



# 7<sup>TH</sup> INTERNATIONAL BLACK SEA MODERN SCIENTIFIC RESEARCH CONGRESS

JUNE 24-26, 2025 / ARTVIN, TÜRKİYE

## ABSTRACT BOOK

EDITOR: ASSIST. PROF. DR. MEHMET TATOĞLU

ISBN: 979-8-89695-113-1

# 7th INTERNATIONAL BLACK SEA MODERN SCIENTIFIC RESEARCH CONGRESS

June 24-26, 2025

Artvin, Türkiye

20.07.2025

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adopted by Mariam Rasulan

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ISBN: 979-8-89695-113-1

# CONGRESS ID

## CONGRESS TITLE

7th INTERNATIONAL BLACK SEA MODERN SCIENTIFIC RESEARCH  
CONGRESS

## DATE AND PLACE

June 24-26, 2025

Artvin, Türkiye

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IKSAD INSTITUTE

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20.07.2025

REF: Akademik Teşvik

İlgili makama;

7. Uluslararası Karadeniz Modern Bilimsel Araştırmalar Kongresi, 24-26 Haziran 2025 tarihleri arasında Artvin’de 25 farklı ülkenin (Türkiye 120 bildiri- Diğer ülkeler 128 bildiri) akademisyen/araştırmacılarının katılımıyla gerçekleşmiştir

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İlgi dilekçenize istinaden 24-26 Haziran 2025 tarihinde Artvin’de yapılacak olan 7. Uluslararası Karadeniz Modern Bilimsel Araştırmalar Kongresi’nde Düzenleme Kurulu ve Bilim ve Danışma Kurulunda görev almanız Müdürlüğümüzce uygun görülmüştür.  
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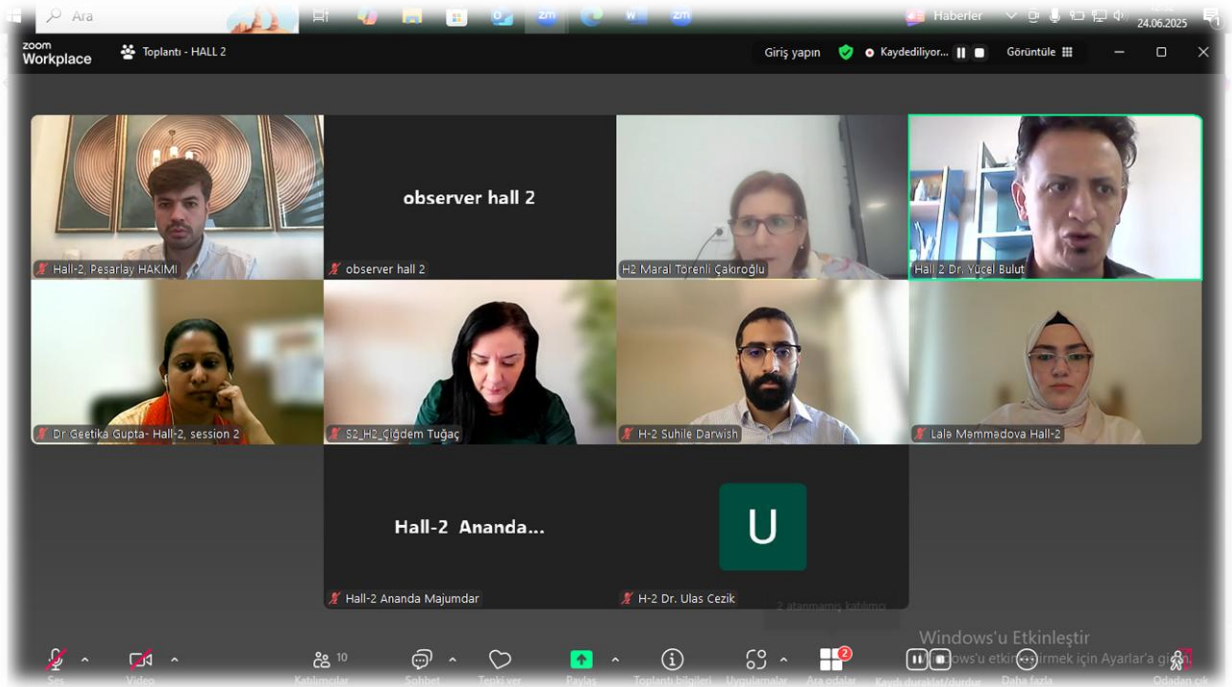
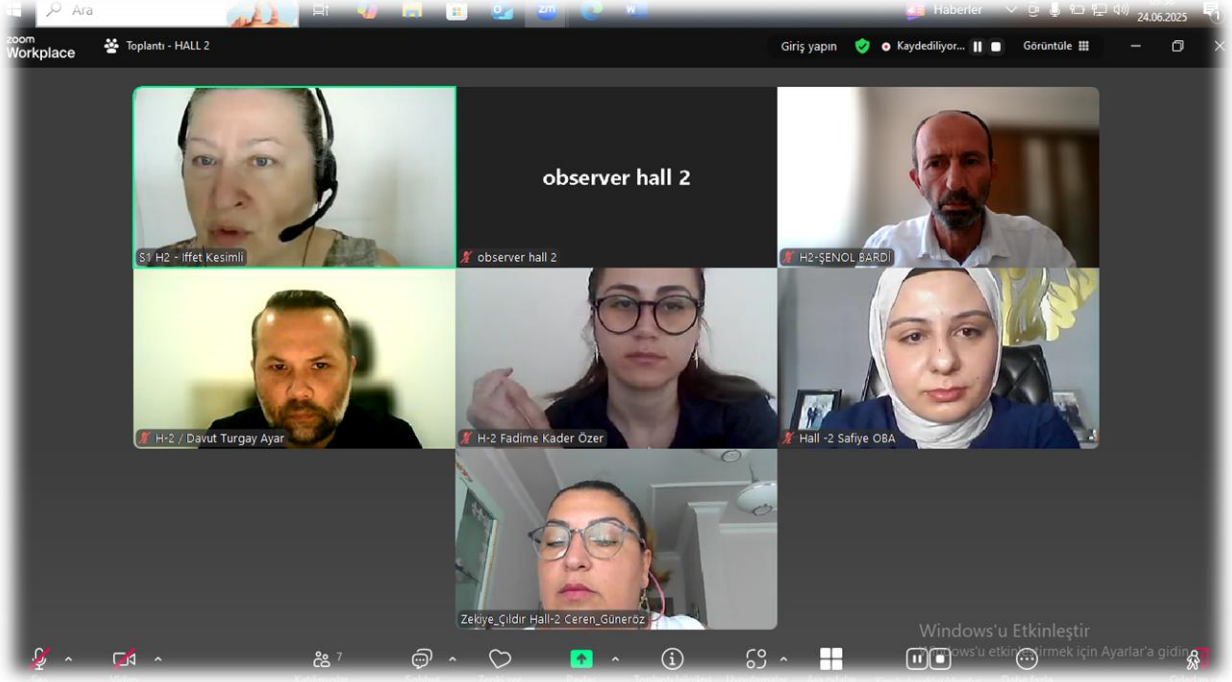
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# PHOTO GALLERY

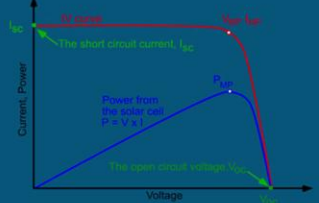
zoom Workplace

H2 - AMZAR KHALILU BIN KH

Giriş yapın Kaydediliyor... Görüntüle

## CONCLUSION

In conclusion, this research validates the utility of simulation tools in resistance-based solar panel evaluation and supports their application in system optimization, performance diagnostics, and informed technology selection for energy sustainability.



Windows'u Etkinleştir

Windows'u etkinleştirmek için Ayarlar'a gidin

zoom Workplace

Alexander Plakida adlı kişinin ekr

Giriş yapın Kaydediliyor... Görüntüle

26°C Güneşli 24.06.2025

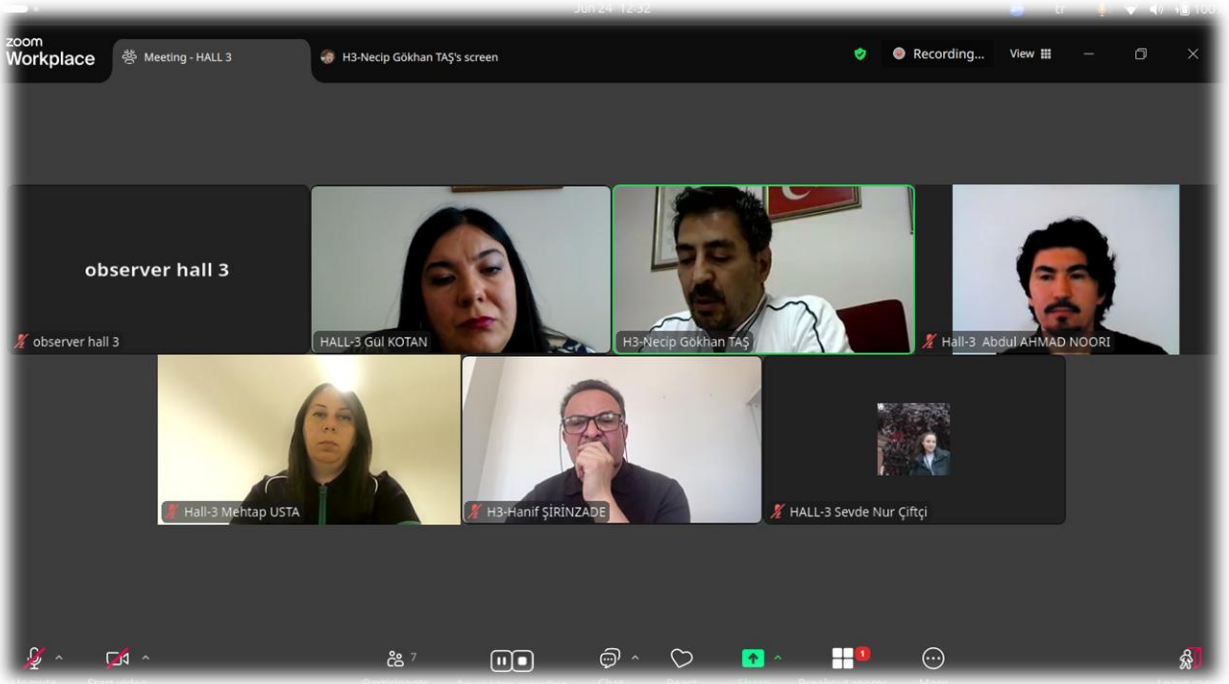
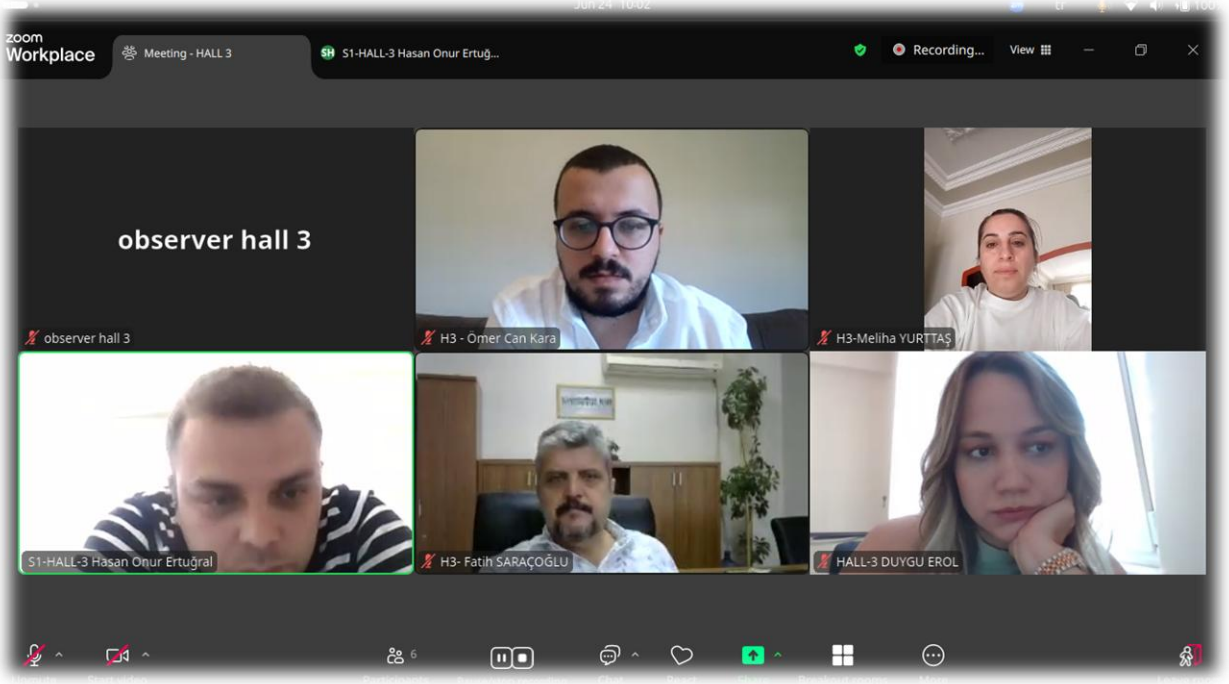


