüzey aktif maddeler için  $143,84 \mu\text{m}$  olarak gerçekleşmiştir. Beklenen sonuçlar açısından noniyonik karakterli yüzey aktif maddelerin anyonik yüzey aktif maddelere göre daha iyi sonuç verdiği söylenebilir.

**Anahtar Kelimeler:** Aniyonik, damla çapı, katkı maddeleri, noniyonik, yüzey gerilim,

### THE EFFECTS OF SURFACTANTS ION STRUCTURE ON SPRAY PROPERTIES

#### ABSTRACT

It is common to use pesticides in agricultural production to maintain plant health and increase yield. Some features such as spraying technique, nozzle type and different formulations are used to increase the effectiveness of spraying. Many adjuvant are also used to increase pesticide effectiveness. Among these additives are surfactants. Surfactants with different ion structures increase the pesticide application efficiency by changing the physical properties of the spray liquid. In the study conducted with surfactants with anionic and nonionic structures, the effects of spray liquid such as surface tension, spray pattern, drop diameter, foam formation were investigated. the surface tension changes of the mixtures prepared at recommended doses, anionic surfactants reduced the value of water with a surface tension of  $73.21 \text{ mNm}^{-1}$  to  $52.64 \text{ mNm}^{-1}$ , and nonionic surfactants to  $27.78 \text{ mNm}^{-1}$ . The mean volumetric diameter  $Dv0.5$  values were respectively  $157 \mu\text{m}$  for water,  $147.98 \mu\text{m}$  for nonionic surfactants and  $143.84 \mu\text{m}$  for anionic surfactants. It can be said that surfactants with nonionic character give better results than anionic surfactants in terms of expected results.

**Keywords:** Anionic, drop diameter, additives, nonionic, surface tension



## 2-(6-METOKSİNAFTALEN-2-İL) PROPİYONİK ASİT BİLEŞİĞİNİN KRİSTAL YAPISI VE DFT ÇALIŞMALARI

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### ÖZET

Floresan makrosiklik ligandların tasarımı, biyolojik sistemlerde ve çevre bilimi araştırmalarında metal katyonların tespiti için büyük önem taşımaktadır. Floresan naftalin bağlı moleküller, makrosiklik ligandların sentezinde sıklıkla kullanılır. Naftalin, birbirine kaynaşmış iki benzen halkasından oluşan bir hidrokarbon molekülüdür. Naftalin molekülü, hem endüstride hem de bilimsel araştırmalarda önemli bir rol oynayan önemli ve büyüleyici bir bileşiktir. Bu çalışmada bir naften türevi olan 2-(6-metoksinaftalen-2-il)propiyonik asit bileşiği incelenmiştir.  $C_{14}H_{14}O_3$  bileşiğinin kristal yapısı, tek kristal X-ışını difraktometri tekniği kullanılarak aydınlatılmıştır. Bir naftalin halkasına bağlı bir propiyonik asitten oluşan bu bileşik, asimetrik birimde bir molekül içermekle birlikte monoklinik uzay grubu  $P2_1$ 'de kristalleşir. Birim hücre parametreleri  $a=7,8992$  (11) Å,  $b=5,8269$  (5) Å,  $c=13,3931$  (19) Å,  $\alpha = \gamma = 90^\circ$ ,  $\beta = 94,023$  (11) $^\circ$  ve  $Z=2$ 'dir. Naftalin halkası düzlemsel olmasına rağmen propiyonik asit grubu naftalin düzlemine  $69.18$  (2) $^\circ$  açı yapacak şekilde büküldüğü için molekül düzlemsel değildir. Moleküller, a eksenine doğrultusunda boyunca bir katman yapısı oluşturan O–H $\cdots$ O hidrojen bağları ile birbirine bağlanır ve ayrıca kristal yapının kararlılığını sağlayan C–H $\cdots$  $\pi$  ve  $\pi\cdots\pi$  etkileşimleri de vardır. Tüm teorik hesaplamalar için 3 parametrelili Becke tipi B3LYP/6-31G (d,p) baz seti ile yoğunluk fonksiyonel teorisi yöntemi, DFT, kullanılmıştır. Bileşiğin kararlılığı hakkında bilgi veren kimyasal sertlik ve yumuşaklık parametreleri HOMO-LUMO enerji değerlerinden elde edilmiştir. Ayrıca moleküler elektrostatik potansiyel haritası, MEP, oluşturularak nükleofilik ve elektrofilik bölgeler belirlenmiştir.

**Anahtar Kelimeler:** Naftalin, Kristal yapı, DFT

### CRYSTAL STRUCTURE AND DFT STUDIES OF 2-(6-METHOXYNAPHTHALEN-2-YL) PROPIONIC ACID

#### ABSTRACT

The design of fluorescent macrocyclic ligands is of great importance for the detection of metal cations in biological systems and environmental science research. Fluorescent naphthalene-bounded molecules are frequently used in the synthesis of macrocyclic ligands. Naphthalene is a hydrocarbon molecule that is composed of two benzene rings that are fused together. The naphthalene molecule is an important and fascinating compound that has played a significant role in both industry and scientific research. In this study, 2-(6-methoxynaphthalen-2-yl)propionic acid compound which is a naphthene derivative was investigated. The crystal structure of the compound,  $C_{14}H_{14}O_3$ , was elucidated using the single-crystal X-ray diffractometry technique. The title compound which consists of a propionic acid linked to a naphthalene ring crystallizes in the monoclinic space group  $P2_1$  with one molecule in the asymmetric unit. The unit cell parameters are  $a=7.8992$  (11) Å,  $b=5.8269$  (5) Å,  $c=13.3931$  (19) Å,  $\alpha = \gamma = 90^\circ$ ,  $\beta = 94.023$  (11) $^\circ$  and  $Z=2$ . Although the naphthalene ring is planar, the molecule is not planar because the propionic acid group is twisted at an angle of  $69.18$  (2) $^\circ$  to the naphthalene plane. The molecules are connected to each other by O–H $\cdots$ O hydrogen bonds forming a layer structure along  $a$ -axis direction and there are also C–H $\cdots$  $\pi$  and  $\pi\cdots\pi$

interactions that provide the stability of the crystal structure. Density functional theory method, DFT, with 3-parameter Becke type B3LYP/6-31G (d,p) basis set was used for all theoretical calculations. Chemical hardness and softness parameters, which information about the stability of the compound, were obtained from HOMO-LUMO energy values. In addition, nucleophilic and electrophilic regions were determined by creating the molecular electrostatic potential map, MEP.

**Keywords:** Naphthalene, Crystal structure, DFT

## 2,2'-DİPİRİDİLAMİN KLORİD DİHİDRATIN KRİSTAL YAPISI VE HİRSHFELD YÜZEY ANALİZİ

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### ÖZET

Piridin, çeşitli endüstrilerdeki çok yönlü uygulamaları nedeniyle son yıllarda önemi artan organik bir bileşiktir. Bileşiğin benzersiz yapısı ve özellikleri, onu çok sayıda organik bileşiğin sentezi, farmasötik ve tarım kimyasallarının sentezi için önemli bir yapı taşı haline getirir. Piridin ve türevlerinin çeşitli endüstrilerde artan önemi, onu modern teknolojinin ilerlemesi için gerekli bir bileşik haline getirmektedir. Bu çalışmada, bir piridin türevi olan 2,2'-dipiridilamin klorür dihidrat, tek kristal X-ışını difraktometri tekniği ile incelenmiştir. Bileşik monoklinik sistemde ve *Cc* uzay grubuna sahip olmakla birlikte şu birim hücre parametreleriyle kristalleşir:  $a = 9,6381 (13) \text{ \AA}$ ,  $b = 15,8782 (15) \text{ \AA}$ ,  $c = 7,9523 (11) \text{ \AA}$ ,  $\alpha = \gamma = 90^\circ$ ,  $\beta = 105,0 (1)^\circ$  ve  $Z=2$ . Başlıktaki bileşiğin asimetric biriminde,  $C_{10}H_9N_3^+ Cl^- \cdot 2H_2O$ , bir organik katyon, bir klorür anyonu ve iki kristalizasyon su molekülü bulunmaktadır. Kristalde  $N-H \cdots O$  ve  $N-H \cdots N$  molekül içi hidrojen bağları vardır ve moleküller birbirlerine  $N-H \cdots Cl$ ,  $O-H \cdots Cl$  ve  $C-H \cdots Cl$  moleküller arası hidrojen bağları ile bağlanmaktadır. Hirshfeld yüzey analizi, malzeme bilimi, kristal mühendisliği ve hesaplamalı kimyada popüler bir teknik haline gelmiştir. Moleküller arası etkileşimleri ve moleküler kristallerdeki paketlenmeyi anlamının yanı sıra malzemelerin özelliklerini tahmin etmek için güçlü bir araç sağlar. Hirshfeld yüzeyinin analizi, supramoleküler yapıyı yöneten moleküller arası etkileşimleri keşfetmek için yapıldı. Bulgular,  $H \cdots H$  (%43) temaslarının en belirgin etkileşimler olduğunu,  $Cl \cdots H$  (%18) ve  $C \cdots H$  (%12) etkileşimlerinin nispeten daha az önemli olduğunu göstermektedir.

**Anahtar Kelimeler:** Piridin, Kristal yapı, Hirshfeld yüzey analizi

### CRYSTAL STRUCTURE AND HIRSHFELD SURFACE ANALYSIS OF 2,2'-DIPYRIDYLAMINE CHLORIDE DIHYDRATE

### ABSTRACT

Pyridine is an organic compound that has gained increasing importance in recent years due to its versatile applications in various industries. The compound's unique structure and properties make it an important building block for the synthesis of numerous organic compounds, pharmaceuticals, and agrochemicals. The increasing importance of pyridine and its derivatives in various industries makes it an essential compound for the advancement of modern technology. In this study, a pyridine derivative, 2,2'-dipyridylamine chloride dihydrate was investigated by the single-crystal X-ray diffractometry technique. The compound crystallizes in the monoclinic space group *Cc* with the unit cell parameters:  $a=9.6381 (13) \text{ \AA}$ ,  $b=15.8782 (15) \text{ \AA}$ ,  $c=7.9523 (11) \text{ \AA}$ ,  $\alpha = \gamma = 90^\circ$ ,  $\beta = 105.0 (1)^\circ$  and  $Z=2$ . The asymmetric unit of the title compound,  $C_{10}H_9N_3^+ Cl^- \cdot 2H_2O$ , contains one organic cation, one chloride anion and two water molecules of crystallization. In the crystal, there are  $N-H \cdots O$  and  $N-H \cdots N$  intramolecular hydrogen bonds and the molecules are linked by  $N-H \cdots Cl$ ,  $O-H \cdots Cl$  and  $C-H \cdots Cl$  intermolecular hydrogen bonds. Hirshfeld surface analysis has become a popular technique in materials science, crystal engineering, and computational chemistry. It provides a powerful tool for understanding the intermolecular interactions and packing in molecular crystals, as well as for predicting the properties of materials. The analysis of the Hirshfeld surface was conducted to explore the

intermolecular interactions that govern the supramolecular structure. The findings suggest that H···H (43%) contacts are the most prominent interactions, while Cl···H (18%) and C···H (12%) interactions are comparatively less significant.

**Keywords:** Pyridine, Crystal structure, Hirshfeld surface analysis

## GERİ DÖNÜŞTÜRÜLMÜŞ POLİ (ETİLEN TEREFALAT)'IN ÖZELLİKLERİNİN GELİŞTİRİLMESİ

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### ÖZET

Poli(etilen tereftalat) (PET) yarı kristalin mühendislik termoplastiklerinden biri olup; tekstil, gıda ambalajı, içecek şişeleri gibi geniş bir uygulama yelpazesinde kullanılmaktadır. Bu ürünlerin yaygın kullanımı, ciddi bir PET atık sorununa yol açmakta ve atık PET' in geri dönüşümüne yönlendirmektedir. Yaygın geri dönüşüm teknikleri kimyasal ve mekaniktir, ancak endüstriyel işleme tekniklerine uygulanabilirliği nedeniyle termoplastikler için mekanik geri dönüşüm daha uygundur. PET' in mekanik geri dönüşümünün zorluğu, PET atıklarını katma değerli ürünlere dönüştürmek olup, PET çoklu eriyik işleme döngüleri sırasında ciddi termo-mekanik bozunmaya maruz kalmaktadır. Bu bozunma reaksiyonları, polimer zincirlerinin kopmasına ve PET' in moleküler ağırlığında düşümlere yol açmaktadır. Bu çalışmada, geri dönüştürülmüş PET' in moleküler ağırlığını tekrar arttırmak ve özelliklerini iyileştirmek için reaktif ekstrüzyon yaklaşımı kullanılmıştır. Geri dönüştürülmüş PET' in termal olarak bozulmuş zincir uç gruplarıyla reaksiyona girmek için çoklu anhidrit reaktif gruplara (Joncryl ADR 3400) (%1 ağırlık) sahip bir zincir uzatıcı kullanılmıştır. Zincir uzatıcının bozulmuş PET zincirlerini etkili bir şekilde yeniden bağladığı ve moleküler ağırlığı arttırdığı gözlemlenmiştir. Reolojik sonuçlar, geri dönüştürülmüş PET' in viskoelastik özelliklerini iyileştirmek için kullanılan zincir düzenleyicinin faydasını göstermiştir. Zincir uzatıcı ayrıca mekanik özellikleri de geliştirerek, zincir uzatılmış geri dönüştürülmüş PET örneklerde daha yüksek çekme modülü ve mukavemeti olarak yansıtmıştır. Ayrıca, bu çalışmada izlenen reaktif ekstrüzyon yaklaşımının, daha fazla ekipman gerektirmeden ve az miktarda zincir uzatıcı kullanarak geri dönüştürülmüş PET' in termal bozunmasını telafi edebildiği ve özelliklerini ekonomik ve pratik bir şekilde iyileştirebildiği sonucuna varılmıştır.