Figure 1 Correct electrode placement

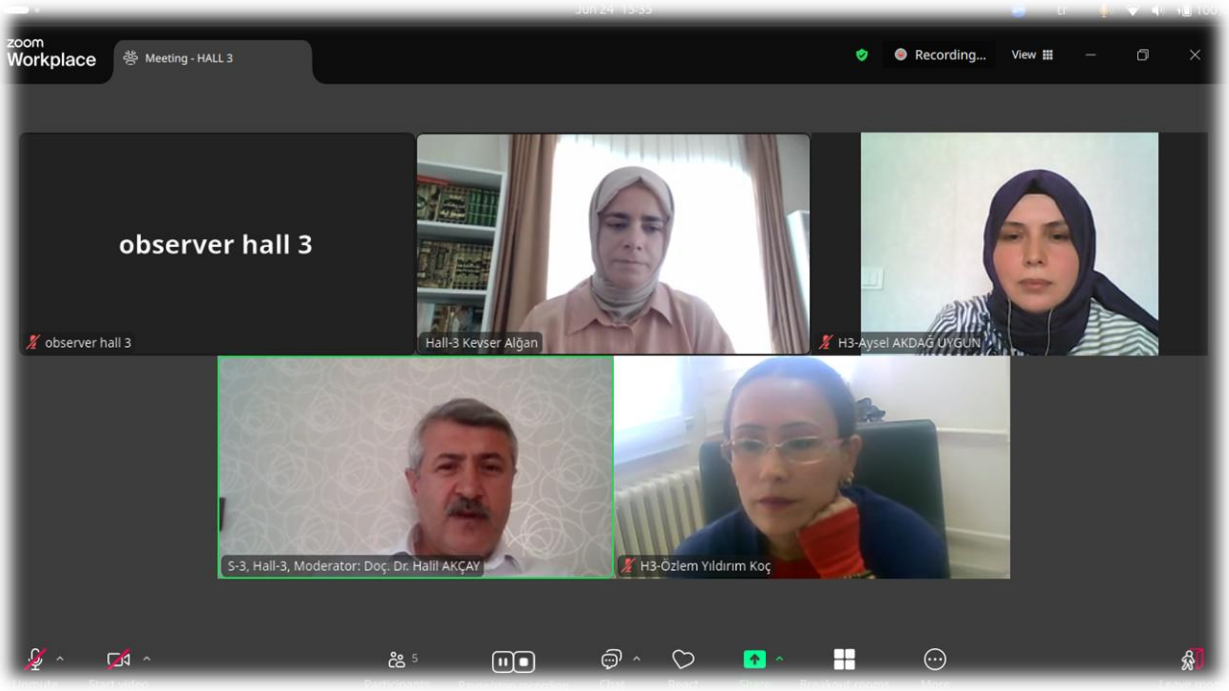
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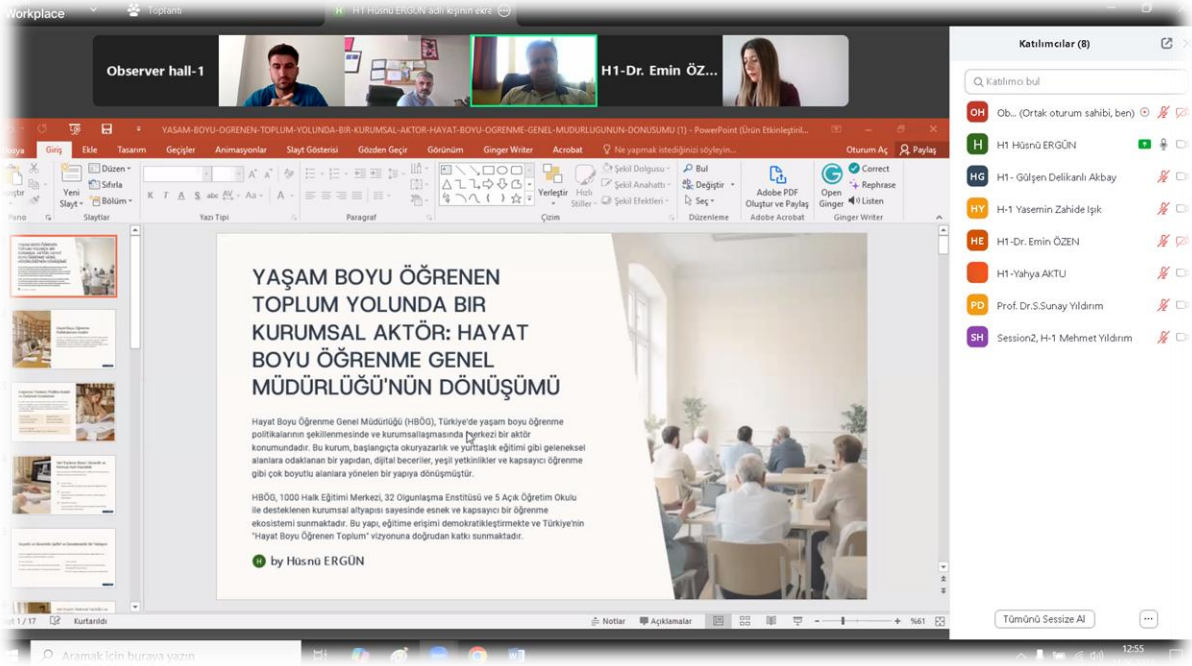
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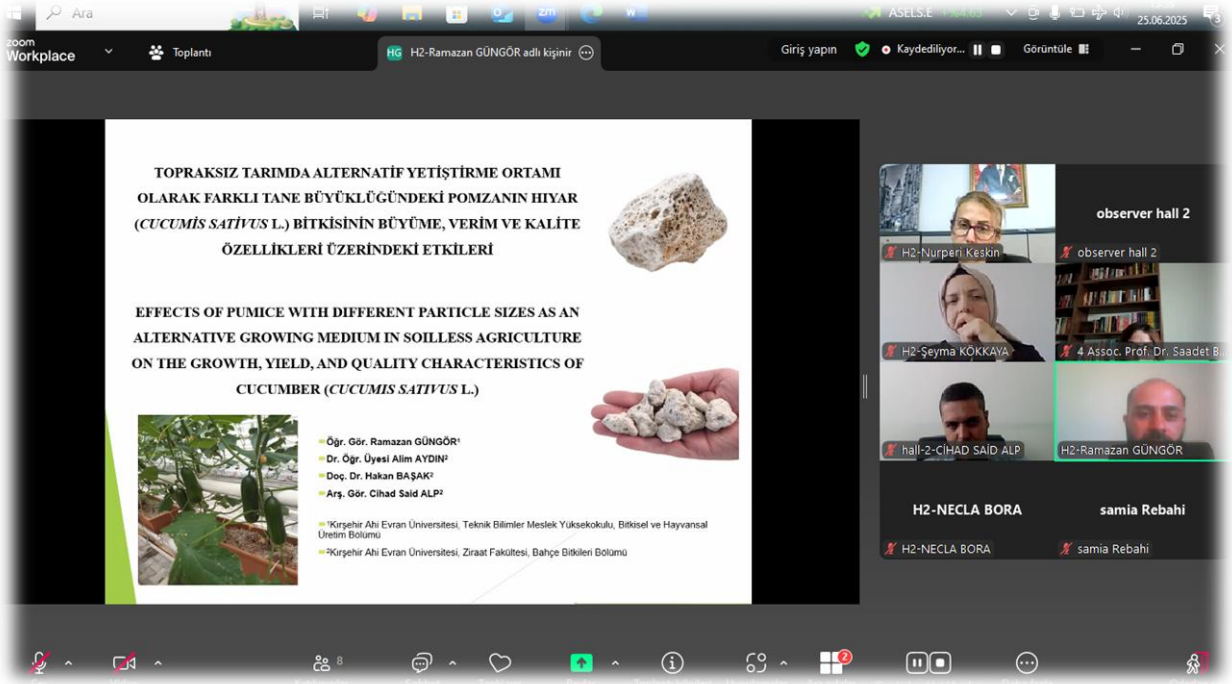
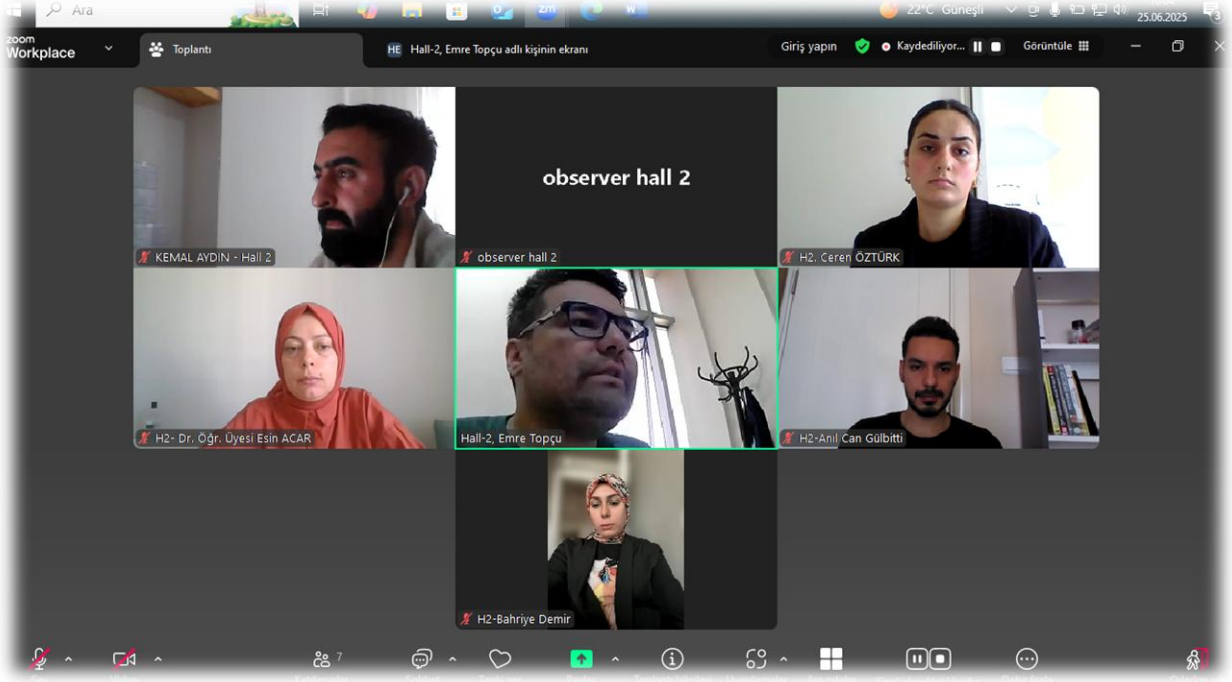
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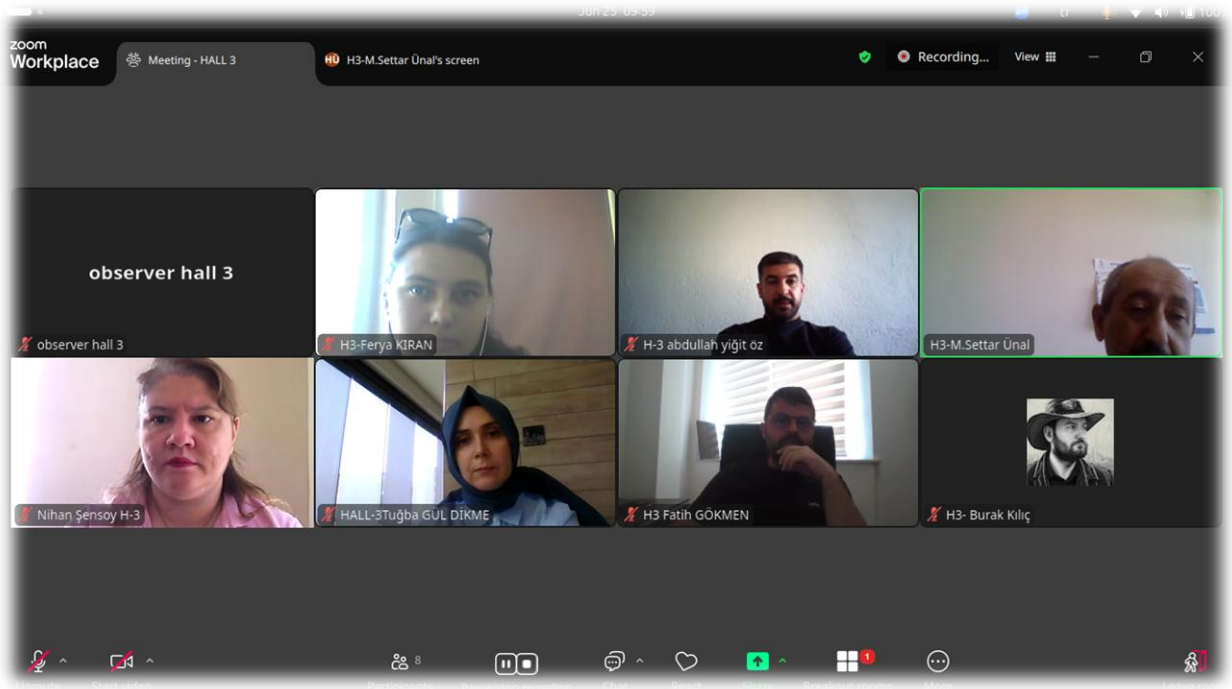