**Anahtar Kelimeler:** *Poli(etilen tereftalat), geri dönüşüm, zincir uzatıcı*

### IMPROVEMENT OF THE PROPERTIES OF RECYCLED POLY (ETHYLENE TEREPHTHALATE)

#### ABSTRACT

Poly(ethylene terephthalate) (PET) is one of the semi-crystalline engineering thermoplastics and has been used in a wide range of applications such as textile, packaging foods, drink bottles. The extensive usage of these products induces a serious PET waste problem and addressed the upcycling of the discarded PET. The well-established recycling techniques are chemical and mechanical, however mechanical recycling can be considered more convenient for thermoplastics due to applicability to industrial processing techniques. The challenge of mechanical recycling of PET is to convert the PET wastes into value-added products since PET exposed severe thermo-mechanical degradation during multiple melt-processing cycles. These degradation reactions lead to scission of polymer chains and impairment of molecular weight of PET. In this study, reactive extrusion approach was used to recover molecular weight and improve the properties of the recycled PET. A chain extender with multiple anhydride reactive groups (Joncryl ADR 3400) (1 wt%) was employed to react with thermally degraded chain end groups of the recycled PET during twin-screw extrusion. It was observed that the chain extender effectively recoupled the degraded PET chains and increase the molecular weight. The rheological results showed benefit of the chain modifier to improve viscoelastic properties of the recycled PET. The chain extender also enhanced the mechanical properties that reflected to higher tensile modulus and strength of chain extended recycled PET samples. It was also concluded the reactive extrusion approach pursued in this study was able to compensate thermal degradation and improve the properties of the

recycled PET in an economical and practical way without requirement of further equipments and use of a small amount of chain extender.

**Keywords:** *Poly(ethylene terephthalate), recycling, chain extender*

## ORGANOKİLLERİN POLİ (LAKTİK ASİT)' İN ÖZELLİKLERİNE ETKİSİ

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### ÖZET

Poli(laktik asit) (PLA); mısır, şeker kamışı ve patates gibi tarım ürünlerinin fermantasyonu ile endüstriyel olarak üretilen biyolojik olarak parçalanabilen bir poliesterdir. Endüstriyel tekniklerden olan ekstrüzyon ve enjeksiyon kalıplama kullanılarak işlenebilmekte, bu da onu petrol bazlı polimerlere önemli bir alternatif yapmaktadır. PLA' nın özelliklerini daha da geliştirmek için nanoparçacıkların kullanılması etkili bir yaklaşımdır. Nanokiller, yüksek yanıl boyutlar sunmaları ve bir nanometre kalınlığa sahip olmaları nedeniyle PLA ile en çok kullanılan nanoparçacıklardandır. Nanokillerin yüksek boy-en oranları, polimer matris ile gelişmiş etkileşime neden olur, bu nedenle matrise daha yüksek gerilimler uygulanabilir ve PLA' nın özelliklerini geliştirir. Kil tipinin belirlenmesi, killerdeki organomodifiye ediciler ile polimer arasındaki etkileşimlerin nanokompozitlerdeki özellik geliştirme derecesini etkilediğinden kritik bir konudur. Bu çalışmada, PLA ve iki ticari nanokil (Cloisite 10A ve Cloisite 30B) ağırlıkça %3 yüklemede çift vidalı bir ekstrüder kullanılarak eriyik harmanlanmıştır. Nanokiller matrisi güçlendirdiğinden her iki organokil türünün de PLA' nın mekanik özelliklerini yüksek çekme modülü göstererek arttırdığı, ancak Cloisite 30B içeren nanokompozitlerin daha yüksek modüle sahip olduğu saptanmıştır. Beklenildiği gibi, nanokompozitlerin kırılma davranışı, saf PLA' ya kıyasla daha düşük kopma uzaması ile gözlenmiştir. Dinamik mekanik analiz sonuçları, Cloisite 30B' nin nanokompozitlerin modülünü iyileştirme etkinliğini destekleyerek, kildeki modifiye edicinin hidroksil gruplarının PLA' nın karboksil gruplarıyla daha yüksek etkileşime sahip olduğu sonucuna varılmıştır.

**Anahtar Kelimeler:** *Poli(laktik asit), nanokiller, nanokompozitler*

### THE INFLUENCE OF ORGANOCLOYS ON THE PROPERTIES OF POLY(LACTIC ACID)

#### ABSTRACT

Poly(lactic acid) (PLA) is a biodegradable polyester which is industrially produced by fermentation of agricultural products such as corn, sugarcane and potato. It can be processed by using industrial techniques extrusion and injection molding which makes it an important alternative to petroleum based polymers. In order to further enhance the properties of PLA, employment of nanoparticles is an effective approach. The nanoclays are the most used nanoparticles with PLA, as they present high lateral dimensions and having one nanometer thickness. The high aspect ratios of the nanoclays result into advanced interaction with the polymer matrix therefore higher stresses may be applied to the matrix and enhances the properties of PLA. The determination of the clay type is a critical issue as the interactions between organomodifiers in the clays and polymer affect the extent of property enhancement in the nanocomposites. In this study, PLA and two commercial nanoclays (Cloisite 10A and Cloisite 30B) at 3 wt% loading were melt-compounded by using a twin-screw extruder. It was found that both types of the organoclays increased the mechanical properties of the PLA with presenting higher tensile modulus as nanoclays reinforced the matrix, however the nanocomposites containing Cloisite 30B had higher modulus. As expected, the brittle behaviour of the nanocomposites was observed from lower elongation at break compared to neat PLA. The dynamical mechanical analysis results supported the efficiency of Cloisite 30B to improve the modulus of the nanocomposites and concluded that hydroxyl groups of modifier in the clay had higher interactions with carboxyl groups of the PLA.

**Keywords:** *Poly(lactic acid), nanoclays, nanocomposites*

## İÇSELLEŞMİŞ PATRİARKA

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### ÖZET

Ataerkil düzen zaman ve mekanın toplumsal örgütlenmesine ve cinsiyetler arası işbölümünde olduğu gibi toplumsal yapılarla kendini göstermekle birlikte aynı zamanda bedenlerde, zihinlerde kazılı bilişsel yapılar arasında kurulan uyum sayesinde son derece doğal kabul edilir. Kişilerin cinsiyetler arası eşitlik konusuyla ilgili olarak bildirdiği tutumuyla toplumdaki uygulama/eylem/davranış açısından önemli bir fark göze çarpmaktadır. Bildirilen tutumlar eşitlik yönündeysen de eylemler bu yöndeki bilgiyi desteklememektedir. Yani kişiler ya olduğu gibi görünmemekte, ya da görüldüğü gibi olmamaktadırlar. Cinsiyetler arasındaki eşitlik sözde desteklendiği halde eylemler bu yönde değildir. Kadınlar, ataerkil sistem içerisinde yalnızca mağdur/kurban olmamış aynı zamanda bu sistemin inşasında önemli birer kurucu olmuşlardır. Ataerkilliği sürdürmede kadınların rolünden bahsetmek için öncelikle bunun salt bir zorlama ya da baskı yoluyla olmadığını düşünmek gerekir. Kadınların ataerkilliğin varlığını devam ettirmesi üzerindeki katkıları çoğu zaman rızayla gerçekleşmektedir. Çocuklar kendilerinden beklenen toplumsal cinsiyet davranışlarını anne ve babalarını taklit ederek ya da gözleyerek öğrendikleri gibi onların bazen açık bazen kapalı mesajları aracılığı ile de öğrenirler. Kadın ve erkek arasında eril bakış açısına göre belirlenen cinsiyet rolleri aile içindeki çocukların da cinsiyetçi rollerle yetişmesine sebep olarak bumerang etkisi göstermektedir.

**Anahtar Kelimeler:** Kadınlar; Patriarka; Toplumsal cinsiyet

## INTERNALIZED PATRIARCHY

### Abstract

While the patriarchal order manifests itself in the social organization of time and space and in social structures such as the division of labor between the sexes, it is also considered extremely natural thanks to the harmony established between the cognitive structures engraved in the bodies and minds. There is a significant difference between the attitudes of people on the issue of equality between the sexes and the practice/action/behavior in the society. Although the reported attitudes are towards equality, the actions do not support the information in this direction. In other words, people either do not appear as they are, or they are not as they seem. Although the equality between the sexes is supposedly supported, the actions are not in this direction. Women were not only victims/victims in the patriarchal system, but also became important founders in the construction of this system. In order to talk about the role of women in maintaining patriarchy, first of all, it is necessary to think that this is not just through coercion or coercion. The contribution of women to the continuation of patriarchy is mostly done by consent. Children learn the gender behaviors expected of them by imitating or observing their parents, as well as through their sometimes explicit and sometimes implicit messages. Gender roles determined according to the masculine point of view between men and women show a boomerang effect by causing children in the family to grow up with sexist roles.

**Keywords:** Women; Patriarchy; Gender



## SERBEST FETAL DNA ANALİZİ VE ETİK SORUNLAR

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### ÖZET

Prenatal tanı testleri invaziv ve non- invaziv olarak iki şekilde yapılmaktadır. İnvaziv testler fetüs ve eklerine doğrudan müdahaleyi içeren; amniyosentez, kordosentez, koryonik villüs örnekleme gibi yöntemleri içermektedir. Non- invaziv testler ise fetal ultrasonografi, fetal ense kalınlığı ve maternal kandan bakılan biyokimyasal testler (ikili serbest -HCG, PAPP-A, üçlü HCG, AFP, uE3 tarama testi) dir. Serbest fetal DNA testi ile 7. gestastonel haftadan itibaren cinsiyet tayini yapılabilmektedir. Testin yaygınlaşması ve uygulama endikasyonları arttıkça yararları yanında beraberinde sorunları da getirmektedir. Özellikle etik problemlerin belirlenmesi, tartışılması ve gerekirse rehberler hazırlayarak serbest fetal DNA testinin uygulamasının optimum sağlıklı halde sunulması gerekmektedir. Maternal dolaşımdaki fetal hücrelerin prenatal tanı rutin olarak kullanılabilmesi için; tüm gebe kadınların kanlarında bulunmaları, erken gebelik haftalarındaki miktarlarının analiz için yeterliliği, bir sonraki gebelikte anne kanındaki varlıklarını devam ettirmemeleri ve maternal hücreler ile ayırmalarını sağlayabilecek spesifik işaretleyicilere (marker) sahip olmaları gibi kriterler sağlanmalıdır. Test, seçilmiş hastalarda uygulandığında oldukça başarılı ve yönlendiricidir. ACOG'un 2012 önerisinde düşük riskli ve çoğul gebeliklerde asla önerilmemesini tavsiye etmesine ve maliyeti yüksek olmasına rağmen Amerika da bazı özel klinikler tarafından, standart ilk adım prenatal taramalar (NT, serum biyokimyasal tahliller) yerine serbest fetal rutin olarak önerilmeye başlanmıştır. Gebenin kişisel nedenlerle bu testi isterken, alınacak sonucun fetüsün sonraki hayatında kısıtlayıcı, olumsuz etkilerinin olabileceğinin bilincinde olması gerekir. Fetüsün yetişkin hayatında bir hastalığının ortaya çıkacağına bilinmesi, daha sonraki dönemde onun eğitim, iş, hatta özel hayatını olumsuz etkileyebileceği gibi, sigorta şirketleri, işveren ve benzeri toplumsal aktörler karşısında da dezavantajlı duruma düşmesine neden olabilecektir.

**Anahtar Kelimeler:** Prenatal tanı; Serbest fetal DNA; Etik.

### CELL- FREE DNA ANALYSIS AND ETHICAL ISSUES

#### ABSTRACT

Prenatal diagnostic tests are performed in two ways as invasive and non-invasive. Invasive tests include direct intervention on the fetus and its appendages; It includes methods such as amniocentesis, cordocentesis, and chorionic villus sampling. Non-invasive tests are fetal ultrasonography, fetal nuchal translucency and biochemical tests from maternal blood (double free -HCG, PAPP-A, triple HCG, AFP, uE3 screening test). With the free fetal DNA test, gender can be determined from the 7th gestational week. As the spread of the test and the indications for its application increase, it brings problems as well as benefits. In particular, it is necessary to identify and discuss ethical problems and, if necessary, prepare guidelines and present the application of free fetal DNA testing in an optimum healthy state. In order for fetal cells in the maternal circulation to be used routinely in prenatal diagnosis; Criteria such as the presence of all pregnant women in their blood, the adequacy of their amount in the early gestational weeks for analysis, their absence in the mother's blood in the next pregnancy, and the fact that they have specific markers that can distinguish them with maternal cells should be provided. The test is highly successful and directive when applied to selected

patients. Although the ACOG recommended that it should never be recommended in low-risk and multiple pregnancies in its 2012 recommendation and its cost is high, some private clinics in the USA have started to offer free fetal routinely instead of standard first-step prenatal screenings (NT, serum biochemical tests). While the pregnant woman requests this test for personal reasons, she should be aware that the result to be obtained may have restrictive and negative effects in the future life of the fetus. Knowing that a disease will occur in the adult life of the fetus may adversely affect his education, work, and even private life in the later period, and may cause him to be disadvantaged in the face of insurance companies, employers and similar social actors.

**Keywords:** Prenatal diagnosis; Cell free DNA; Ethic.

## KRONİK BEL AĞRILI BİREYLERDE AĞRI SEVİYESİ İLE İLİŞKİLİ FAKTÖRLERİN İNCELENMESİ (PİLOT ÇALIŞMA)

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### ÖZET

Bel ağrısı yaşam kalitesini olumsuz etkileyen yaygın bir durumdur. Bel ağrılı bireylerin yaklaşık %10'unda kronik bel ağrısı gelişir. Çalışmamızın amacı kronik bel ağrılı bireylerde ağrı seviyesi ile ilişkili faktörleri incelemektir. Çalışmaya toplam kronik bel ağrılı 20 hasta (8 erkek, 12 kadın) dahil edildi. Hastaların değerlendirme öncesi yaş, boy, kilo ve vücut kütle indeksleri (VKİ) kayıt altına alındı. Hastaların ağrı seviyesi Görsel Analog Skalası (GAS) ile, alt ekstremitte kas kuvveti izometrik bir dinamometre yardımı ile ve engellilik seviyeleri ise Oswestry Disabilite İndeksi (ODİ) ile değerlendirildi. Ağrı seviyesi ile diğer parametreler arasında ilişki Pearson Korelasyon Analizi ile değerlendirildi. İstatistiksel olarak anlamlılık düzeyi  $p<0.05$  olarak kabul edildi. Çalışmaya dahil edilen hastaların yaş ortalaması  $54.75\pm 9.87$ 'dir. Çalışmada GAS ile yaş, boy, kilo ve VKİ arasında anlamlı bir ilişki yoktu ( $p>0.05$ ). Ancak VAS ile sağ diz ekstansiyon kuvveti ( $r= -0.940$ ), sol diz ekstansiyon kuvveti ( $r= -0.927$ ) ve ODİ ( $r= 0.989$ ) arasında anlamlı bir ilişki vardı ( $p<0.05$ ). Çalışma bulgularımız kronik bel ağrılı bireylere ağrı seviyesinin artmasının diz ekstansiyon kuvvetini ve engellilik düzeyini olumsuz yönde etkilediğini düşündürmektedir.

**Anahtar Kelimeler:** Kronik, bel ağrısı, ağrı

### INVESTIGATION OF FACTORS ASSOCIATED WITH PAIN LEVEL IN INDIVIDUALS WITH CHRONIC LOW BACK PAIN (A PILOT STUDY)

#### ABSTRACT

Low back pain is a common condition that negatively affects quality of life. About 10% of individuals with low back pain develop chronic low back pain. The aim of our study is to examine the factors associated with the level of pain in individuals with chronic low back pain. A total of 20 patients (8 men, 12 women) with chronic low back pain were included in the study. Age, height, weight and body mass index (BMI) of the patients were recorded before the evaluation. The pain level of the patients was evaluated with the Visual Analog Scale (VAS), the lower extremity muscle strength was evaluated with the help of an isometric dynamometer, and the disability levels were evaluated with the Oswestry Disability Index (ODI). The relationship between pain level and other parameters was evaluated with Pearson Correlation Analysis. Statistically significant level was accepted as  $p<0.05$ . The mean age of the patients included in the study was  $54.75\pm 9.87$  years. In the study, there was no significant relationship between VAS and age, height, weight and BMI ( $p>0.05$ ). However, there was a significant correlation between VAS and right knee extension strength ( $r= -0.940$ ), left knee extension strength ( $r= -0.927$ ) and ODI ( $r= 0.989$ ) ( $p<0.05$ ). Our study findings suggest that an increase in pain level in individuals with chronic low back pain affects knee extension strength and disability level negatively.

**Keywords:** Chronic, low back pain, pain

## OPERE KIENBÖCK SENDROMLU OLGUDA REHABİLİTASYON SONUÇLARI

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### ÖZET

Osteonekroza sekonder lunat kollaps ilk olarak 1910'da Robert Kienböck tarafından tanımlanmıştır. Kienböck bu konuyla ilgili ilk serisinde 16 hasta tanımlamıştır. Bu hastaların çoğu 30 ve 40'lı yaşlarda olan erkek işçilerdi. Kienböck, ilk etapta lunat yapısındaki ve şeklindeki değişikliklerin konjenital anomaliye, kompresyon kırığına, enfeksiyona veya inflamatuvar artrite bağlı olarak gelişebileceğini öne sürdü. Fakat sonrasında "lunatomalazi" olarak adlandırdığı durumun temel nedeninin "ezilmeler, burkulmalar veya sublüksasyonlar sırasında bağların ve kan damarlarının yırtılmasının neden olduğu lunat avaskülarizasyonu olduğunu bildirmiştir.

Ev hanımı olan 46 yaşında kadın hasta sol el bileğinde ağrı şikayetiyle ortopedi kliniğine başvurmuştu. Yapılan muayenesinde ve tetkik sonuçlarında lunatunda ileri derece dejenerasyon tespit edilmişti. Evre III b Kienböck Sendromu tanısı alan hastanın opere edilmesine karar verildi. Operasyon esnasında lunatumun ileri derecede dejeneratif ve parçalı olduğu görüldü ve sonrasında proksimal sıra karpektomi yapıldı. Post-operatif dördüncü haftada hasta fizyoterapiye yönlendirildi. Sol bilek için ilk yapılan değerlendirmede; ekstansiyon 30 derece, fleksiyon 10 derece kavrama gücü 3 kg, ödem 38 cm, Duruöz El İndeksi 74 puan olarak ölçüldü. Tedavide ise dört hafta boyunca hafta içi her gün; 20 dakika whirlpool, 10 dakika retrograd ödem masajı, aktif yardımcı el bileği normal eklem hareketleri, bilek traksiyonu ve el kavrama gücü kuvvetlendirme çalışıldı. Dört hafta sonrasında yapılan değerlendirmede ise; ekstansiyon 40 derece, fleksiyon 15 derece kavrama gücü 7 kg, ödem 36 cm, Duruöz El İndeksi 58 puan olarak ölçüldü.

Kienböck hastalığı, genç erişkinlerde aktivite ile ilişkili dorsal bilek ağrısının nadir fakat klinik olarak önemli bir nedenidir. Erken teşhis, daha az invaziv cerrahi yapılmasını sağlar ve böylece bilek hareketleri nispeten daha iyi korunur. Karpektomi yapılan hastalarda ise optimum sonuçlar almak için uzun soluklu rehabilitasyon süreçleri gerekmektedir.

**Anahtar Kelimeler:** Kienböck, lunatum, rehabilitasyon

### REHABILITATION RESULTS IN A CASE WITH OPERE KIENBOCK SYNDROME

#### ABSTRACT

Lunate collapse secondary to osteonecrosis was first described by Robert Kienböck in 1910. Kienböck described 16 patients in his first series on this subject. Most of these patients were male workers in their 30s and 40s. Kienböck suggested that the changes in lunate structure and shape in the first place may develop due to congenital anomaly, compression fracture, infection or inflammatory arthritis. But he later reported that the root cause of what he called "lunatomalacia" was "lunate avascularization caused by rupture of ligaments and blood vessels during contusions, sprains, or sublaxations."

A 46-year-old woman, a housewife, applied to the orthopedics clinic with the complaint of pain in her left wrist. In the examination and results of the examination, advanced degeneration was detected in the lunate. It was decided to operate the patient who was diagnosed with stage III b Kienböck Syndrome. During the operation, the lunate was found to be severely degenerative and fragmented, and then proximal row carpectomy was performed. In the post-operative fourth week, the patient was referred to physiotherapy. In the first evaluation for the left wrist; extension was 30 degrees, flexion was 10 degrees, grip strength was 3 kg, edema was 38 cm, and Duruöz Hand Index was 74 points. In treatment, every weekday for four weeks; 20 minutes of whirlpool, 10 minutes of retrograde edema massage, active assisted wrist normal joint movements, wrist traction and hand grip strength strengthening were studied. In the evaluation made after four weeks; extension was 40 degrees, flexion was 15 degrees, grip strength was 7 kg, edema was 36 cm, and Duruöz Hand Index was 58 points.

Kienböck's disease is a rare but clinically important cause of activity-related dorsal wrist pain in young adults. Early diagnosis allows less invasive surgery and thus wrist movements are relatively better preserved. Long-term rehabilitation processes are required in order to obtain optimum results in patients who underwent carpectomy.

**Keywords:** Kienböck, lunatum, rehabilitation

## AAÇI TAKİPLİ DİZ ORTEZİNİN TEK BACAK ÇÖMELME TESTİ HAREKET KALİTESİ ANALİZİNE ETKİSİ

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### ÖZET

**Giriş:** Tek bacak çömelme testi yaralanma riski belirlemede yaygın olarak kullanılan bir testtir. Test sırasında 30° ve 60° arasında bir diz fleksiyonu ile çömelmeleri istenmektedir. Diz fleksiyon açısı, uygulama denemeleri sırasında standart bir gonyometre kullanılarak kontrol edilmektedir. Fakat her iki kol hareketli olduğu için açı kontrolü zor olmaktadır. Bu çalışmada daha rahat gözlemlenebilir olması sebebiyle gonyometre dize temas etmeyecek şekilde ortezle birleştirilmiş ve açı takipli diz ortezi oluşturulmuştur. Açı takipli diz ortezi ile ortezsiz değerlendirme arasında fark olup olmadığını incelemek amacıyla çalışma yapılmıştır.

**Metot:** Çalışmaya yaş ortalaması 21.12±1.34 yıl olan 34 üniversite öğrenci dahil edilmiştir. Değerlendirmek için katılımcıların dominant alt ekstremiteleri sorgulanmış ve sadece dominant taraf değerlendirme yapılmıştır. Katılımcılara ortezsiz tek bacak çömelme testi yapılmış aradan bir hafta sonra da ortezli tek bacak çömelme testi yapılmıştır. Testler videoyaya çekilmiş ve çekim öncesinde ikişer deneme yapılmıştır. Videolar karışık olarak izlenmiş, deneyimli bir fizyoterapist tarafından niteliksel hareket analizi yapılmıştır.

**Bulgular:** Katılımcıların analiz sonuçlarına göre açı takipli diz ortezi ile yapılan ve ortezsiz yapılan niteliksel hareket analizi değerlendirmelerine göre anlamlı bir fark bulunmamıştır ( $p=0.899$ ,  $t=0.128$ ).

**Sonuç:** Ortezin varlığının hareket kalitesi üzerine anlamlı bir etkisi olmadığı bulunduğu için değerlendirmeye sağladığı kolaylık da düşünülürse objektif bir değerlendirme olarak açı takipli ortezler tek bacak çömelme testi için kullanılabilir.

**Anahtar Kelimeler:** ortez, nitel analiz, tek bacak çömelme testi

## THE EFFECT OF ANGLE-FOLLOWING KNEE ORTHOSIS ON ONE-LEG SQUAT TEST MOVEMENT QUALITY ANALYSIS

### ABSTRACT

**Introduction:** The single leg squat test is a commonly used test to determine injury risk. During the test, they are asked to squat with a knee flexion between 30° and 60°. Knee flexion angle is checked using a standard goniometer during practice trials. However, since both arms are movable, angle control is difficult. In this study, the goniometer was combined with the orthosis in such a way that it would not touch the knee, and an angle-following knee orthosis was created, since it was more easily observed. A study was conducted to examine whether there is a difference between the knee orthosis with angle tracking and the evaluation without orthosis.

**Method** 34 university students with a mean age of 21.12±1.34 years were included in the study. For evaluation, the dominant lower extremities of the participants were questioned and only the dominant side

was evaluated. A single leg squat test without orthosis was applied to the participants, and a week later, a single leg squatting test with an orthosis was performed. The tests were videotaped and two trials were conducted before shooting. The videos were watched in a mixed manner, and qualitative movement analysis was performed by an experienced physiotherapist.

**Results:** According to the analysis results of the participants, there was no significant difference according to the qualitative movement analysis evaluations performed with and also without an angle-tracked knee orthosis ( $p=0.899$ ,  $t=0.128$ ).

**Conclusion:** Since the presence of the orthosis has no significant effect on the quality of movement, angle-following orthoses can be used for the single-leg squat test as an objective evaluation, considering the ease of evaluation.