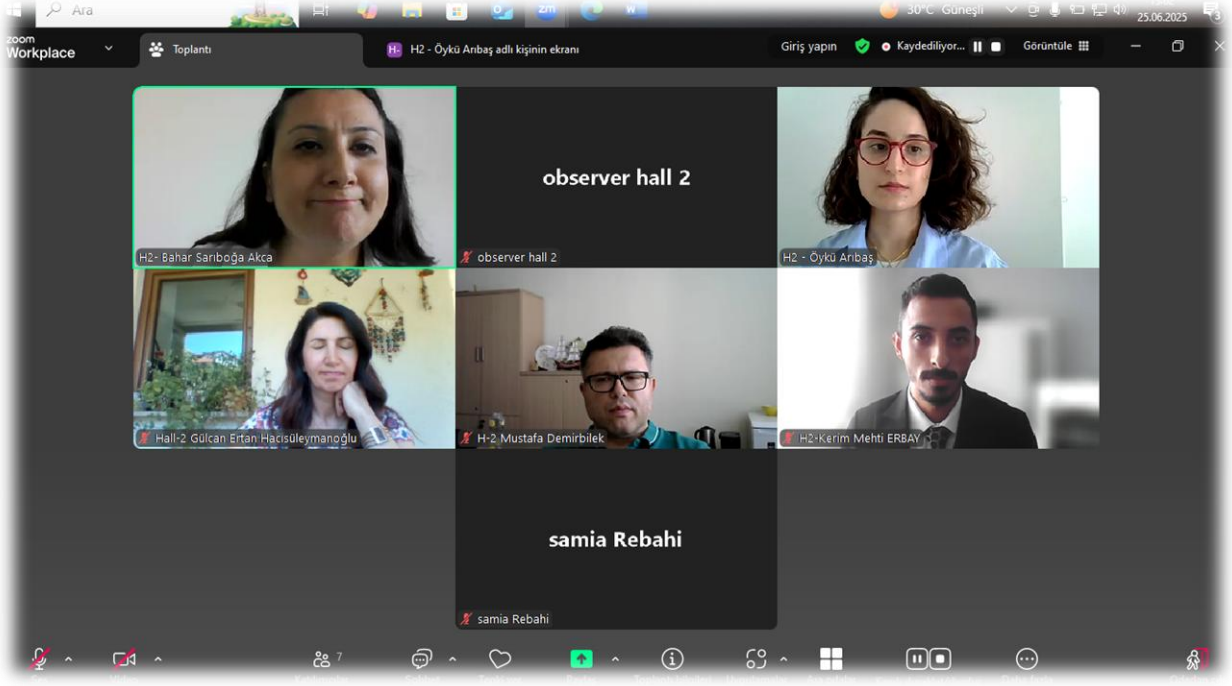
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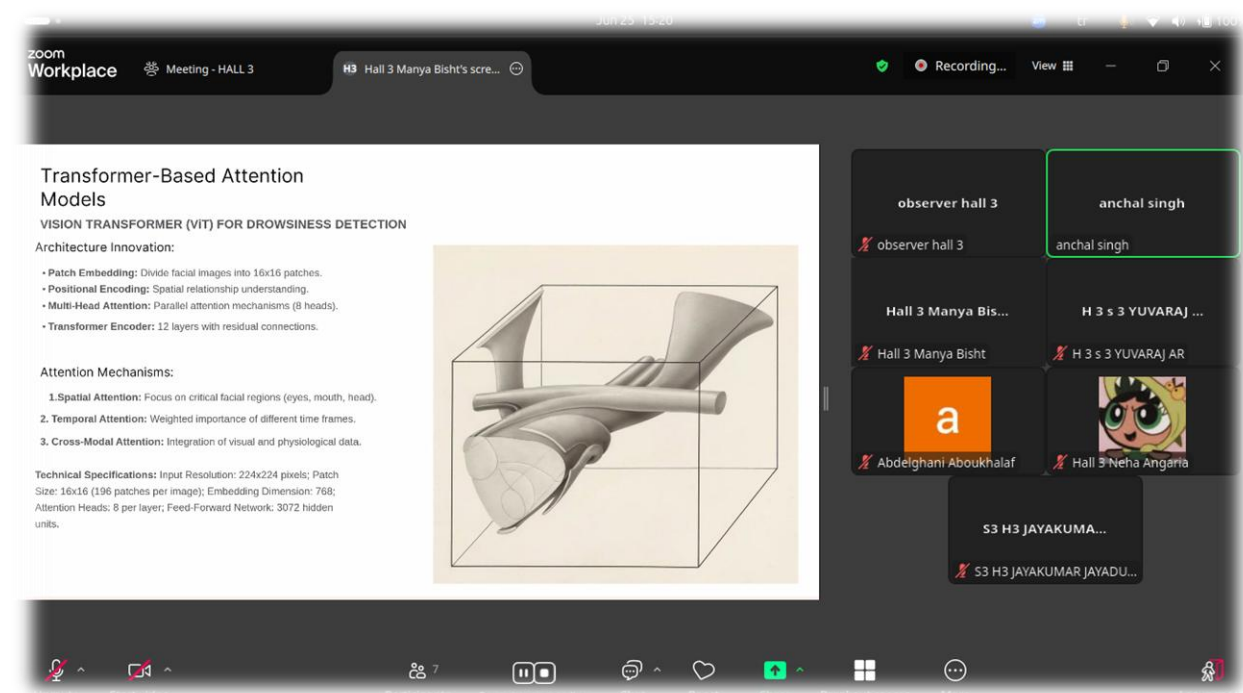
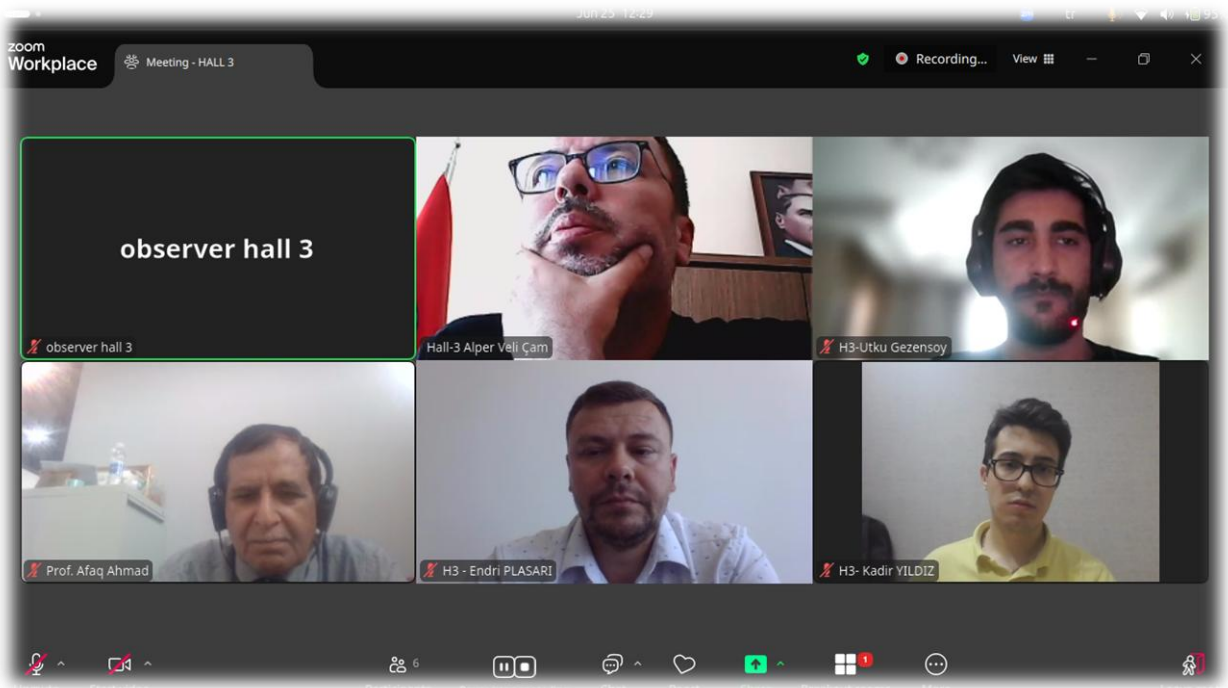
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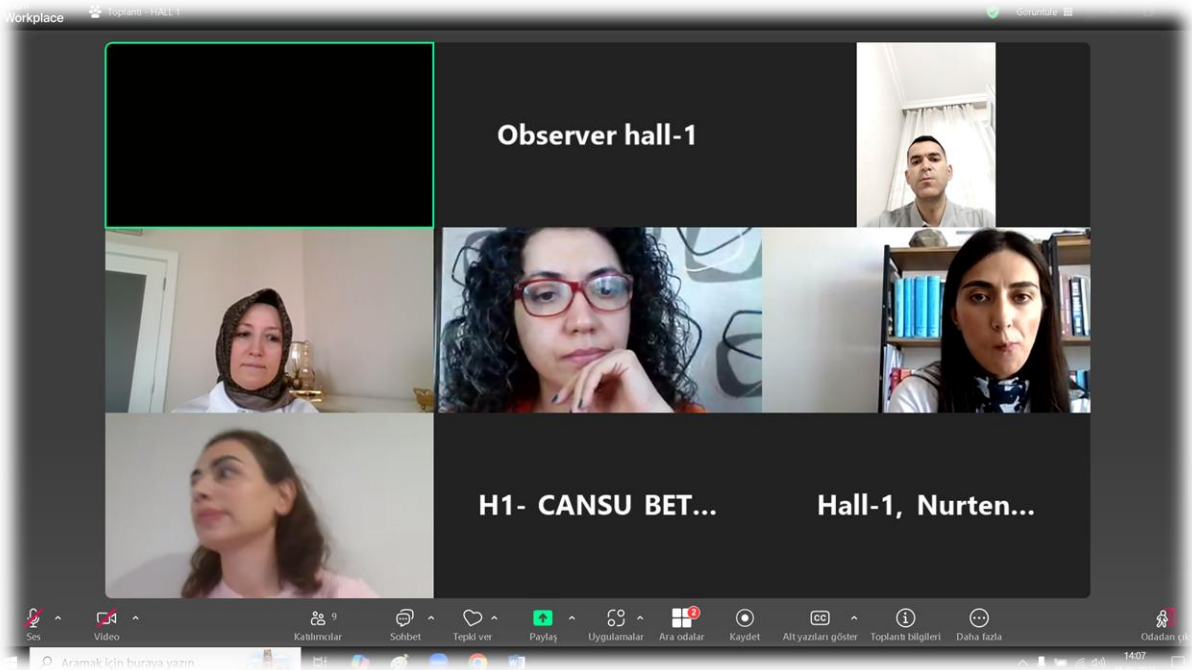
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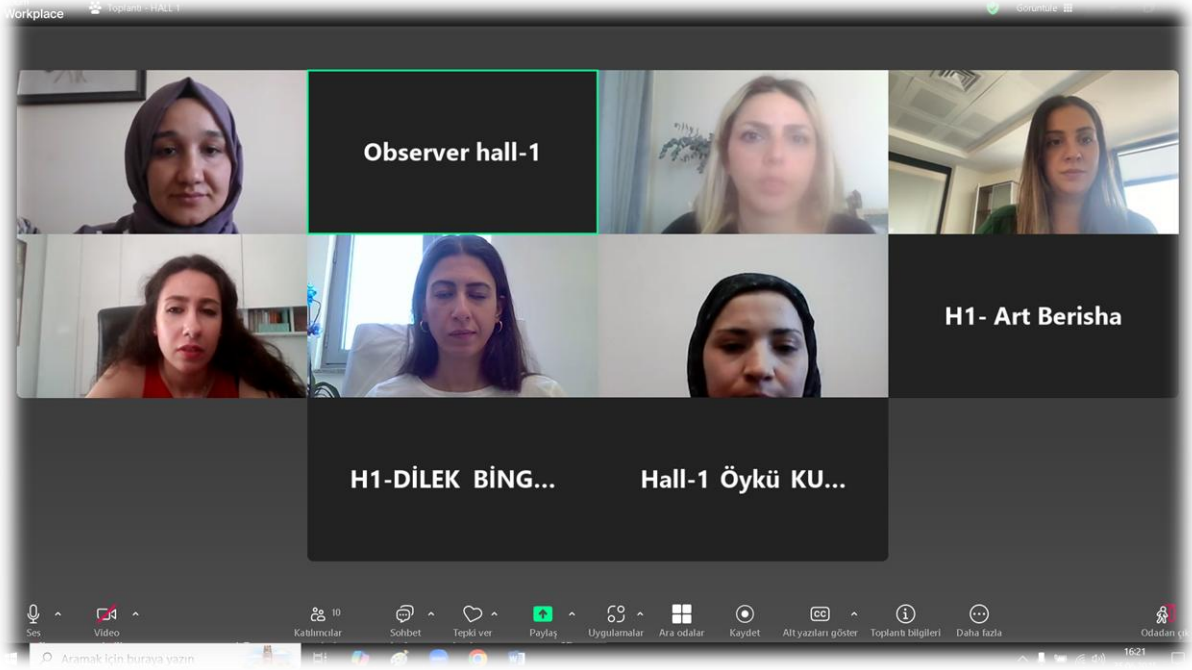
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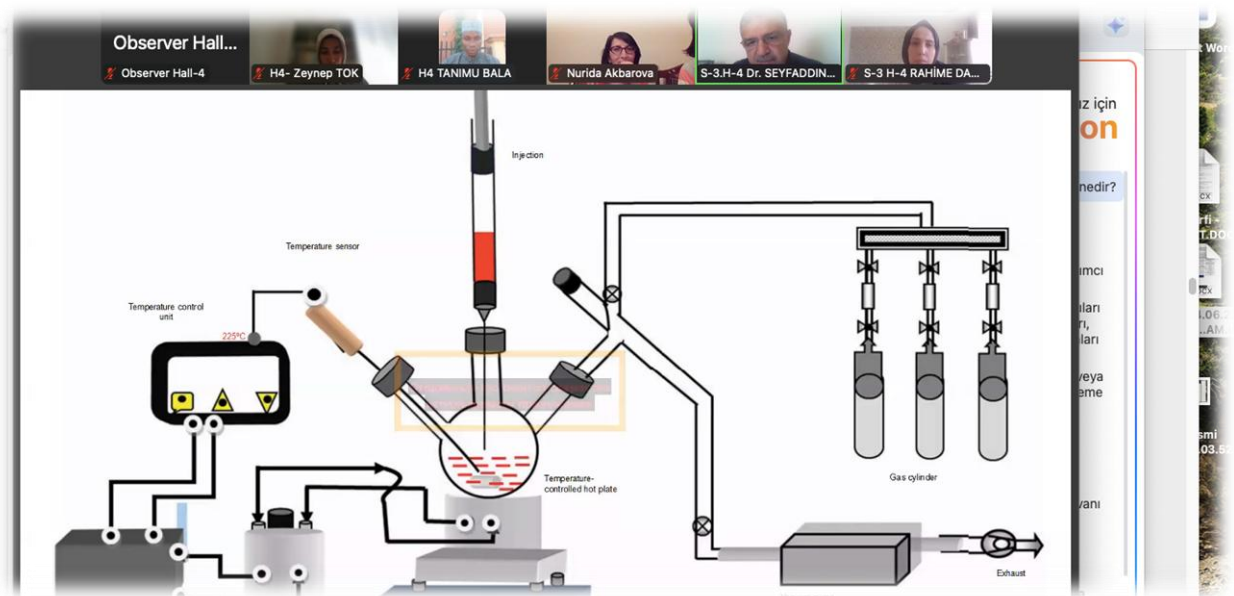
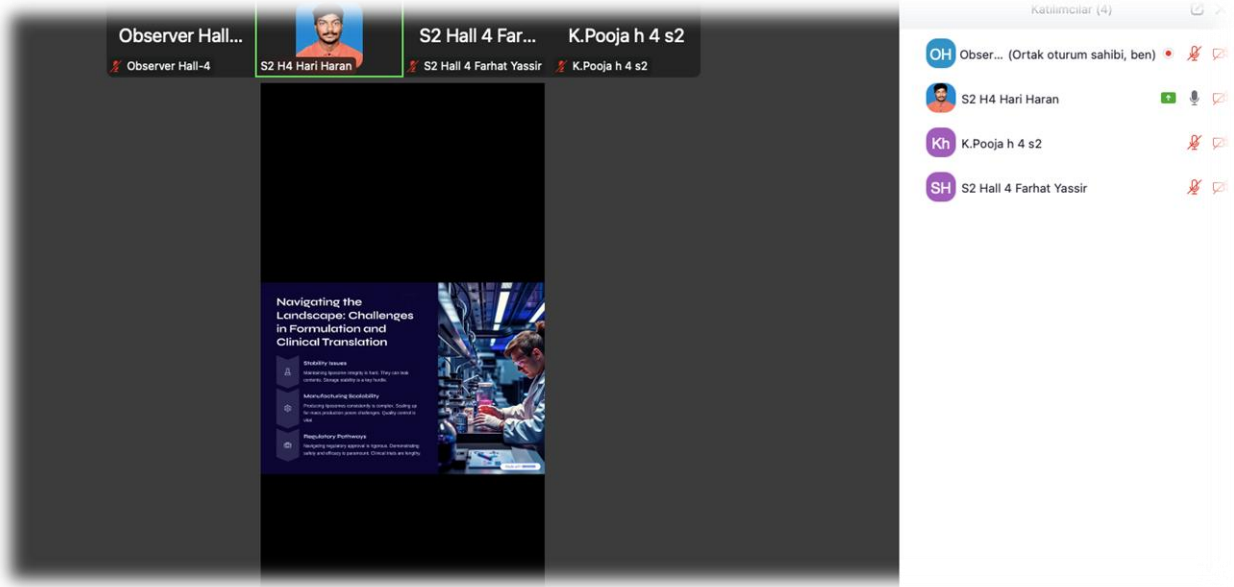
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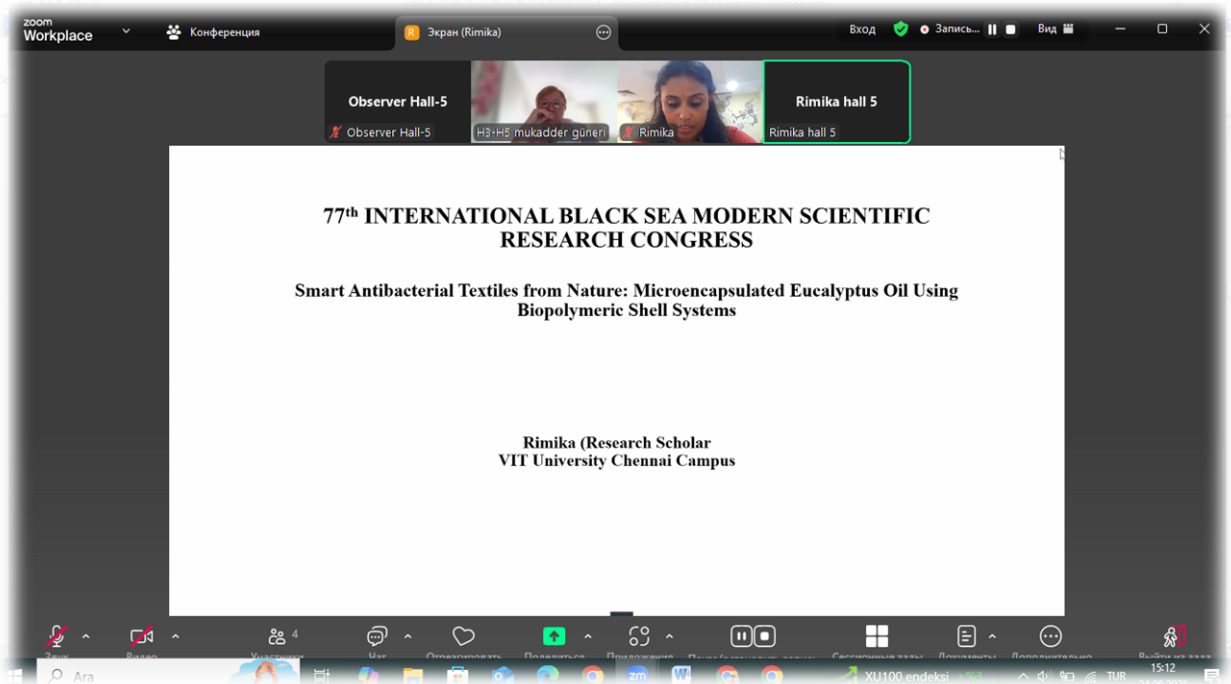
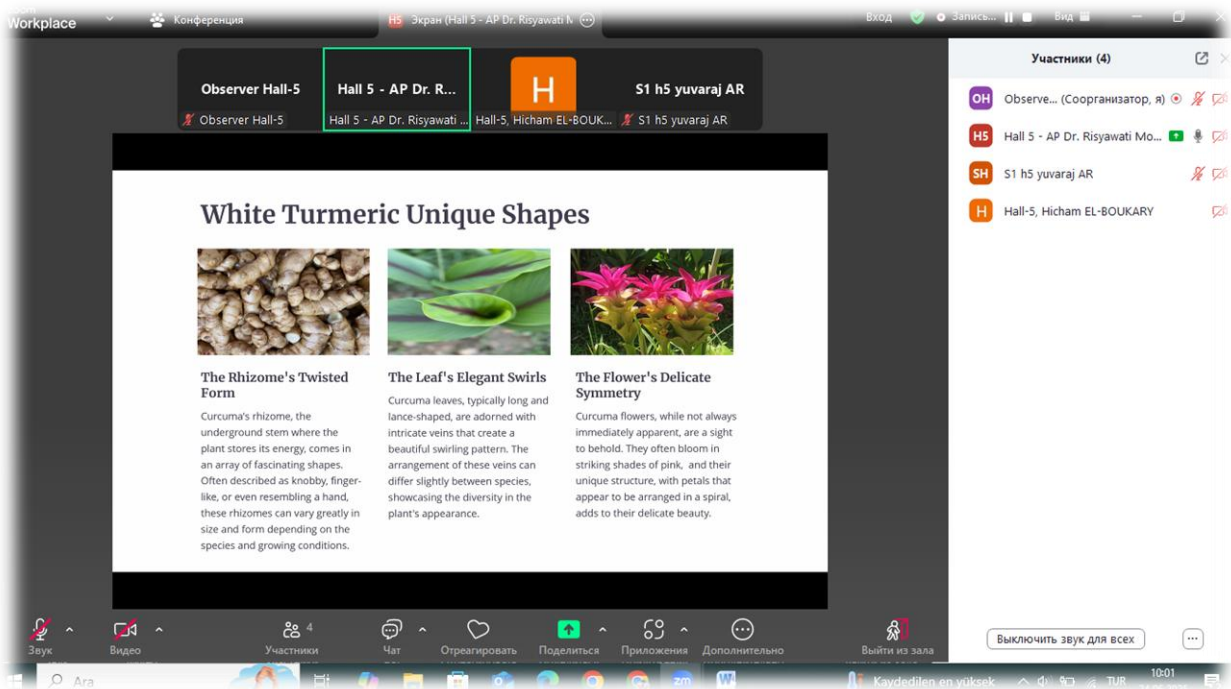
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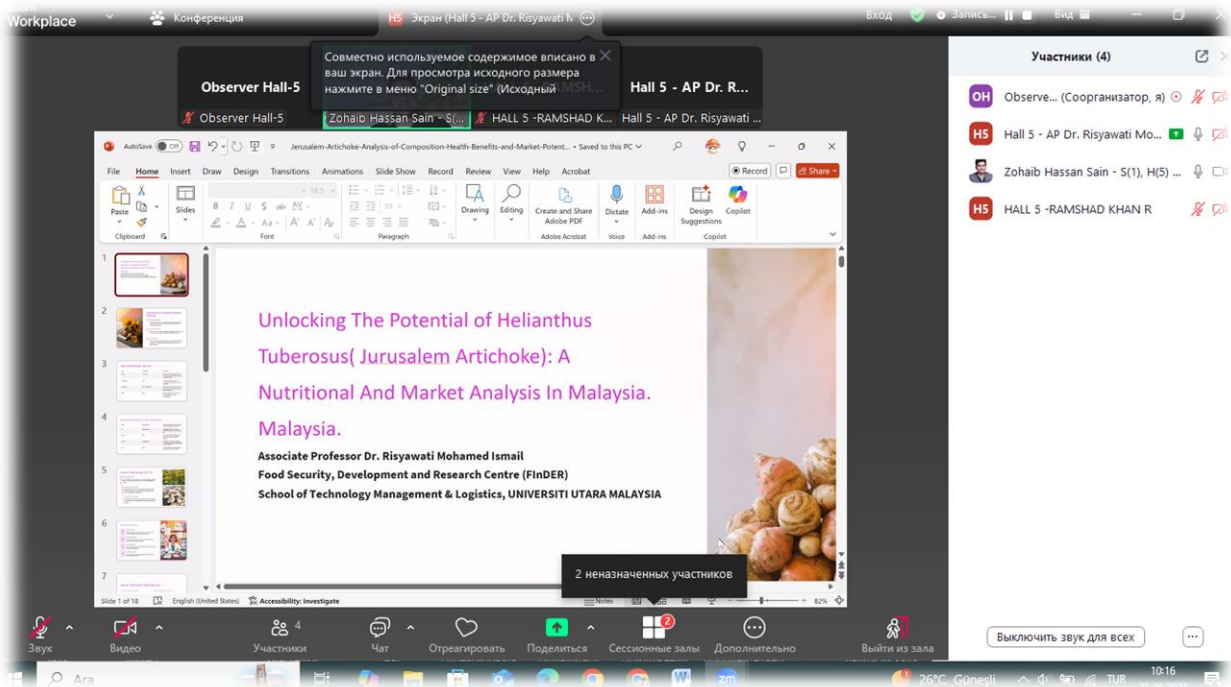
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# PHOTO GALLERY