**Keywords:** orthosis, qualitative analysis, single leg squat test

## FİZİK TEDAVİ VE REHABİLİTASYONDA BULANIK MANTIK TEMELLİ YAKLAŞIMLAR

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### ÖZET

Bulanık mantık, klasik mantık kurallarından farklı olarak bir sistemin karar verme sürecinde belirsiz verileri kullanarak karar vermeyi sağlayan bir algoritma olarak tanımlanır ve kullanıldığı her alanda klasik mantığa göre daha hassas sonuçlar verebilen bir kontrol yöntemidir. Klasik mantıkta var olan “kesin ve sabit” gibi kavramlar bulanık mantıkta yerini doğruluk derecelerine bırakır. Günlük hayatta kullandığımız birçok ifade aslında bulanık bir yapıya sahiptir. Bulanık mantık yaklaşımı, dünyamızdaki durum, olgu ve olayların, karar verme mekanizmalarının aslında kesintisiz süreçler olduğunu, iyi-kötü, siyah-beyaz, doğru-yanlış, evet-hayır, 0-1 şeklinde kesin sınırlar ile ayıramayacağını ifade eder. Bu ikili ifadelerin arasındaki değerler bulanık mantık kapsamına girer. İlık, biraz ve 0,6 gibi ifadeler bulanık mantığın gündelik yaşamda kullanımına örnektir. Bulanık mantık ilk çıktığı yıllarda çoğunlukla mühendislik ve diğer sayısal alanlar da kullanılmasına rağmen son yıllarda sağlık alanında da kullanımı yaygınlaşmıştır. Fizik tedavi ve rehabilitasyonda bulanık mantık temelli yaklaşımlar, hastaların klinik durumlarının tanımlanması, tedavi planının oluşturulması, tedavinin uygulanması ve tedavi sonuçlarının değerlendirilmesine kadar uzanan süreçte yer almaktadır. Bu yaklaşımlar hastaların durumlarının çok sayıda parametreye göre değerlendirilmesini ve tedavide daha etkin sonuçlar elde edilmesini sağlar. Bulanık mantık, son yıllarda fizik tedavi ve rehabilitasyon alanında da etkin bir şekilde kullanılmaya başlanmış olup bu hastaların daha iyi tedavi edilmesi ve rehabilitasyon sürecinin daha verimli hale gelmesine olanak tanıdığı bilimsel araştırmalar ile kanıtlanmıştır. Bu derlemede, bulanık mantığa genel bir bakış sunulacak ardından fizik tedavi ve rehabilitasyonda bulanık mantık temelli yaklaşımlar hakkında bilgi verilecektir.

**Anahtar Kelimeler:** Bulanık mantık, Fizik tedavi, Yazılım.

### FUZZY LOGIC BASED APPROACHES IN PHYSICAL THERAPY AND REHABILITATION

#### ABSTRACT

Fuzzy logic, unlike classical logic rules, is defined as an algorithm that enables decision making using uncertain data in the decision-making process of a system, and it is a control method that can give more precise results than classical logic in every area where it is used. Concepts such as "exact and fixed" in classical logic leave their place to degrees of accuracy in fuzzy logic. Many expressions we use in our daily life actually have a fuzzy structure. The fuzzy logic approach states that the situations, facts and events in our world, decision-making mechanisms are actually continuous processes, and cannot be separated with definite boundaries such as good-bad, black-white, right-wrong, yes-no, 0-1. Values between these binary expressions fall within the scope of fuzzy logic. Expressions such as warm, a little and 0.6 are examples of the use of fuzzy logic in everyday life. Although fuzzy logic was used mostly in engineering and other numerical fields in its first years, its use in the field of health has become widespread in recent years. Fuzzy logic-based approaches in physical therapy and rehabilitation are involved in the process of defining the clinical condition of the patients, creating the treatment plan, applying the treatment and evaluating the treatment results. These approaches allow the evaluation of patients' conditions according to many parameters and to obtain more effective results in treatment. Fuzzy logic has been used effectively in the field of physical therapy and rehabilitation in recent years, and it has been proven by scientific research that it allows these patients to be treated better and the rehabilitation process to become more efficient. In this review, an overview of fuzzy logic will be presented, followed by information about fuzzy logic-based approaches in physical therapy and rehabilitation.

**Keywords:** Fuzzy logic, Physical therapy, Software



## GÖÇ, SAVAŞ, TERÖR OLGULARININ SAĞLIĞA ETKİLERİ VE HEMŞİRELİK

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### ÖZET

Göç; nedeni, yapısı ve süresine bakılmaksızın insanların bireysel ya da toplu olarak yer değiştirdiği nüfus hareketleri olarak tanımlanmaktadır. Göçün gerçekleşme nedenleri dört temel bölümde ele alınabilir. Bunlar; ekonomik nedenler, siyasal nedenler, sosyo/kültürel nedenler, doğal nedenlerdir. Savaş ve terör göçe neden olan siyasi olaylardandır. Savaşlar, terör tehdidi ve bazı siyasi gelişme ve antlaşmalar da göç etmede etkilidir. Savaş, devlet veya devletlerin barış yöntemiyle halledemedikleri sorunların çözümü için milli savunma kaynaklarının tamamını ya da bir bölümünü kullanarak yaptığı mücadele demektir. Terör, bir grup insan topluluğunun, toplumun sadece bir kesimini veya tamamını, şiddet yoluyla baskı altına alarak yönlendirmesi demektir. Göçlerin sağlık üzerine etkisi, göç nedenleri ve şekli, göç edilmiş ülkedeki yaşam koşulları ile ikamet edilen süreye göre değişkenlik göstermektedir. Dünya Sağlık Örgütüne göre mülteci kamplarında en sık görülen sağlık sorunları hipotermi, yanıklar, ve gastrointestinal hastalıklardır. Bunlara ek olarak üst solunum yolu hastalıkları, cilt problemleri, bulaşıcı hastalıklar, ruhsal hastalıklar ve beslenme sorunları da göçmenlerin yaşadıkları sağlık sorunları arasında yer almaktadır. Ani ve hızlı bir çevre değişimi yaratan göç, sosyal, kültürel ve fiziksel olarak toplumu ve bireyleri derinden etkilemektedir. Göç eden bireylerin sağlık hizmetlerine erişimleri bireysel özellikleri (eğitim düzeyi, dil engeli vb.), yapısal faktörler (sağlık sistemi, sağlık politikaları, coğrafi konum vb.), sağlık hizmetini sunan bireylerin özelliklerinden (göçmenlerin sağlık sorunlarını belirlemede yetersizlik vb.) etkilenmektedir. Bu faktörler göçmenlerin önlenebilir sağlık riskleriyle karşılaşmalarına yol açmaktadır. Birinci basamak sağlık çalışanları, özelde de halk sağlığı hemşireleri tarafından göçmenlerin sağlık durumlarının değerlendirilmesi, risk faktörlerini önlemeye ve sağlıklarını koruma-geliştirmeye yönelik müdahaleler geliştirilmesi gerekmektedir. Savaş ve terör olayları karşısında hemşirelere düşen başlıca rol ve sorumluluklar ise; hayati riskleri önlemek, saldırı anında acil yaşam desteği sağlamak, hastaların bakım gereksinimlerini belirleyerek uygun bakım planını planlamak, hemşirelik bakım ve tedavisini standartlara göre uygulamak, olabilecek en kısa zamanda askerlerin savaş bölgesine, sivillerin de günlük yaşantısına devam etmesini sağlamaktır.

**Anahtar kelimeler:** Göç, Savaş, Terör, Sağlık, Hemşirelik

### HEALTH EFFECTS OF MIGRATION, WAR, TERRORISM AND NURSING

#### ABSTRACT

Migration; It is defined as population movements in which people are displaced individually or collectively, regardless of their cause, structure and duration. The reasons for migration can be discussed in four main sections. These; economic reasons, political reasons, socio/cultural reasons, natural causes. War and terrorism are political events that cause migration. Wars, the threat of terrorism, and some political developments and treaties are also effective in immigration. War means the struggle of the state or states by using all or a part of the national defense resources to solve the problems that they cannot solve with the peace method. Terrorism means the manipulation of a group of people by oppressing only a part of the society or the whole of society by means of violence. The effects of migration on health, reasons and mode of migration vary according to the living conditions in the country of origin and the duration of residence. According to the World Health Organization, the most common health problems in refugee camps are hypothermia, burns, and gastrointestinal diseases. In addition to these, upper respiratory tract diseases, skin problems, infectious diseases, mental illnesses and nutritional problems are among the health problems

experienced by immigrants. Migration, which creates a sudden and rapid environmental change, deeply affects the society and individuals socially, culturally and physically. Access to health services of immigrants is affected by their individual characteristics (education level, language barrier, etc.), structural factors (health system, health policies, geographical location, etc.), characteristics of individuals providing health services (inability to identify immigrants' health problems, etc.). These factors cause immigrants to face preventable health risks. It is necessary to evaluate the health status of immigrants by primary health care workers, especially public health nurses, and to develop interventions to prevent risk factors and protect and improve their health. The main roles and responsibilities of nurses in the face of war and terror events are; To prevent vital risks, to provide emergency life support in the event of an attack, to determine the care needs of patients and to plan the appropriate care plan, to apply nursing care and treatment according to standards, to ensure that soldiers continue to the war zone and civilians to their daily lives as soon as possible.

**Keywords:** Migration, War, Terror, Health, Nursing

## SAĞLIK OKURYAZARLIĞI VE SAĞLIK OKURYAZARLIK DÜZEYİNİ YÜKSELTMEDE SAĞLIK ÇALIŞANLARININ ROL VE SORUMLULUKLARI

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### ÖZET

Bu derlemede amaç, halk sağlığı açısından önemi son zamanlarda artan konulardan birisi olan sağlık okuryazarlığını tanımlayıp genel hatlarını belirleyerek önemini ortaya koymaktır. Sağlık okuryazarlığının birçok tanımı olmasına karşın hepsinin ortak noktası bireylerin, doğru sağlık birimine başvurma, doğru ilaç kullanımı ve sağlıklarının daha iyi düzeyde olması için sağlıkları ile ilgili verilen bilgileri doğru anlayıp uygulama becerileridir. Bu becerilerin ölçülüp değerlendirilebilmesi için geliştirilmiş birçok ölçek bulunmaktadır. Dünyada ve ülkemizdeki sağlık okuryazarlık oranlarına bakıldığında zaman özellikle ülkemizde kısıtlı sayıda çalışma olmakla birlikte yapılan çalışmalarda sağlık okuryazarlık oranlarının düşük olduğu görülmektedir. Bu durumun bireylerin ekonomik, demografik, kültürel, psikososyal, kişisel özellikleri ve yaşam biçimleri ile ilişkili olduğu belirtilmektedir. Bunlara ek olarak hastalık deneyimleri ve sağlık sisteminin özellikleri de sağlık okuryazarlık düzeyine etki eden faktörlerdendir. Yetersiz sağlık okuryazarlığı; koruyucu sağlık hizmetlerine daha az dâhil olma, tedavi edici sağlık hizmetlerinin daha çok kullanımına, sağlık hizmetlerine ulaşmada sıkıntılara, hastalanma ve hastaneye yatış riskinin artmasına, sağlık bakım harcamalarının artmasına ve yaşam kalitesinin olumsuz etkilenmesine yol açmaktadır. Nihai hedefleri toplumun sağlık düzeyinin yükseltilmesi, bireylerin sağlığının geliştirilmesi olan sağlık çalışanlarının, toplumun sağlık okuryazarlığı düzeylerini dikkate alması önemlidir. Ülkemizde sağlık okuryazarlık düzeyinin yükseltilmesinde öncelikle bireylerin sağlık okuryazarlık düzeylerinin belirlenmesi, sağlık okuryazarlık düzeyi düşük olan bireylere yönelik sağlık çalışanlarının eğitim ve bilinçlendirme çalışmaları yürütmesi, sağlık ve eğitim sisteminin iyileştirilmesi önemli katkılar sağlayacaktır.

**Anahtar Kelimeler:** Sağlık okuryazarlığı, sağlığın geliştirilmesi, sağlık çalışanları.

## HEALTH LITERACY AND THE ROLE AND RESPONSIBILITIES OF HEALTHCARE PROFESSIONALS IN RAISING THE LEVEL OF HEALTH LITERACY

### ABSTRACT

The aim of this review is to define and outline health literacy, which is one of the issues whose importance has increased recently in terms of public health, and to reveal its importance. Although there are many definitions of health literacy, the common point of all of them is the ability of individuals to apply to the right health unit, use the right medication, and correctly understand and apply the information given about their health in order to improve their health. There are many scales developed to measure and evaluate these skills. When we look at the health literacy rates in the world and in our country, it is seen that the health literacy rates are low in the studies, although there are a limited number of studies especially in our country. It is stated that this situation is related to the economic, demographic, cultural, psychosocial, personal characteristics and lifestyles of individuals. In addition to these, illness experiences and the characteristics of the health system are among the factors affecting the level of health literacy. Inadequate health literacy; Less involvement in preventive health services leads to more use of curative health services, difficulties in accessing health services, an increase in the risk of getting sick and hospitalization, an increase in health care expenditures and a negative impact on quality of life. It is important that health professionals, whose ultimate goals are to increase the health level of the society and improve the health of individuals, take into account

the health literacy levels of the society. In order to increase the level of health literacy in our country, first of all, determining the health literacy levels of individuals, training and awareness-raising activities of health professionals for individuals with low health literacy level, and improving the health and education system will provide important contributions.