# PHOTO GALLERY



# PHOTO GALLERY

Workplace Toplantı - HALL 6 Giriş yapın Kaydediliyor... Görüntüle

Observer Hall-6

Hall-6-session 1-Deema Dakakni

H6- Ijeoma B. Uche, (University of Nigeria, Nsukka)

Mariam Manjgaladze

H 6- Ashish Kumar & Dr. Sanjiv Kadyan

Katılımcılar (5)

- OH O... (Ortak oturum sahibi, ben)
- H6 H6- Ijeoma B. Uche, (University o...
- H1 Hall-6-session 1-Deema Dakakni
- H6 H 6- Ashish Kumar & Dr. Sanjiv ...
- Mariam Manjgaladze

Ses Video Katılımcılar Sohbet Tepki ver Paylaş Uygulamalar Kaydı duraklat/durdur Daha fazla Odadan çık

Tümünü Sessize Al

27°C Güneşli 10:30

Workplace Toplantı Hall-6, Arianna Antonelli adlı kişi... Giriş yapın Kaydediliyor... Görüntüle

Observer Hall-6

H6-Francesco EVOLO

Hall-6, Arianna Antonelli

Hall 6 Leporale

Hall-6, Khan Wa...

Hall-6, Khan Wajahat ...

## Results

Fracture resistance, Newton

|    | S1         | S2          | S3          | S4          | S5          | TOT              |
|----|------------|-------------|-------------|-------------|-------------|------------------|
| ZR | 6242 ± 224 | 6789 ± 1890 | 7892 ± 2564 | 8430 ± 4234 | 6830 ± 2348 | 7230 ± 2339<br>A |
| LD | 1480 ± 520 | 1379 ± 423  | 1780 ± 470  | 1540 ± 380  | 1870 ± 446  | 1609 ± 430<br>B  |

Different letters indicate statistically significant differences (P < 0.05)

The group of endocrowns fabricated in lithium disilicate fractured at significantly lower load values compared to the group fabricated in zirconia

Pagina 8

Ses Video Katılımcılar Sohbet Tepki ver Paylaş Uygulamalar Kaydı duraklat/durdur Ara odalar Daha fazla Odadan çık

XU100 endokel -50.10 12:58

# PHOTO GALLERY

workplace

observer hall-6

Zakaria Fahym

K.Pooja h6 s1

S.Harinisri S1 hall 6

S1 Hall 6 Farhat...