**Keywords:** Health literacy, health promotion, health workers.

## GENERAL FEATURES OF *Aronia melanocarpa* PLANT AND İTS COMMERCIAL STATUS IN TURKEY

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### ABSTRACT

As a result of the rapid growth of the world depending on the global economy, the rapid depletion of resources has created an inevitable result. It is inevitable that mulberry fruits, which are among the fruits with natural antioxidant group, contain high antioxidant capacity and anthocyanin content. As a result of this consumption, the increase in mulberry fruits in domestic and foreign trade has become visible in recent years. World. When we look at aronia cultivation in Turkey, Atatürk Horticulture Central Research Institute registered 2 aronia cultivars for the first time and started to produce certified saplings as of 2017. There are some factors that make aronia such a demanded agricultural product. The first of these is that it starts from the garden part and can be supplied in a very short time and covers the expenses. As for the use of fruits, they have many uses. In addition to the fact that the benefit obtained from the unit area is extremely high, it is a popular enough fruit in terms of health. At the initial stage of the project, production costs in agricultural enterprises should be determined comprehensively. However, it is also an important condition that the income that the investor will obtain during the project is sustainable. The technical analyzes to be made in the first stage of the investment constitute an important observation, especially since the establishment of orchards, the controlled operation of the institution, the production and intermediate problems in the institution are likely to put a large part of the investment. The fact that Turkey is surrounded by seas on 3 sides, prudent and controlled applicability of climate, location and economic conditions is important in terms of quality assurance. The fact that aronia starts to produce products in the year after planting and finds buyers at very good prices allows the cultivation areas and amount of aronia to increase in our country and in the world. It also offers products. As a result of studies on the chemical composition and bioactivity of aronia fruit, it has been determined that it is a strong fruit in terms of antioxidants, anticancer, cardiological, antimutagenic activities and positive effects in chronic diseases. The fact that the fruit can be used by processing as well as fresh consumption increases the interest in aronia cultivation in Turkey and in the world day by day. In this study, medicinal properties and ecological demands of Aronia were taken into consideration and the situation of Aronia trade in Turkey was compiled with literature reviews and different approaches were presented.

**Keywords:** Turkey, Aronia , Commercial plants,

### *Aronia melanocarpa* BİTKİSİNİN GENEL ÖZELLİKLERİ VE TÜRKİYE'DEKİ TİCARİ DURUMU

### ÖZET

Küresel ekonomiye bağlı olarak dünyanın hızla büyümesi sonucunda kaynakların hızla tükenmesi kaçınılmaz bir sonuç yaratmıştır. Doğal antioksidan grubu içeren meyveler arasında yer alan dut meyvelerinin yüksek antioksidan kapasite ve antosiyanin içeriği içermesi kaçınılmazdır. Bu tüketimin bir sonucu olarak son yıllarda iç ve dış ticarete dut meyvelerindeki artış gözle görülür hale gelmiştir. dünya. Türkiye'de aronia yetiştiriciliğine baktığımızda Atatürk Bahçe Kültürleri Merkez Araştırma Enstitüsü ilk kez 2 aronia çeşidini tescil ettirmiş ve 2017 yılı itibari ile sertifikalı fidan üretimine başlamıştır. Aronia'yı bu kadar talep gören bir tarım ürünü yapan bazı faktörler vardır. Bunlardan ilki bahçe kısmından başlayıp çok kısa sürede temin

edilebilmesi ve masrafları karşılayabilmesidir. Meyvelerin kullanımına gelince, birçok kullanımları vardır. Birim alandan elde edilen faydanın son derece yüksek olmasının yanı sıra sağlık açısından da yeterince popüler bir meyvedir. Projenin başlangıç aşamasında tarımsal işletmelerde üretim maliyetlerinin kapsamlı bir şekilde belirlenmesi gerekmektedir. Ancak yatırımcının proje süresince elde edeceği gelirin sürdürülebilir olması da önemli bir koşuldur. Yatırımın ilk aşamasında yapılacak teknik analizler, özellikle meyve bahçelerinin kurulması, kurumun kontrollü çalışması, kurumdaki üretim ve ara sorunları yatırımın büyük bir bölümünü ortaya koyma ihtimali yüksek olduğundan, önemli bir gözlem oluşturmaktadır. . Türkiye'nin 3 tarafının denizlerle çevrili olması, iklim, konum ve ekonomik koşulların ihtiyatlı ve kontrollü uygulanabilirliği kalite güvencesi açısından önemlidir. Aronia'nın ekimden sonraki yıl içerisinde ürün üretmeye başlaması ve çok iyi fiyatlara alıcı bulması, aronia'nın ülkemizde ve dünyada ekim alanlarının ve miktarının artmasına olanak sağlamaktadır. ürünler de sunmaktadır. Aronia meyvesinin kimyasal bileşimi ve biyoaktivitesi üzerine yapılan çalışmalar sonucunda antioksidanlar, antikanser, kardiyolojik, antimutajenik aktiviteler ve kronik hastalıklarda olumlu etkileri açısından güçlü bir meyve olduğu belirlenmiştir. Meyvenin taze tüketiminin yanı sıra işlenerek de kullanılabilmesi Türkiye'de ve dünyada aronia yetiştiriciliğine olan ilgiyi her geçen gün artırmaktadır. Bu çalışmada Aronia'nın tıbbi özellikleri ve ekolojik talepleri ele alınmış ve Türkiye'de Aronia ticaretinin durumu literatür taraması ile derlenmiş ve farklı yaklaşımlar sunulmuştur.

**Anahtar Kelimeler:** Türkiye, Aronya, Aronya Ticareti,

## COMMERCIAL STATUS OF PLANT SPECIES USED IN SALEP PRODUCTION IN TURKEY

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### ABSTRACT

There are 1000 genera and at least 25,000 species in the Orchidaceae family, which is the richest family of the group of flowering plants spread over the earth (Harrap and Harrap, 2009). Orchids, which are taxonomically included in the monocotyledons, are represented by 24 genera and 170 taxa in Turkey (Kreutz, 2009).

About 70% of orchids are epiphytes, 25% live in the soil. The remaining 5% survive underground, on rocks and in decaying vegetation (Arditti, 1979; Renz and Taubenheim, 1984). Orchids in Turkey are among the middle generation orchids. Turkey is located in a transition zone between Europe and the Near East in terms of vegetation and reflects the joint influence of Africa, Asia and Europe (Kreutz, 2009). There are 30 endemic orchid taxa in our country (Kreutz, 2009). Salep is a hot beverage that is mixed into milk after orchid tubers are ground into powder. Orchids are locally called salep or sahlep. Glucomannan swells with milk or water and forms a liquid solution (Sezik et al., 2007). Tuberous orchids are used in making salep; However, not all tuberous species are suitable for salep production. In Turkey, about 120 tuberous orchid salep belonging to the genera *Aceras*, *Anacamptis*, *Barlia*, *Comperia*, *Dactylorhiza*, *Himantoglossum*, *Neotinea*, *Ophrys*, *Orchis* and *Serapias* are produced (Sezik et al., 2007). All orchid species spread almost all over the geography of Turkey, urbanization, industrialization, overgrazing, expansion of agricultural areas, agricultural activities, tourism activities, fires, foreign and domestic use orchid destruction all over Turkey. As it continues, this destruction is tried to be brought under control with legal restrictions. Despite all the prohibitions, approximately 500 tons of fresh salep tubers are harvested annually in Turkey and an average of 80-100 tons of salep flour is produced from here. These values are unofficial figures obtained from buyers. It has no official record as it was sold illegally due to the collection ban. Similarly, it is known that salep orchids are collected in neighboring countries. This negativity causes the removal of millions of salep orchids from their natural habitats, damage to the populations of the species and an increase in genetic erosion. Urgent intervention required; It is the development of salep agriculture and its production in the form of field agriculture. In this study, the importance of salep type in our country, its usage, commercial situation and solutions for the precautions to be taken were evaluated.

**Keywords:** Turkey, Salep , Commercial plants

## TÜRKİYEDE SALEP ELDESİNDE KULLANILAN BİTKİ TÜRLERİNİN TİCARİ DURUMU

### ÖZET

Yeryüzüne yayılmış çiçekli bitkiler grubunun en zengin familyası olan Orchidaceae familyasında 1000 cins ve en az 25.000 tür bulunmaktadır. Taksonomik olarak monokotiledonlar içinde yer alan orkideler, Türkiye'de 24 cins ve 170 takson ile temsil edilmektedir.

Orkidelerin yaklaşık %70'i epifittir, %25'i toprakta yaşar. Kalan %5'lik kısım ise yeraltında, kayaların üzerinde ve çürüyen bitki örtüsünün içinde hayatta kalır. Orkideler orta kuşak orkideler arasındadır. Türkiye, bitki örtüsü bakımından Avrupa ile Yakın Doğu arasında bir geçiş kuşağında yer almakta ve Afrika, Asya ve Avrupa'nın ortak etkisini yansıtmaktadır. Ülkemizde 30 endemik orkide taksonu bulunmaktadır. Salep, orkide yumrularının toz haline getirilmesinden sonra süte karıştırılan sıcak bir içecektir. Orkideler yerel olarak salep veya sahlep olarak adlandırılır. Glucomannan süt veya su ile şişer ve sıvı bir solüsyon oluşturur. Salep yapımında yumrulu orkideler kullanılır; Ancak tüm yumrulu türler salep üretimine uygun değildir. Türkiye'de *Aceras*, *Anacamptis*, *Barlia*, *Comperia*, *Dactylorhiza*, *Himantoglossum*, *Neotinea*, *Ophrys*, *Orchis* ve *Serapias* cinslerine ait yaklaşık 120 yumrulu orkide salebi üretilmektedir. Tüm orkide türleri Türkiye coğrafyasının hemen her yerine yayılmış, kentleşme, sanayileşme, aşırı otlatma, tarım alanlarının genişlemesi, tarımsal faaliyetler, turizm faaliyetleri, yangınlar, orkidelerin yerli ve yabancı kullanımı tüm Türkiye'de yok olmuştur. Devam ederken bu yıkım yasal kısıtlamalarla kontrol altına alınmaya çalışılmaktadır. Tüm yasaklara rağmen Türkiye'de yılda yaklaşık 500 ton taze salep yumrusu hasat edilmekte ve buradan ortalama 80-100 ton salep unu üretilmektedir. Bu değerler, alıcılardan elde edilen resmi olmayan rakamlardır. Toplama yasağı nedeniyle kaçak satıldığı için resmi kaydı yoktur. Benzer şekilde komşu ülkelerde de salep orkidelerinin toplandığı bilinmektedir. Bu olumsuzluk milyonlarca salep orkidesinin doğal yaşam alanlarından uzaklaştırılmasına, tür popülasyonlarının zarar görmesine ve genetik erozyonun artmasına neden olmaktadır. Acil müdahale gerekli; Salep tarımının geliştirilmesi ve tarla tarımı şeklinde üretilmesidir. Bu çalışmada salep çeşidinin ülkemizdeki önemi, kullanımı, ticari durumu ve alınması gereken önlemlere yönelik çözümler değerlendirilmiştir.

**Anahtar Kelimeler:** Türkiye, Salep, Orchidaceae, Tıbbi bitkiler, Ticari bitkiler



## **RADIX ASTRAGALUS'UN GLİOBLASTOMA MULTİFORME HÜCRE KÜLTÜRÜ ÜZERİNDEKİ TEDAVİ EDİCİ ETKİLERİNİN ARAŞTIRILMASI**

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### **ÖZET**

Glioblastomalar, agresif ve yayılımcı doğalarıyla tanınır ve etkili tedavileri mümkün değildir. Şu anda mevcut tedaviler, bu primer beyin tümörü ile mücadelede tamamen etkili değildir. Bu nedenle, bu çalışma, in vitro ortamdaki Glioblastoma Multiforme (GBM) hücre hatlarına karşı *Radix astragalus*'un antitümöral potansiyelini araştırarak yeni terapötik stratejileri keşfetmeyi amaçlamaktadır.

Bu amaçla, bu çalışmada MTT ve LDH analizleri yoluyla GBM hücre canlılığı ve çoğalmasını değerlendirmeyi içeren kapsamlı bir araştırma metodolojisi kullanıldı. Ayrıca, *Radix astragalus* ekstresinin etkilerini daha fazla araştırmak için, bu çalışmada total antioksidan kapasitesi (TAC) ve toplam oksidan durumu (TOS) değerlerini ölçerek GBM hücre hatlarının oksidatif yükünü analiz edildi. Bu gelişmiş teknikler, GBM hücreleri ve ekstre arasındaki karmaşık moleküler etkileşimleri detaylı bir anlayışla değerlendirilmiştir ve bu da bu yüksek derecede malign hastalıkla etkili şekilde mücadele edebilecek yeni tedavilerin geliştirilmesinin yolunu açmaktadır.