S1 H 6 Hari Haran

Katimolar (6)

OH o... (Ortak oturum sahibi, ben)

Zakaria Fahym

K.Pooja h6 s1

S1 H 6 Hari Haran

S.Harinisri S1 hall 6

S1 Hall 6 Farhat Yassir

## CHITIN & CHITOSAN

Chitin is a natural amino polysaccharide composed of  $\beta$ -1,4-linked *N*-acetyl-D-glucosamine units. It is the second most abundant biopolymer after cellulose, found in crustacean shells, fungal cell walls, and insect exoskeletons.

**Definition**

Chitosan is a partially deacetylated derivative of chitin, obtained by alkaline treatment (NaOH). It becomes soluble in acidic solutions due to its free amino groups (degree of deacetylation >50%). Known for its film-forming ability, antimicrobial activity, and biodegradability,

Chitin

Deacetylation

Chitosan

workplace

observer hall-6

S-3 H-6 Dr. Alok Kumar Shrivastava

Dr Kazi

S-3 HALL-6 -Dr...

H6\_BLESSINA

Katimolar (6)

OH o... (Ortak oturum sahibi, ben)

S-3 HALL-6 -Dr. Alok Kumar Shrivastava

S-3 H-6 Dr. Alok Kumar Shrivastava

Dr Kazi

H6\_BLESSINA

S-3 H-6, Moderator: Moses Ade...

## Moth Flame Optimization (MFO)

9

- Nature-inspired metaheuristic based on moth navigation behavior.
- Moths (candidate solutions) update positions via logarithmic spiral towards flames (optimal solutions).
- Efficiently explores complex, multi-objective solution spaces.

Start

Initialize the parameters of MFO

Generate the initial solutions randomly

Calculate the objective function

Update flame number

OM = Fitness function(M)

F = sort(M\_{t-1}, M\_t)

OF = sort(OM\_{t-1}, OM\_t)

Calculate the distance with respect to the corresponding moth D<sub>i</sub>

Update the position of moth with respect to the corresponding moth D<sub>i</sub>

Display the best solutions

Satisfy MFO criteria?

End



# 7<sup>th</sup> INTERNATIONAL BLACK SEA MODERN SCIENTIFIC RESEARCH CONGRESS

*June 24-26, 2025  
Artvin, Türkiye*

## CONGRESS PROGRAM

**Zoom Meeting ID: 860 5266 6988**

**Zoom Passcode: 070707**

<https://us02web.zoom.us/j/86052666988?pwd=PVLh7ZFBzaTySpyVMwXe8rkZJeUdZx.1>

### **Participant Countries (25):**

Türkiye, Morocco, Kosovo, USA, Nigeria, Azerbaijan, Canada, Iraq, Iran, Algeria, Saudi Arabia, Lebanon, Malaysia, Italy, Poland, Serbia, Ghana, Mexico, Romania, Albania, Oman, Pakistan, Ukraine, Portugal, Indonesia, Georgia

**Türkiye: 120**

**Other Countries: 130**

### **Önemli, Dikkatle Okuyunuz Lütfen**

- ✓ Kongremizde Yazım Kurallarına uygun gönderilmiş ve bilim kurulundan geçen bildiriler 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.
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- ✓ **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, Merve KIDIRYUZ**

**24.06.2025 / Session-1, Hall-1**

**Ankara Local Time: 10:00 – 12:00**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Assoc. Prof. Dr. Abdlvahap AKMAK**

| Title                                                                                                                                                                                                      | Author(s)                                                                           | Affiliation                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| EXPERIMENTAL AND MULTI-CRITERIA ANALYSIS OF CO2 LASER CUTTING QUALITY IN CARBON FIBER-REINFORCED THERMOPLASTIC PLATES                                                                                      | Assoc. Prof. Dr. Oğuzhan DER<br>Assoc. Prof. Dr. Gökhan BAŞAR                       | Bandırma Onyedi Eylül University TÜRKİYE<br>Osmaniye Korkut Ata University TÜRKİYE                                                    |
| THERMAL BEHAVIOR AND SAFETY ASSESSMENT OF LITHIUM-ION BATTERY CELLS VIA CFD                                                                                                                                | Mehmet Fatih YİĞİT<br>Assoc. Prof. Dr. Tarkan KOCA                                  | İnönü University TÜRKİYE                                                                                                              |
| THERMAL MODELING AND SIMULATION TECHNIQUES FOR PRISMATIC LITHIUM-ION BATTERIES                                                                                                                             | Mehmet Fatih YİĞİT<br>Assoc. Prof. Dr. Tarkan KOCA                                  | İnönü University TÜRKİYE                                                                                                              |
| SUSTAINABILITY AND ADVANCED EXERGY ANALYSIS OF A TURBOJET ENGINE                                                                                                                                           | Ahmet Burak UYAN<br>Prof. Dr. Hüseyin GÜNERHAN<br>Assoc. Prof. Dr. Cem Tahsin YÜCER | Ege University TÜRKİYE                                                                                                                |
| ANALYSIS OF CORRECT AND INCORRECT DIE CRIMPING OF TERMINALS TO WIRES IN AUTOMOTIVE WIRING HARNESSSES                                                                                                       | Ezgi ASLANE<br>İsmail GENÇ                                                          | Transportation Domestic and Foreign Trade Inc. R&D Electrical Equipment Team Leader, Automotive wiring harness design, Bursa, TÜRKİYE |
| STRUCTURAL ANALYSIS OF THE BALIK LAKE FISHERY                                                                                                                                                              | Adem Sezai BOZAOĞLU                                                                 | Van Yüzüncü Yıl University TÜRKİYE                                                                                                    |
| LAND VEHICLE FIRES IN TÜRKİYE: PRIMARY CAUSES AND PREVENTIVE MEASURES                                                                                                                                      | Ahmet Eren İSSİSU<br>Assoc. Prof. Dr. Abdlvahap AKMAK                             | Samsun University TÜRKİYE                                                                                                             |
| ANALYSIS OF THE CARBON FOOTPRINT OF SAMSUN UNIVERSITY'S KAVAK CAMPUS                                                                                                                                       | İlker İŞİK<br>Assoc. Prof. Dr. Abdlvahap AKMAK                                    | Samsun University TÜRKİYE                                                                                                             |
| All participants must join the conference 10 minutes before the session time.<br>Every presentation should last not longer than 10-12 minutes.<br>Kindly keep your cameras on till the end of the session. |                                                                                     |                                                                                                                                       |

**24.06.2025 / Session-1, Hall-2**

**Ankara Local Time: 10:00 – 12:00**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Assoc. Prof. Dr. İffet KESİMLİ**

| Title                                                                                                                                                                                                      | Author(s)                                                        | Affiliation                                                  |
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| ASSESSMENT OF TURKISH AUDIT FIRMS IN THE LIGHT OF PCAOB INSPECTION REPORTS                                                                                                                                 | Assoc. Prof. Dr. İffet KESİMLİ                                   | Kırklareli University TÜRKİYE                                |
| RELATIONSHIP BETWEEN ADVERTISING EXPENSES AND FINANCIAL PERFORMANCE: THE EXAMPLE OF PARTICIPATION BANKS                                                                                                    | Lect. Şenol BARDİ                                                | Düzce University TÜRKİYE                                     |
| THE RELATIONSHIP BETWEEN LEADERSHIP, CULTURE, AND PERFORMANCE: A THEORETICAL EXAMINATION IN THE HEALTHCARE SECTOR                                                                                          | Fadime Kader ÖZER<br>Assoc. Prof. Dr. Nazan TORUN                | Ankara Yıldırım Beyazıt University TÜRKİYE                   |
| DIGITAL RITUALS: CEREMONIAL SHARING PRACTICES AND COLLECTIVE AFFECT ON SOCIAL MEDIA                                                                                                                        | Dr. Dursun Can ŞİMŞEK                                            | Avrasya University TÜRKİYE                                   |
| ARTVİN'S ECOMUSEUM POTENTIAL: SEEKING A MODEL AT THE INTERSECTION OF SUSTAINABLE DEVELOPMENT AND CULTURAL HERITAGE                                                                                         | Assoc. Prof. Dr. Zekiye ÇILDIR<br>Assoc. Prof. Dr. Ceren GÜNERÖZ | Artvin Çoruh University TÜRKİYE<br>Ankara University TÜRKİYE |
| AN ANALYSIS OF SOCIAL MEDIA USE IN TERMS OF PUBLIC RELATIONS ACTIVITIES OF MUNICIPALITIES: THE CASE OF THE BLACK SEA REGION                                                                                | Davut Turgay AYAR<br>Assist. Prof. Dr. Anıl Uğur OĞUZCAN         | Giresun University TÜRKİYE                                   |
| SOCIAL MEDIA USAGE ANALYSIS OF MUNICIPALITIES IN TERMS OF PUBLIC RELATIONS ACTIVITIES INTERIOR ANATOLIA EXAMPLE                                                                                            | Safiye OBA<br>Assist. Prof. Dr. Anıl Uğur OĞUZCAN                | Giresun University TÜRKİYE                                   |
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**24.06.2025 / Session-1, Hall-3**

**Ankara Local Time: 10:00 – 12:00**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Prof. Dr. Fatih SARAÇOĞLU**

| Title                                                                                                                                                                                                      | Author(s)                                                 | Affiliation                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------|
| INCOME INEQUALITY AND ITS POLITICAL CONSEQUENCES                                                                                                                                                           | Hasan Onur ERTUĞRAL                                       | Ordu University TÜRKİYE                                                             |
| COOPERATIVES AND LOCAL DEVELOPMENT                                                                                                                                                                         | Hasan Onur ERTUĞRAL                                       | Ordu University TÜRKİYE                                                             |
| A THEORETICAL PERSPECTIVE ON THE FACTORS AFFECTING WOMEN'S PARTICIPATION IN THE LABOR MARKET                                                                                                               | Meliha YURTTAŞ                                            | Ordu University TÜRKİYE                                                             |
| CHALLENGES FACED BY WOMEN IN ENTERING THE LABOR MARKET: THE GLASS CEILING SYNDROME                                                                                                                         | Meliha YURTTAŞ                                            | Ordu University TÜRKİYE                                                             |
| THE ROLES OF PREVENTIVE AND CURATIVE HEALTH CARE IN ECONOMIC DEVELOPMENT                                                                                                                                   | Anna PIROGOVA                                             | İstanbul Technical University TÜRKİYE                                               |
| A REVIEW OF TÜRKİYE AND ISRAEL DEFENSE INDUSTRY EXPORTS                                                                                                                                                    | Ömer Can KARA<br>Assoc. Prof. Dr. Zeynep KARAS            | Düzce University TÜRKİYE                                                            |
| FINANCIAL PERFORMANCE ANALYSIS OF TOURISM SECTOR / ENTERPRISES                                                                                                                                             | Duygu EROL                                                | Zonguldak Bülent Ecevit University TÜRKİYE                                          |
| EVALUATIONS ON THE EFFECTS OF TAXES ON ALCOHOL AND TOBACCO PRODUCTS IN TURKEY                                                                                                                              | Prof. Dr. Fatih SARAÇOĞLU<br>Beril SARAÇOĞLU              | Ankara Hacı Bayram Veli University TÜRKİYE<br>Gazi University TÜRKİYE               |
| ACTIVITIES CARRIED OUT BY THE REVENUE ADMINISTRATION FOR THE PREVENTION OF TAX LOSSES AND EVASION IN ALCOHOL AND TOBACCO PRODUCTS IN TURKEY                                                                | Prof. Dr. Fatih SARAÇOĞLU<br>Assist. Prof. Dr. Öner GÜMÜŞ | Ankara Hacı Bayram Veli University TÜRKİYE<br>Kütahya Dumlupınar University TÜRKİYE |
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**24.06.2025 / Session-1, Hall-4**