Bu çalışmanın bulguları, *Radix astragalus*'un önemli bir antitümöral aktivitesinin olduğunu ve GBM hücre hatlarında hücre canlılığını önemli ölçüde azalttığını göstermektedir. Dahası, özüt, GBM hücrelerinin gelişim ve ilerlemesine katkıda bulunan önemli bir faktör olan oksidatif stresi de engellemiştir. Ayrıca, antioksidan analizler, *Radix astragalus* ile tedavi edilen GBM hücrelerinde normal GBM hücrelerine göre artan antioksidan aktivitesini ortaya koymuştur. Bu bulgular, tedavisi son derece zor olan GBM'lerin tedavisine yönelik umut verici bir çözüm sunmaktadır.

Bu çalışmada tespit edilen *Radix astragalus*'un dikkate değer antitümöral aktivitesi, malign beyin tümörleriyle etkili tedaviler geliştirmek için potansiyel uygulamalara sahip kanser tedavisi araştırmaları için yeni bir yol açmaktadır. *Radix astragalus*'un potansiyelinin daha ileri çalışmalarla araştırılması, GBM'lerle etkili şekilde mücadele edebilecek yenilikçi tedavilerin yolunu açmak için gereklidir.

**Anahtar Kelimeler:** GBM, *Radix Astragalus*, antikanser

### **EXPLORING THE THERAPEUTIC EFFECTS OF *Radix Astragalus* ON GLIOBLASTOMA MULTIFORME CELL CULTURE**

#### **ABSTRACT**

Glioblastomas, recognized for their aggressive and invasive nature, present a daunting challenge for effective treatment. At present, available therapies are not entirely efficacious in combating this primary brain tumor. In light of this, the present study aims to explore novel therapeutic strategies by investigating the antitumorigenic potential of *Radix astragalus* against Glioblastoma Multiforme (GBM) cell-lines in vitro.

To accomplish this, the study employed a comprehensive research methodology that involved evaluating GBM cell viability and proliferation through MTT and LDH assays. Additionally, the study analyzed the oxidative burden of the GBM cell-line by measuring total antioxidant capacity (TAC) and total oxidant status (TOS) values, in order to further investigate the effects of *Radix astragalus* extracts. These advanced techniques allowed us to gain an in-depth understanding of the intricate molecular interactions between

GBM cells and the extracts, paving the way for the development of novel therapies that can effectively combat this highly malignant disease.

The findings of this study demonstrate the remarkable antitumorigenic activity of *Radix astragalus*, as it significantly reduced cell viability in the GBM cell-line. Moreover, the extract inhibited the oxidative stress of GBM cells, which is a crucial factor that contributes to the development and progression of GBMs. Furthermore, the antioxidant assays revealed increased antioxidant activity in *Radix astragalus*-treated GBM cells compared to normal GBM cells. These findings offer a promising solution for treating GBMs, which are notoriously challenging to treat.

The remarkable antitumorigenic activity of *Radix astragalus* identified in this study presents a novel avenue for cancer treatment research, with potential applications in the development of efficacious treatments against malignant brain tumors. Further exploration of the potential of *Radix astragalus* is warranted to pave the way for innovative therapies that can effectively combat GBMs.

**Keywords:** *GBM, Radix Astragalus, anticancer*

## REİSHİ, SHİITAKE VE MAİTAKE MANTAR KOMBİNASYONUNUN MEME KANSERİ HÜCRE KÜLTÜRÜ ÜZERİNDEKİ YARARLI ETKİLERİNİN ARAŞTIRILMASI

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### ÖZET

Asya toplumlarında hastalıklarla savaşma yetenekleri nedeniyle tıbbi özellikleri olan yenebilen mantarlar yüzyıllardır yüksek saygı görmektedir. Son yıllarda bilim adamları bu mantarların tedavi edici özelliklerini, özellikle de *Ganoderma lucidum* (Reishi), *Lentinula edodes* (Shiitake) ve *Grifola frondosa* (Maitake) mantarlarının anti-kanser etkilerini araştırmaya odaklanmışlardır. Bu üç mantar türü, akciğer hastalıkları ve kanser de dahil olmak üzere çeşitli hastalıkların tedavisine yardımcı olduğu tespit edilen biyoaktif bileşenler içermektedir.

Bu çalışmanın amacı, Reishi, Shiitake ve Maitake ekstralarının MCF-7 hücre hattı üzerindeki anti-kanser etkilerini değerlendirmektir. Çalışma, *Ganoderma lucidum*, *Lentinula edodes* ve *Grifola frondosa* ekstralarının MCF-7 hücre hattı üzerindeki biyolojik etkilerini MTT ve LDH testleri kullanarak inceledi. Daha sonra, bu ekstraların oksidatif yük üzerindeki etkileri MCF-7 hücre hattının toplam antioksidan kapasitesi (TAC) ve toplam oksidan durumu (TOS) değerlerini ölçerek araştırıldı.

Çalışmanın sonuçları, *Ganoderma lucidum*, *Lentinula edodes* ve *Grifola frondosa* ekstralarının MCF-7 hücrelerinde doza bağımlı olarak inhibitör etki gösterdiğini gösterdi. Bu, bu mantarların meme kanseri için terapötik ajan olarak potansiyel sahip olduklarını göstermektedir. Ayrıca, antioksidan testlerinden elde edilen sonuçlar, mantar tedavisi gören MCF-7 hücrelerinde normal MCF-7 hücrelerine kıyasla artan bir antioksidan aktivitesi olduğunu öne sürdü.

Anti-kanser özellikleri olan doğal ürünlerin kolayca temin edilebilir ve uygun fiyatlı olduğu göz önüne alındığında, meme kanserini önlemede ve tedavisine yardımcı olmak için diyet takviyeleri olarak kullanılabilirler. Bu çalışmanın umut verici sonuçları dikkate alındığında, bu mantarların anti-kanser etkilerinin altında yatan mekanizmaları ve meme kanseri için terapötik ajan olarak potansiyellerini araştırmak için daha fazla araştırmaya ihtiyaç vardır.

**Anahtar Kelimeler:** *MCF-7, Reishi-Shiitake-Maitake, antikanser*

### EXPLORING THE BENEFICIAL EFFECTS OF REISHI, SHIITAKE, AND MAITAKE MUSHROOM COMBINATION ON BREAST CANCER CELL CULTURE

#### ABSTRACT

Gourmet fungi with medicinal properties have been highly esteemed in Asian societies for centuries due to their ability to fight diseases. In recent years, scientists have focused on studying the therapeutic properties of these fungi, particularly the anti-cancer effects of *Ganoderma lucidum* (Reishi), *Lentinula edodes* (Shiitake), and *Grifola frondosa* (Maitake). These three types of fungi contain bioactive compounds that have been found to aid in the treatment of various diseases, including lung diseases and cancer.

The objective of this study was to evaluate the anti-cancer effects of a combination of Reishi, Shiitake, and Maitake extracts on the MCF-7 cell line. The study examined the biological effects of the extracts from *Ganoderma lucidum*, *Lentinula edodes*, and *Grifola frondosa* on the MCF-7 cell line using MTT and LDH assays. Subsequently, the effects of these extracts on the oxidative burden were investigated by measuring the total antioxidant capacity (TAC) and total oxidant status (TOS) values of the MCF-7 cell line.

The results of the study showed that the extracts from *Ganoderma lucidum*, *Lentinula edodes*, and *Grifola frondosa* exhibited a dose-dependent inhibition of MCF-7 cells. This suggests that these fungi have potential as therapeutic agents for breast cancer. Furthermore, the results obtained from antioxidant assays suggested an increased antioxidant activity in mushroom-treated MCF-7 cells as compared to normal MCF-7 cells.

It is noteworthy that natural products with anti-cancer properties are readily available and affordable. Therefore, they can be used as dietary supplements to prevent and assist in the treatment of breast cancer. Given the promising results of this study, further research is warranted to investigate the mechanisms underlying the anti-cancer effects of these mushrooms and to explore their potential as therapeutic agents for breast cancer.

**Keywords:** *MCF-7, Reishi-Shiitake-Maitake, anticancer*

## KUDRET NARI (*Momordica charantia* L.)'NİN VERİM VE KALİTE ÖZELLİKLERİNİN DEĞİŞİMİ

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### ÖZET

Kudret narı (*Momordica charantia* L.) cucurbitaceae familyasına ait tek yıllık, tropikal ve subtropikal bir bitkidir. Hindistan, Güneydoğu Asya, Çin, Afrika, Karayipler ve Akdeniz ülkeleri gibi birçok ülkede meyvesi için yetiştirilmektedir. Kudret narı meyveleri vitaminler ve mineral madde bakımından zengindir. Bu bitki antioksidan, antiviral, antimikrobiyal gibi özelliklere sahiptir. Ayrıca bu bitkinin kan şekerini düşürme özelliği vardır. Cucurbitaceae familyası, farmakolojik aktiviteye sahip birçok bileşen içeren tıbbi ve besleyici açıdan faydalı bitkilere sahiptir. Bu çalışma, kudret narının Bolu ekolojik koşullarında morfolojik, verim ve bazı kalite kriterlerini belirlemek amacıyla yürütülmüştür. %50 çiçeklenme süreleri 57-73 gün, ilk meyve bağlama 65-83 gün, bitki boyu değerleri 81,40-113,60 cm, meyve uzunluğu 8,45-9,12 cm, meyve çapı 35,96-39,77 cm, meyve et kalınlığı 3,98-4,64 mm, bitkide yaş meyve ağırlığı 21,89-78,96 g, dekara yaş meyve ağırlığı 109,44-393,44 kg, bitkide kuru meyve ağırlığı 1,23-3,38 g, dekara kuru meyve ağırlık değeri ise 6,14-16,90 kg arasında değişmiştir. Meyvede tohum sayısı 16,13-18 adet ve 1000 tane ağırlığı 118,40-182,20 g arasında belirlenmiştir. Kudret narının kalite kriterlerinden ham yağ oranının %29,00-32,82 arasında değiştiği belirlenmiştir. Toplamda 10 yağ asiti belirlenmiş olup, ana yağ asitlerinden kaprik asit miktarının %20,06-40,27 arasında, laurik asit miktarının %15,16-22,67 arasında ve linolelaidik asit miktarının %1,58-3,54 arasında belirlenmiştir. Çalışma sonucunda elde edilen verilere göre, kudret narı bitkisinin Bolu ekolojik koşullarında verim ve kalite kriterlerinin yüksek olduğu bulunmuştur. Sonuç olarak, kudret narının Bolu ekolojik koşullarında yetiştiriciliği önerilebilir.

**Anahtar Kelimeler:** Kudret narı, *Momordica charantia*, verim ve kalite

### VARIATION OF THE YIELD AND QUALITY PROPERTIES OF BITTER MELON (*Momordica charantia* L.)

#### ABSTRACT

Bitter melon (*Momordica charantia* L.) is an annual, tropical and subtropical plant belonging to the cucurbitaceae family. It is cultivated for its fruit in many countries such as India, Southeast Asia, China, Africa, the Caribbean and Mediterranean countries. Fruits are rich in vitamins and minerals. This plant has antioxidant, antiviral, antimicrobial properties. In addition, this plant has the ability to lower blood sugar. The cucurbitaceae family has medicinal and nutritionally beneficial plants containing many components with pharmacological activity. This study was carried out to determine the morphological, yield and some quality criteria of bitter melon under Bolu ecological conditions. 50% flowering times 57-73 days, first fruit linking 65-83 days, plant height between 81.40-113.60 cm, fruit length between 8.45-9.12 cm, fruit diameter between 35.96-39.77 cm, fruit thickness between 3.98-4.64 mm, fresh fruit weight per plant between 21.89-78.96 g, fresh fruit weight per decare between 109.44-393.44 kg, dry fruit weight per plant between 1.23-3,38 g, and the dry fruit weight value per decare between 6.14-16.90 kg were determined. The number of seeds in the fruit was determined between 16.13-18 and the weight of 1000 seeds was between 118.40-182.20 g. When the quality criteria of bitter melon are examined; crude fatty oil between 29.00-32.82%. Totally 10 fatty acid compositions were determined. Among the main fatty acids, capric acid was determined between 20.06-40.27%, lauric acid between 15.16-22.67% and linolelaidic acid between 1.58-3.54%. According to the data obtained as a result of the study, it was found that the yield and quality criteria of the bitter melon

were high in Bolu ecological conditions. As a result, it can be recommended to grow bitter melon under Bolu ecological conditions.

**Keywords:** *Bitter melon, Momordica charantia, yield and quality*

## BALIK RESTORANLARINDAKİ HİZMET KALİTESİ İLE MÜŞTERİ MEMNUNİYETİ ARASINDAKİ İLİŞKİ

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### ÖZET

Turizm etkinliklerinde ve hizmet sektöründe müşterinin memnun edilmesi temel amaçlardandır. Hizmet sektörü, her geçen gün gelişen, yenilenen ve rekabetin artmasını sağlayan bir pazardır. Ürün ve hizmetlerin birbirinden ayırt edilebilmesi, müşteriye hitap edebilmesi, kalıcı hale gelmesi için yapılan tüm çalışmalar müşteri memnuniyetiyle geri dönüş sağlamaktadır. Böylece müşteride kalıcı deneyimler sağlayan işletmeler rakipler karşısında avantajlı konuma geçmektedir. Balık restoranlarının müşteri memnuniyeti üzerindeki en büyük etkilerinden biri ise; hizmet kalitesidir. Hizmet kalitesi; müşterilerin, bekledikleri düzeyde hizmetin ne kadar iyi bir şekilde sunulduğunun bir ölçümüdür (Lewis vd., 1983: 99). Bu ölçümle müşteri portföyü oluşmakta ve balık restoranlarının tercih edilme sebepleri gözlemlenmektedir.

Çalışmanın amacı, balık restoranı hizmet kalitesi ile müşteri memnuniyetinin ölçülmesi, bu değişkenler arasındaki ilişkinin değerlendirilmesi ve bulguların araştırmacı /karar vericilere sunulmasıdır. Bu kapsamda ilgili literatürden (Andaleeb & Conway, 2006; Ha & Jang, 2010; Min & Lee, 2014) restoranlar ile balık restoranlarında sunulan hizmet kalitesi üzerine -ikisi tutarlılık ölçümü amacıyla olmak üzere- toplam 30 soru üzerinden likert ölçeğinde anket oluşturulmuştur. Ayrıca 7 konu üzerinden müşteri memnuniyeti üzerine sorular oluşturulmuştur. Bu anket Zonguldak'ta Balık restoranlarından hizmet alan müşteriler üzerinde uygulanmıştır. İlgili literatürde özellikle sonbahar-kış sezonunda balık tüketilmesi kültürünü yoğun yaşadığı Karadeniz bölgesinde Balık restoranlarındaki müşteri memnuniyeti ile hizmet kalitesini ölçen bir çalışmaya rastlanmamış olması, çalışma bulgularının önemini arttırdığı şeklinde yorumlanmıştır. Anket üzerinden elde edilen veriler ile balık restoranlarının sunduğu hizmet kalitesi boyutları ve müşteri memnuniyeti arasındaki ilişki yanısıra müşterilerin kişisel özelliklerine göre farklılaşmalar t testi/ANOVA gibi istatistiksel testlerle incelenmesi ve yorumlanması planlanmıştır.

**Anahtar Kelimeler:** Balık restoranları, Hizmet Kalitesi, Müşteri Memnuniyeti.

## THE RELATIONSHIP BETWEEN SERVICE QUALITY IN FISH RESTAURANTS AND CUSTOMER SATISFACTION

### ABSTRACT

Satisfying the customer is one of the main objectives in tourism activities and in the service sector. The service sector is a market that is developing, renewing and increasing competition day by day. All efforts to distinguish products and services from each other, to appeal to customers and to make them permanent, provide customer satisfaction. Thus, businesses that provide lasting customer experiences gain an advantageous position against their competitors. One of the biggest effects of fish restaurants on customer satisfaction is; is service quality. Service quality; It is a measure of how well the service is provided at the level that customers expect (Lewis et al., 1983: 99). With this measurement, the customer portfolio is formed and the reasons why fish restaurants are preferred are observed.

The aim of the study is to measure the fish restaurant service quality and customer satisfaction, to evaluate the relationship between these variables and to present the findings to the researchers /decision makers. In this context, a Likert scale questionnaire was prepared on fish restaurants for the service quality offered from the relevant literature (Andaleeb & Conway, 2006; Ha & Jang, 2010; Min & Lee, 2014), and survey

was conducted over a total of 30 items (with 6 dimensions), two of which were for the purpose of measuring consistency of repliers. In addition, questions on customer satisfaction questionnaire were formed with 7 items. This survey was applied to customers who received service from fish restaurants in Zonguldak. The fact that there is no study observed in the related literature measuring customer satisfaction and service quality in fish restaurants in the Black Sea region, where the culture of consuming fish is intense, especially in the autumn-winter season, has been interpreted as increasing the importance of the study findings. It is planned to analyze data obtained through the survey statistically and interpret results about the relationship between the service quality dimensions offered by fish restaurants and customer satisfaction, as well as the differences according to the individual characteristics of the customers, via statistical tests such as t-test/ANOVA.

**Keywords:** Fish restaurants, Service Quality, Customer Satisfaction



## TIBBİ VE AROMATİK BİTKİLERDE BİYO-GÜBRE UYGULAMALARININ VERİM VE KALİTE ÜZERİNDEKİ ROLÜ

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### ÖZET

Kimyasal gübreler bitki yetiştiriciliğinde önemli verim artışlarına yol açmakla birlikte, bu gübrelerin giderek artan bir şekilde kullanımı ekosistemi, toprak ve su kalitesini olumsuz etkilemektedir. Son yıllarda toprak kalitesinin devamlılığındaki öneminin anlaşılmasıyla birlikte, üretimde çevre dostu, sürdürülebilir üretimi sağlamak amacıyla organik, biyo- gübrelerin uygulamaları yaygınlaşmaktadır. Özellikle çevresel stresler ile baş edebilmek ve tarımsal alanlarda gübre kullanımını azaltmak için biyo-gübreler tarımsal alanların iyileştirilmesinde, idare edilmesinde ve sorunların çözümünde alternatif bir çözüm aracı olarak görülmektedir. Biyo-gübreler toprağın fiziko-kimyasal özellikleri ve verimliliği artırarak, toprağı biyolojik olarak harekete geçirdiklerinden bitki büyümesini teşvik eder ve fitohormon üretirler, böylece bitkide verim ve kalitenin artmasına neden olurlar. Bununla birlikte biyogübrelerin ekosistemdeki böcek ve mikroorganizmalara zarar vermediği de bildirilmektedir. Biyo-gübreleri araştırmacılar farklı şekilde sınıflandırmakla birlikte Roy vd (2006) biyogübrelerin; N-fikse edici biyogübreler (Rhizobium, Azotobacter, Azospirillum, Clostridium ve Acetobacter bakterileri, mavi-yeşil algler (siyanobakteriler) ve Azolla bitkisi (mavi-yeşil alg ile simbiyoz halindeki eğrelti otu), P-çözücü/taşıyıcı biyogübreler (Bacillus, Pseudomonas, Aspergillus ve vesikular arbuskular mikoriza (VAM ya da AM) gibi bakteri ve funguslar), kompost hızlandırıcılar (selülotik (Trichoderma) ve lignolitik (Humicola) funguslar) ve bitki gelişimini teşvik eden rizobakteriler (Pseudomonas cinsi içinde yer alırlar) olmak üzere toplam 4 kategori içinde sınıflandırılabilirliğini bildirmişlerdir. Tıbbi ve aromatik bitkilerin yetiştirilmesinde yoğun kimyasal yada organik, biyoorganik uygulamalar verim yanı sıra biyoaktif madde üretim miktarını ve kalitesini etkilemektedir. Yapılan birçok çalışmada özellikle stres koşullarında uygulanan biyo-gübrelerin tıbbi ve aromatik bitkilerde biyoaktif madde üretimini artırdığı bildirilmiştir. Bu derlemede biyo-gübre uygulamalarının tıbbi ve aromatik bitkilerin verime ve kalite üzerine etkileri irdelenecektir.

**Anahtar Kelimeler:** *Tıbbi ve aromatik bitki, biyo-gübre, verim ve kalite*

### THE ROLE OF BIO-FERTILIZER APPLICATIONS ON YIELD AND QUALITY IN MEDICINAL AND AROMATIC PLANTS

#### ABSTRACT

Although chemical fertilizers lead to significant yield increases in plant cultivation, the increasing use of these fertilizers negatively affects the ecosystem, soil and water quality. In recent years, with the understanding of the importance of the continuity of soil quality, the applications of organic and bio-fertilizers have become widespread in order to ensure environmentally friendly and sustainable production in production. In order to cope with environmental stresses and to reduce the use of fertilizers in agricultural areas, bio-fertilizers are seen as an alternative solution tool in the improvement and management of agricultural areas and in solving problems. By increasing the physico-chemical properties and productivity of the soil, bio-fertilizers stimulate plant growth and produce phytohormones, as they activate the soil biologically, thus increasing the yield and quality of the plant. However, it is also reported that biofertilizers do not harm the insects and microorganisms in the ecosystem. Roy et al. (2006) reported that the biofertilizers can be classified as N-fixing biofertilizers (Rhizobium, Azotobacter, Azospirillum, Clostridium and Acetobacter bacteria, blue-green algae (cyanobacteria) and Azolla plant (fern in symbiosis with blue-

green algae)), P-solvent/carrier biofertilizers (Bacillus, Pseudomonas), a total of 4 categories: bacteria and fungi such as Aspergillus and vesicular arbuscular mycorrhiza (VAM or AM), compost accelerators (cellulotic (Trichoderma) and lignolytic (Humicola) fungi) and plant growth promoting rhizobacteria (included in the genus Pseudomonas). Intensive chemical or organic, bioorganic applications in the cultivation of medicinal and aromatic plants affect the production amount and quality of bioactive substances as well as yield. In many studies, it has been reported that bio-fertilizers applied especially under stress conditions increase the production of bioactive substances in medicinal and aromatic plants. In this review, the effects of bio-fertilizer applications on the yield and quality of medicinal and aromatic plants will be discussed.

**Keywords:** *Medicinal and aromatic plant, bio-fertilizer, yield and quality*

## THE IMPACTS OF CLIMATE CHANGE ON TURFGRASS MANAGEMENT: THE EXAMPLE OF IZMIR PROVINCE, TURKEY

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### ABSTRACT

*Climate change* is a phenomenon attributed to increased anthropogenic greenhouse gases in the atmosphere, particularly carbon dioxide (CO<sub>2</sub>), resulting from human activities such as burning fossil fuels, deforestation, and land-use changes. This increase in carbon dioxide and other greenhouse gases leads to global warming, which causes changes in temperature, precipitation, and extreme weather events in certain regions. The Mediterranean Climate Zone, including the province of Izmir, is one of the most vulnerable areas to the impacts of climate change worldwide. It has been identified as a hotspot for climate change, with predicted increases in temperature, changes in precipitation patterns, and an increase in the frequency and intensity of extreme weather events such as droughts and floods. The impacts of climate change on turfgrass management are significant due to the rise in temperatures and changes in precipitation patterns, which can adversely affect grass growth and maintenance. To mitigate these impacts, various adaptive strategies must be developed to maintain healthy turf and promote sustainable land use practices in the face of changing climatic conditions. On the other hand, the growth potential of turfgrass can be modeled based on air temperatures. Using this modeling approach, the effects of climate change and global warming on the growth and development of turfgrass can also be determined. In this study, the overall impacts of climate change on turfgrass establishment and management were examined. Additionally, based on temperature data from past and present years in the Mediterranean climate conditions of Izmir province, the growth potential values of cool-season (C3) and warm-season (C4) turfgrass were calculated. The effects of climate change on turfgrass in Izmir province were evaluated by comparing the growth potential values of different years.

**Keywords:** Climate change, turfgrasses, growth potential

### İKLİM DEĞİŞİKLİĞİNİN ÇİM ALAN YÖNETİMİ ÜZERİNE ETKİLERİ: İZMİR İLİ ÖRNEĞİ

#### ÖZET

*İklim değişikliği*, fosil yakıtların yakılması, ormansızlaşma ve arazi kullanımındaki değişiklikler gibi insan faaliyetlerinden kaynaklanan, atmosferdeki artan antropojenik sera gazlarına, özellikle de karbondioksit (CO<sub>2</sub>) atfedilen bir olgudur. Karbondioksit ve diğer sera gazlarındaki bu artışın, küresel ısınmaya yol açarak, belirli bölgelerde sıcaklık, yağış ve aşırı hava olaylarında değişikliklere neden olduğu bilinmektedir. İzmir İli'nin de içinde bulunduğu Akdeniz İklim Kuşağı, dünya genelinde iklim değişikliğinin etkilerine karşı en savunmasız bölgelerden biridir. Sıcaklıkta tahmin edilen artışlar, yağış modellerindeki değişiklikler ve kuraklık ve sel gibi aşırı hava olaylarının sıklığı ve yoğunluğundaki artış ile iklim değişikliği için bir sıcak nokta olarak tanımlanmıştır. İklim değişikliğinin çim alan yönetimi üzerindeki etkileri, çim bitkilerinin büyümesi ve bakımı üzerinde olumsuz etkileri olabilecek sıcaklıklardaki artış ve yağış modellerindeki değişiklikler nedeniyle önemlidir. Bu etkileri azaltmak için, sağlıklı çimin sürekli olarak korunmasını sağlamak ve değişen iklim koşulları karşısında sürdürülebilir arazi kullanım uygulamalarını teşvik etmek için çeşitli uyarlanabilir stratejilerin geliştirilmesi gerekmektedir. Öte yandan, çim bitkilerinin büyüme potansiyelleri hava sıcaklıklarına göre modellenebilmektedir. Bu modelleme yaklaşımı kullanılarak, iklim değişikliğinin ve küresel ısınmanın çim bitkilerinin büyümesi ve gelişmesi üzerindeki etkileri de belirlenebilmektedir. Bu çalışmada, iklim değişikliğinin çim bitkileri üzerindeki genel etkileri incelenmiştir. Ayrıca, Akdeniz iklim koşullarındaki İzmir İli'nde mevcut ve geçmiş yıllara ait sıcaklık verilerinden yararlanılarak serin iklim (C3) ve sıcak iklim (C4) çim bitkilerinin büyüme potansiyelleri hesaplanmıştır. İklim değişikliğinin İzmir İli'ndeki çim alanlar üzerindeki etkileri, farklı yıllara ait büyüme potansiyeli değerleri karşılaştırılarak değerlendirilmiştir.