**Ankara Local Time: 10:00 – 12:00**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Assoc. Prof. Mahira Firudin kizi Amirova**

| Title                                                                                                                     | Author(s)                                                                                                                                                 | Affiliation                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CHRONIC ANAL FISSURE MANAGEMENT WITH BOTULINUM TOXIN INJECTIONS AND LATERAL INTERNAL SPHINCTEROTOMY                       | Assoc. Prof. Gullu Khanlar Abdiyeva<br>Assoc. Prof. Mahira Firudin kizi Amirova                                                                           | Azerbaijan Medical University<br>AZERBAIJAN                                                                                                                                                                                                                                    |
| REPRODUCTIVE HEALTH AND FAMILY PLANNING IN THE CONTEXT OF UTERINE FIBROIDS MODERN TREATMENT                               | Assoc. Prof. Mahira Firudin kizi Amirova<br>Assoc. Prof. Gultekin Rafiq Javadova<br>Ellada Eldar qizi Huseynova<br>Nigar Veli kizi Melikova               | Azerbaijan Medical University<br>AZERBAIJAN                                                                                                                                                                                                                                    |
| IN SILICO PREDICTION OF HEPATOTOXICITY AND SYSTEMIC ADVERSE EFFECTS OF NOVEL HYDRAZONE ESTER DERIVATIVES USING ADVER-PRED | Gulnar Atakishiyeva<br>Nigar Ahmedova<br>Sevinç Muhtarova<br>Assoc. Prof. Gulnara Babayeva<br>Khatira Garazade<br>Abel Maharramov                         | Baku State University<br>AZERBAIJAN<br>Baku State University<br>AZERBAIJAN<br>Azerbaijan Technical University<br>AZERBAIJAN<br>Azerbaijan Technical University<br>AZERBAIJAN<br>Baku State University<br>AZERBAIJAN<br>Baku State University<br>AZERBAIJAN                     |
| IN SILICO PREDICTION OF ANTIBACTERIAL TARGETS OF HYDRAZONE ESTER DERIVATIVES USING ANTIBAC-PRED                           | Gulnar Atakishiyeva<br>Ayten Qajar<br>Sevinç Muhtarova<br>Assoc. Prof. Sima Musayeva<br>Assoc. Prof. İlhamı Hamdullayeva<br>Assoc. Prof. Gulnara Babayeva | Baku State University<br>AZERBAIJAN<br>Baku State University<br>AZERBAIJAN<br>Azerbaijan Technical University<br>AZERBAIJAN<br>Azerbaijan Technical University<br>AZERBAIJAN<br>Azerbaijan Technical University<br>AZERBAIJAN<br>Azerbaijan Technical University<br>AZERBAIJAN |
| A GENERAL OVERVIEW OF THE CURRENT STATUS OF THE WORLD ALPACA INDUSTRY                                                     | Prof. Dr. Rıza ATAV<br>Serkan BALCI<br>Durul Büşra DİLDEN                                                                                                 | Tekirdağ Namık Kemal University<br>TÜRKİYE<br>Beymen Retail and Textile Investments Inc. İstanbul<br>TÜRKİYE<br>Beymen Retail and Textile Investments Inc. İstanbul<br>TÜRKİYE                                                                                                 |
| INVESTIGATION OF VARIOUS PERFORMANCE PROPERTIES OF DYED 100% ACRYLUNA AND 70% ACRYLUNA / 30% WOOL KNITTED FABRICS         | Selma SOYSAL<br>Prof. Dr. Rıza ATAV                                                                                                                       | Gulle Textile, Ergene-Tekirdağ<br>TÜRKİYE<br>Tekirdağ Namık Kemal University<br>TÜRKİYE                                                                                                                                                                                        |
| RESEARCH ON THE ROLE IN THE GROWTH OF ELECTRONIC COMMERCE AND CASHLESS PAYMENTS IN AZERBAIJAN (2022-2024)                 | Mammadov Shamkhal Guluyar                                                                                                                                 | Odlar Yurdu University<br>AZERBAIJAN                                                                                                                                                                                                                                           |

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**24.06.2025 / Session-1, Hall-5**

**Ankara Local Time: 10:00 – 12:00**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Assoc. Prof. Dr. Risyawati MOHAMED ISMAIL**

| Title                                                                                                                                | Author(s)                                                                                     | Affiliation                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| POTENTIAL APPLICATIONS OF ENDOPHYTES AS A SOURCE OF BIOACTIVE COMPOUNDS IN VARIOUS SECTORS                                           | Hicham EL-BOUKARY<br>Hamza ELKISSANY<br>Adil LAAZIZ<br>Abdelouahed HAJJAJI                    | Sultan Moulay Slimane University MOROCCO<br>Sultan Moulay Slimane University MOROCCO<br>Sidi Mohamed Ben Abdellah University MOROCCO<br>Sultan Moulay Slimane University MOROCCO                                                        |
| REVOLUTIONIZING CANCER DIAGNOSIS: THE POTENTIAL OF 3D PRINTED NANOSENSORS                                                            | Assist. Prof. Babita Gupta                                                                    | Institute of Technology and Management Gida Gorakhpur INDIA                                                                                                                                                                             |
| WHITE TURMERIC AS A FUNCTIONAL INGREDIENT : ANTIOXIDANT PROPERTIES OF CURCUMA ZEDOARIA EXTRACTS                                      | Assoc. Prof. Dr. Risyawati MOHAMED ISMAIL                                                     | Utara University MALAYSIA                                                                                                                                                                                                               |
| HYPERTENSION AND THE PROMISE OF HERBAL NANOMEDICINE: A NEW ERA IN BLOOD PRESSURE MANAGEMENT                                          | Mrs.E.Elavarasi<br>Yuvaraj AR<br>J.Jayadurka<br>Dr.R.Srinivasan                               | Bharath Institute of Higher Education and Research INDIA                                                                                                                                                                                |
| GREEN SYNTHESIS OF CHARACTERIZED ZNO NANOPARTICLES FROM CYMBOPOGON CITRATUS (LEMON GRASS) EXTRACT AND THEIR ANTIBACTERIAL PROPERTIES | Johnson O. Momoh<br>Inemesit A. Udofia<br>Sanjeev Kumar<br>Oluwasegun M. Adekunle             | Lagos State University of Science and Technology NIGERIA<br>CALEB University NIGERIA<br>Chandigarh University INDIA<br>Lagos State University of Science and Technology NIGERIA                                                         |
| WILD EDIBLE PLANTS FROM MOROCCO AS POTENTIAL SOURCES OF ANTIMICROBIAL AGENTS AGAINST PATHOGENIC MICROBES                             | Aboukhalaf Abdelghani<br>Houda ElYacoubi<br>Atmane Rochdi<br>Elbiyad Jamila<br>Belahsen Rekia | Ibn Tofail University MOROCCO<br>Ibn Tofail University MOROCCO<br>Ibn Tofail University MOROCCO<br>Chouaib Doukkali University MOROCCO<br>Chouaib Doukkali University MOROCCO                                                           |
| IN VITRO SALINITY TOLERANCE OF LOCAL CACTUS OPUNTIA FICUS INDICA AND OPUNTIA ROBUSTA                                                 | Chokri BAYOUDH<br>Malek BEN ALI<br>Afifa MAJDOUB<br>Taoufik BETTAIEB                          | Centre on Horticulture and Organic Agriculture (CRRHAB) TUNISIA<br>Monastir University TUNISIA<br>Regional Research Centre on Horticulture and Organic Agriculture (CRRHAB) TUNISIA<br>National Agronomic Institute of Tunisia, TUNISIA |
| ADVERSE DRUG REACTIONS ASSOCIATED WITH FIRST-LINE ANTI-TUBERCULOSIS THERAPY: A PROSPECTIVE PHARMACOVIGILANCE STUDY                   | MADHUMITHA<br>S.VIJITHA.V.<br>Dr.K.RAJAGANAPATHY                                              | Bharath Institute of Higher Education and Research INDIA                                                                                                                                                                                |

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**24.06.2025 / Session-1, Hall-6**

**Ankara Local Time: 10:00 – 12:00**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Prof. Dr. Laila AFIA**

| Title                                                                                                                                                                                                                           | Author(s)                                                                 | Affiliation                                              |
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| FUNGI: AN ALTERNATIVE SUSTAINABLE SOURCE OF CHITIN AND CHITOSAN FOR HIGH-VALUE AND INNOVATIVE APPLICATIONS                                                                                                                      | Zakaria FAHYM<br>Hafida MAARIR<br>Amine MOUBARIK<br>Abdelouahed HAJJAJI   | Sultan Moulay Slimane University MOROCCO                 |
| REMOVAL OF COPPER FROM WASTEWATER ORIGINATING FROM METAL SURFACE TREATMENT BY ELECTROCOAGULATION                                                                                                                                | Ahmed SALIM                                                               | Hassan II University MOROCCO                             |
| OVERVIEW ON ASTHMA A NON-COMMUNICABLE DISEASE                                                                                                                                                                                   | K.Pooja<br>Dr. M.K. Vijayalakshmi                                         | Bharath Institute of Higher Education and Research INDIA |
| EVALUATION OF 2-HYDROXY-1-(2-HYDROXY-4-SULFO-1-NAPHTHYLAZO)-3- NAPHTHOIC ACID AS AN INNOVATIVE CORROSION INHIBITOR FOR C38 STEEL IN HCL MEDIUM                                                                                  | Prof. Dr. Laila AFIA<br>Prof. Dr. Rachid SALGHI                           | Ibnou Zohr University MOROCCO                            |
| OXIDATIVE STRESS, ANTIOXIDANTS AND DIABETES: BRIDGING THE PATHOPHYSIOLOGY WITH TREATMENT                                                                                                                                        | Awadhesh Kumar<br>Akash Ved<br>Dr. Shom Prakash Kushwaha                  | Integral University INDIA                                |
| DIABETICS AND IT'S TREATMENT                                                                                                                                                                                                    | M.Farhatyassir<br>V.Hariharan<br>S.Harini<br>T.Vanitha<br>Mrs.E.Elavarasi | Bharath Institute of Higher Education and Research INDIA |
| ANTI INFLAMMATION DRUGS                                                                                                                                                                                                         | M.Farhatyassir<br>V.Hariharan<br>S.Harini<br>T.Vanitha<br>Mrs.E.Elavarasi | Bharath Institute of Higher Education and Research INDIA |
| HEART FAILURE                                                                                                                                                                                                                   | M.Farhatyassir<br>V.Hariharan<br>S.Harini<br>T.Vanitha<br>Mrs.E.Elavarasi | Bharath Institute of Higher Education and Research INDIA |
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**24.06.2025 / Session-2, Hall-1**