**Anahtar Kelimeler:** İklim değişikliği, çim bitkileri, büyüme potansiyeli

## APPLICAITON OF A NOVEL IL-BASED DLLME METHOD COUPLED WITH UV-VIS. FOR EXTRACTION AND DETECTION OF IRON(III) IN SOME COMMERCIAL FOOD PRODUCTS

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### ABSTRACT

The selective determinations of metal ions is of great importance. Although high-sensitivity analytical instruments have been developed recently, a pre-enrichment process is often required for the determination of low-concentration metals in the sample medium due to the matrix degrading effect. Solvent microextraction (SME) techniques as pre-enrichment process have evolved a lot, especially since 1995. There are many types of SME. Dispersive liquid-liquid microextraction (DLLME), which was first introduced by Assadi and her colleagues in 2006, is one of them. The DLLME method, which is based on the rapid injection of dispersive and extractive solvents onto the aqueous sample containing the analyte, is very fast, easy to apply, low cost and environmentally friendly.

The use of ionic liquids (IL) as the extraction solvent increases the environmental sensitivity of the method. Due to the limited number of extraction solvents and the high toxicity of most of them, it has been necessary to search for alternative solvents for the DLLME method. Recently, much research has focused on the use of ionic liquids (ILs) as extraction solvents.

In the present study, a simple, inexpensive, prompt and efficient IL- DLLME method was developed for spectrophotometric determination of Fe<sup>3+</sup>. The method is based on the complexation of Fe<sup>3+</sup> with an commercial phthalocyanine named direct blue 86 in the water medium and than preconcentration of the formed complex from aqueous sample using proposed IL-DLLME. The linear range of method is 2.8-156 µg/mL. The limits of dedection (LOD) and the limits of quantification of method (LOQ) are 0.51 µg/mL and 1.54 µg/mL, respectively. The enrichment factor is 234 and pH is 5.0. After the optimization and validation of method, the Fe<sup>3+</sup> analyze has been done in commercial food product. The % RSS values of all analyzes were below 5%.

**Keywords:** DLLME, Ionic Liquids, Iron (III), Spectrophotometry

## SIGNIFICANCE OF LEGUMES IN INCREASE OF SOIL FERTILITY

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### ABSTRACT

Today, in the conditions of the development of innovative technologies and the unconditional influence of anthropogenic load on the environment, modern farmers are faced with a new conceptual strategy for farming. And preservation of soil fertility is one of the main points of this concept, in which case legumes can help solve this issue. Plants of the legume family differ markedly from many agricultural crops due to the ability of bacteria to fix nitrogen on the roots of these plants. The process of nitrogen fixation is the most effective way to provide the soil with biological nitrogen, which is necessary for the formation of high yields. Soon after the germination of the legume seeds, the germination of bacteria begins, which are attached to the roots of the plant with an infectious thread, followed by the formation of nodules. Nitrogen in the air of soil pores around nodules is fixed, binding it with other elements and, thus, converting it into a form available to plants. The amount of fixed nitrogen usually depends on the type and variety of legumes. Most legumes can obtain 50 to 80% of their total nitrogen requirement through biological fixation, thereby increasing soil fertility.

**Key words:** legumes, roots, nitrogen, soil fertility.

## ENVIRONMENTAL VECTOR OF ECONOMIC AND INNOVATIVE TECHNOLOGIES FOR THE DEVELOPMENT OF BEEKEEPING UNDER THE CONDITIONS OF CLIMATE CHANGE

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### ABSTRACT

Ukraine is one of the leading countries in the world with developed beekeeping. Its development was ensured by the appropriate natural and climatic conditions, the abundance of honey plants in forests, meadows and steppes, which contributed to the production of high-quality honey-cutting botanical varieties and other valuable bee nest products. Ukraine occupies a favorable geographical position, which makes it expedient to develop beekeeping on a large scale. Which make it possible to produce products not only to meet domestic demand, but also for export. The study of possible ways of accelerated development of the beekeeping industry and the formation of the market for its products is now of priority importance.

The development of a strategic idea of an ecological vector of economic and innovative technologies for the development of beekeeping in the conditions of climate change in the South of Ukraine, which will give producers the opportunity to control the work of their own apiary, create optimal conditions for running their own farm, and increase the level and quality of the obtained products, is especially urgent. Solutions to issues based on the impact of climate changes on the development of bees, modeling their adaptation and acclimatization to weather changes in the climate during the production of beekeeping products in agricultural enterprises and small farms. Economic and innovative technologies for the development of agrarian production of beekeeping products will be analyzed and adapted to the conditions of the Southern region of Ukraine, namely the Kherson region.

**Key words:** beekeeping, honey, apiary, production development.

## **CONTROL AND TESTING OF BEACH WATCHERS ATHLETES AND INCREASE THEIR PHYSICAL CONDITION**

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### **ABSTRACT**

This study is the first and only one of its kind in Albania. Beach watchers or coast guards are necessary on the Albanian coast. this and with an order from the Ministry of Tourism. How much do they meet the required standards? The control and testing of the physical condition of beach-watching athletes will be the focus of our study. In order to improve their physical condition, a 5-week training was undertaken and the results were compared at the beginning and at the end of the physical training.

For its realization, we researched and documented a large amount of literature of the last eight

The preferred method is that of observation and experiment. The physical tests of the samples have been entered into the database and compared using the Excel program to graphically show the results and their parameters. The results and analysis of this material gave an accurate conclusion on the focus of our study, as a result, the physical preparation of the subjects has room for improvement and should be done in a longer time and with a relevant and specific program for this type of sports profession.

**Keywords:** Coast Guard, testing, physical training.

## UNBLOCKING PARTIALLY CLOGGED BLOOD VESSELS

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### **ABSTRACT**

This research assesses the speed of saline fluid in vein vessels using venipuncture medical kit as well as DC submersive pumps that are being controlled by a microcontroller. The microcontroller is monitored and governed using a software IDE interface installed on a powerful laptop. Saline solution is being pumped through a medical syringe at variable speeds up to a maximum of 18.39 cm/second to the vein. The novel technique in this research is the usage of two pumps called Pump 1 and Pump 2. Pump 1 is used to physically model the flow of "blood" in human vein and the second pump (Pump2) is used to generate the accelerated saline particles that are used to break the yellow grease that is placed on the inside of the vein's wall. A tiny brush is briefly dipped into yellow grease, and then it is used to place one layer (one turn) of yellow grease on the inside of the vein's wall, and then this procedure is repeated to place consecutive layers of yellow grease onto the inside of the wall of the vein vessel using a tiny brush. It was found that accelerated saline particles can in fact destroy fats that are built up inside the veins' walls.

**Keywords:** Blood Clot, Fat Deposits, Fat Removals, Veins, Microcontroller, Saline Particles



**PROTECTION OF SEXUAL INTEGRITY (FREEDOM) OF CITIZENS DURING WAR BY  
INTERNATIONAL CRIMINAL LAW: UKRAINE CASE**

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**ABSTRACT**

The article reveals the components of protection by instruments of international criminal law of sexual integrity and freedom of citizens during the war in Ukraine.

Objectives:

to determine the values violated by the crimes of the Russian Federation military;

to classify such crimes according to the norms of international criminal law;

identify problems with prevention of such crimes, their termination and effective investigation;

outline measures to prevent future wartime sexual violence.

Methods: hermeneutic, formal-dogmatic, legal anthropology and sociology.

Results. It was found that the subject of criminological research by the international community should be the issues of connection between masculinity and crimes of sexual violence, as well as perversions of the criminals' consciousness who abused children. The reasons for targeting sexual crimes by the Russian military exclusively against citizens of Ukraine are subject to study. There are no answers to the question of the correlation of these crimes with homicidal mania and all their other war crimes based on the national character. As well, the author established that national systems of law and criminal justice bodies do not have the ability to properly record the huge amount of evidence of war crimes thousands.

Conclusions. Since the beginning of the Russian Federation's full-scale war against Ukraine, the Russian military has committed tens of thousands of war crimes. Among them, crimes against life, health, sexual integrity and freedom became the main ones. All of them are part of a crime against humanity, which is under investigation by the International Criminal Court of the United Nations and defined as such in a number of legal documents adopted by public bodies of states and international organizations.

**Key words:** rule of law, war crime, forensic examination, humanity, investigation, sexual violence, justice.

**TRACING THE TRANSITION FROM VERNACULAR TO MODERN ARCHITECTURE IN THE CITY OF TOUGGOURT IN SOUTHERN ALGERIA: AN EXPLORATION OF THE VARIOUS HISTORICAL MONUMENTS IN THE REGION.**

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**ABSTRACT**

The city of Touggourt in southern Algeria is known for its rich architectural heritage that reflects its complex and diverse history. This research article focuses on the transition from vernacular to modern architecture in the region, examining various historical monuments that embody the unique cultural and architectural identity of Touggourt. Combining archival research and on-site observation, this study provides a comprehensive investigation of the evolution of architectural styles and features in Touggourt. The research identifies distinctive patterns and features that are unique to each era and architectural style, ranging from the austere ornamentation of vernacular architecture to the minimalism of modernism. This research contributes to a deeper understanding of the cultural and historical significance of Touggourt's architectural heritage, and provides valuable insights for the preservation and future development of the city.

**Keywords** – *Vernacular Heritage, Modern architecture, cultural context, Historical monuments.*

## VARIOUS PERSPECTIVES ON THE INFLUENCE IN ARCHITECTURE: AN EXPLORATORY LITERARY OVERVIEW

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### ABSTRACT

The concept of influence has played a significant role in architectural discourse and practice over the centuries. It has been explored by numerous scholars and practitioners, who have attempted to understand the complex and dynamic nature of how ideas, values, and methods of practice are transmitted and transformed over time. In this paper, we analyze different books on the concept of influence in architecture using a technique of literary analysis. Our goal is to present a comprehensive overview of the diverse perspectives on influence and to highlight the critical importance of cultural context, historical forces, and personal experiences in shaping architectural production. By examining the key ideas and arguments of each book, we aim to deepen our understanding of how architects are situated within larger networks of influence that shape their work and the built environment.

**Keywords** – *Influence, Architecture, cultural context, Literary analysis.*

## THERMAL PROPERTIES OF COMPRESSED EARTH BLOCK WITH STRAW

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### ABSTRACT

Earth's population suffers from global warming problems, especially high temperatures. People build their homes according to the climatic nature of the region. Each region has certain characteristics (temperature, humidity, sea, mountains, forests, etc.). Residents of southern Algeria suffer from high temperatures in the summer. They use special compressed bricks made of clay, straw, and sand to build their homes. In this research, we will study the amount of thermal insulation in these bricks. We use laboratory methods to determine the percentage of heat transmitted through the walls over time. We study the physical properties, such as density and water absorption rate, and measure the amount of stress required to break the samples. Preliminary results show that adding a percentage (0.1% to 0.5%) of straw to bricks consisting of 30% sand and 70% clay decreases the density by (4%-12%), and increases water absorption (12%–14.7%), and increases the stresses (22%–38%). These properties make the bricks increase the insulation between 20% and 28%. Consequently, this makes us link the physical and thermal properties of this brick. Furthermore, it reinforces the study of the effect of adding straw to compressed clay bricks in similar areas.

**Keywords:** Compressed earth block. Physical properties. Thermal insulation.

## PEROVSKITE SOLAR CELL STRUCTURE MODELING USING A Bi-ETL of TiO<sub>2</sub> AND SnO<sub>2</sub> THIN FILMS

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### ABSTRACT

Engineering the extraction and recombination of electron-hole pairs in planar perovskite solar cells (PSCs) by adjustment of the electron transport layer (ETL)/perovskite interface is crucial for achieving high performance. The main goal of this study is to improve the properties of the interface between TiO<sub>2</sub> and perovskite by adding an ultra-thin layer (UTL) of SnO<sub>2</sub> that is less than 10 nm thick. The performance of SnO<sub>2</sub> UTL was simulated using SILVACO-ATLAS. The simulated solar cell is made of layers of NiO/Perovskite/SnO<sub>2</sub>/TiO<sub>2</sub>, where NiO is the Hole transport layer (HTL), SnO<sub>2</sub>/TiO<sub>2</sub> is the Bi-layer electron transport (Bi-ETL), and CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub> is the perovskite (PVK) absorber layer. So, the layer thicknesses of different materials are changed to find the best way for solar cells to convert light into electricity. According to the findings, the optimal layer thicknesses for achieving a power conversion efficiency of 25.15% with NiO, SnO<sub>2</sub>, TiO<sub>2</sub>, and PVK are 800, 4, 50 nm, and 1000 nm respectively. It was discovered that the bilayer-structured ETL has benefits of both strong electron extraction and reduced interfacial recombination, which are mostly attributable to improved energy alignment. This work presents a straightforward and potentially fruitful strategy for building solar devices with appropriate charge transport and recombination features.

**Keywords:** Electron transport bilayer, Numerical simulation, Perovskite solar cells (PSCs), SILVACO-ATLAS, SnO<sub>2</sub>, TiO<sub>2</sub>.

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Bilgilerinize arz edilir,

Saygılarımla



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