**Ankara Local Time: 12:30 – 14:30**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Assoc. Prof. Dr. Hüsnü ERGÜN**

| Title                                                                                                                                               | Author(s)                                                                | Affiliation                                                                                                                                                                                                                                                                                                                         |
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| AN EXAMINATION OF TEACHERS' APPROACHES TO USING COMPLEMENTARY ASSESSMENT AND EVALUATION METHODS                                                     | Dr. Emin ÖZEN<br>Ali ÇAM<br>Volkan ÇİÇEK<br>Burhan BOZTAŞ<br>Hasan TURAN | "Eskişehir Technical University<br>TÜRKİYE<br>Eskişehir Assesment and<br>Evaluation Center TÜRKİYE"<br>Eskişehir Assesment and<br>Evaluation Center TÜRKİYE<br>Eskişehir Assesment and<br>Evaluation Center TÜRKİYE<br>Eskişehir Assesment and<br>Evaluation Center TÜRKİYE<br>Eskişehir Assesment and<br>Evaluation Center TÜRKİYE |
| THE RIGHT TO EDUCATION AND EQUALITY IN THE CONTEXT OF ACCESS TO SPECIAL EDUCATION: A COMPARATIVE ANALYSIS OF NATIONAL AND INTERNATIONAL REGULATIONS | Assoc. Prof. Dr. Hüsnü ERGÜN                                             | Pamukkale University<br>TÜRKİYE                                                                                                                                                                                                                                                                                                     |
| A INSTITUTIONAL ACTOR ON THE PATH TO A LIFELONG LEARNING SOCIETY: THE TRANSFORMATION OF THE DIRECTORATE GENERAL FOR LIFELONG LEARNING               | Assoc. Prof. Dr. Hüsnü ERGÜN                                             | Pamukkale University<br>TÜRKİYE                                                                                                                                                                                                                                                                                                     |
| THE MEDIATING ROLE OF PARENTAL REGRET IN THE RELATIONSHIP BETWEEN PARENTAL SELF-STIGMA AND PARENTAL BURNOUT                                         | Assoc. Prof. Dr. Yahya AKTU                                              | Siirt University TÜRKİYE                                                                                                                                                                                                                                                                                                            |
| THE MEDIATING ROLE OF SELF-ESTEEM IN THE RELATIONSHIP BETWEEN PROBLEMATIC INTERNET USAGE AND THE ONLINE GROOMING RISK AMONG ADOLESCENTS             | Assoc. Prof. Dr. Yahya AKTU                                              | Siirt University TÜRKİYE                                                                                                                                                                                                                                                                                                            |
| COMPILATION OF STUDIES ON ADULTHOOD IN INDIVIDUALS WITH SPECIAL NEEDS                                                                               | Mehmet YILDIRIM<br>Prof. Dr. S. Sunay Yıldırım DOĞRU                     | Dokuz Eylül University<br>TÜRKİYE                                                                                                                                                                                                                                                                                                   |
| CLUSTER ANALYSIS BASED ON NUTRITION AND EXERCISE HABITS OF YOUNG ADULTS                                                                             | Gülşen DELİKANLI AKBAY                                                   | Karadeniz Technical University<br>TÜRKİYE                                                                                                                                                                                                                                                                                           |
| A COMPARISON OF MALE AND FEMALE TEACHER SCHOOLS IN THE OTTOMAN EMPIRE THROUGH THE DARULMUALLIMAT AND DARULMUALLIMIN SCHOOLS                         | Assist. Prof. Dr. Yasemin Zahide<br>IŞIK                                 | Munzur University TÜRKİYE                                                                                                                                                                                                                                                                                                           |

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**24.06.2025 / Session-2, Hall-2**

**Ankara Local Time: 12:30 – 14:30**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Assist. Prof. Dr. Yücel BULUT**

| Title                                                                                                                                                                                                      | Author(s)                                                   | Affiliation                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------------|
| THE CONCEPT OF EUTHANASIA AND THE INTERPRETATION OF THE RIGHT TO LIFE IN THE CASE LAW OF THE EUROPEAN COURT OF HUMAN RIGHTS                                                                                | Maral Törenli ÇAKIROĞLU                                     | Haliç University TÜRKİYE                   |
| GLOBAL CITIZENS, NATIONAL TIES: THE INDIAN DIASPORA AND ITS EVOLVING INFLUENCE                                                                                                                             | Dr. Lect. Ulas Kutsi ÇEZİK<br>Assist. Prof. Dr. Yücel BULUT | Karadeniz Technical University TÜRKİYE     |
| THE ROLE OF GREEN INFRASTRUCTURE IN COMBATING CLIMATE CHANGE: AN EVALUATION WITH CASE STUDIES FROM URBAN AREAS IN TURKEY AND GLOBALLY                                                                      | Assoc. Prof. Dr. Çiğdem TUĞAÇ                               | Ankara Hacı Bayram Veli University TÜRKİYE |
| EGYPTIAN STADIUMS & CAIRO'S ULTRAS: POLITICAL MISCALCULATIONS AND RHIZOMIC PROLIFERATION                                                                                                                   | Suhile DARWISH                                              | İbn Haldun University TÜRKİYE              |
| CHINA-RUSSIA COOPERATION IN AFGHANISTAN FOLLOWING THE UNITED STATES' WITHDRAWAL                                                                                                                            | Pesarlay HAKIMI                                             | Ankara Yıldırım Beyazıt University TÜRKİYE |
| UNDERSTANDING CLASSICAL LIBERALISM: PRINCIPLES AND IMPACT                                                                                                                                                  | Ananda MAJUMDAR                                             | Alberta University CANADA                  |
| ANCIENT SYSTEM OF GLOBALIZATION AND TRADE TRENDS: UNVEILING INTERACTIONS THROUGH COMMODITIES IN WESTERN INDIAN SOCIETY                                                                                     | Assist. Prof. Dr. Geetika GUPTA                             | Symbiosis International University INDIA   |
| PROCEEDINGS INVOLVING PERSONS WHO COMMIT A CRIME IN A STATE OF INSANITY OR DEVELOP MENTAL ILLNESS AFTER THE OFFENSE                                                                                        | Lala MAMMADOVA                                              | Baku State University AZERBAIJAN           |
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**24.06.2025 / Session-2, Hall-3**

**Ankara Local Time: 12:30 – 14:30**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Assoc. Prof. Dr. Hanif ŞİRİNZADE**

| Title                                                                                                                                                                                                                                                            | Author(s)                                                           | Affiliation                                 |
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| DFT COMPUTATIONAL STUDIES OF 1- ACETYL-3-METHYL-4-(3-METHOXY-4-ACETOXY BENZYLIDENE AMINO)-4,5-DIHYDRO-1H-1,2,4-TRIAZOL-5-ONE                                                                                                                                     | Sevda MANAP<br>Gül KOTAN<br>Haydar YÜKSEK                           | Kafkas University TÜRKİYE                   |
| DFT STUDIES INCLUDING FMO, MULLIKEN CHARGES, NLO, MEP, ESP, HOMO-LUMO, SPECTROSCOPIC, THERMODYNAMIC AND ELECTRONIC OF 1-(1-METHYLPIPERAZIN-4-YL-METHYL)-3-METHYL-4- (3-METHOXY-4-ISOBUTYRYLOXY-BENZYLIDENEAMINO)-4,5-DIHYDRO-1H-1,2,4-TRIAZOL-5-ONE MANNICH BASE | Gül KOTAN<br>Haydar YÜKSEK                                          | Kafkas University TÜRKİYE                   |
| PROBIOTIC USE IN INTENSIVE CARE UNIT PATIENTS: A PROMISING STRATEGY FOR IMMUNE MODULATION AND INFECTION CONTROL                                                                                                                                                  | Dr. Necip Gökhan TAŞ                                                | Erzincan Binali Yıldırım University TÜRKİYE |
| BIOTECHNOLOGICAL POTENTIAL OF LOCAL LACTOBACILLUS STRAINS FOR PROBIOTIC PRODUCTION                                                                                                                                                                               | Assist. Prof. Dr. Mehtap USTA                                       | Trabzon University TÜRKİYE                  |
| THE ROLE OF GLP-1 AGONISTS IN DIABETIC WOUND HEALING                                                                                                                                                                                                             | Sevde Nur ÇİFTÇİ<br>Assoc. Prof. Dr. Fatih KAR                      | Kütahya Health Sciences University TÜRKİYE  |
| DISRUPTORS OF METABOLIC HOMEOSTASIS: GUT MICROBIOTA AND SYSTEMIC INFLAMMATION TYPE 2 DIABETES                                                                                                                                                                    | Sevde Nur ÇİFTÇİ<br>Assoc. Prof. Dr. Fatih KAR                      | Kütahya Health Sciences University TÜRKİYE  |
| ANALYSIS OF MIR-1302 RS6631 VARIANT IN INFERTILE MEN BY PCR-RFLP                                                                                                                                                                                                 | Abdul Ahmad NOORI<br>Neslihan HEKİM<br>Sezgin GÜNEŞ<br>Ramazan AŞÇI | Ondokuz Mayıs University TÜRKİYE            |
| QUINOLINE-DERIVED SCHIFF BASES AS INHIBITORS OF HUMAN CARBONIC ANHYDRASE ISOENZYMES (HCAI AND HCAII)                                                                                                                                                             | Assoc. Prof. Dr. Hanif ŞİRİNZADE                                    | Selçuk University TÜRKİYE                   |

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**24.06.2025 / Session-2, Hall-4**

**Ankara Local Time: 12:30 – 14:30**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: V.Hariharan**

| Title                                                                                                                                                                                                                                      | Author(s)                                                                 | Affiliation                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------|
| SPINAL DISORDER                                                                                                                                                                                                                            | M.Farhatyassir<br>V.Hariharan<br>S.Harini<br>T.Vanitha<br>Mrs.E.Elavarasi | Bharath Institute of Higher Education and Research INDIA |
| LUNG CANCER                                                                                                                                                                                                                                | M.Farhatyassir<br>V.Hariharan<br>S.Harini<br>T.Vanitha<br>Mrs.E.Elavarasi | Bharath Institute of Higher Education and Research INDIA |
| ANTIMICROBIAL ACTIVITY OF NEEEM EXTRACT                                                                                                                                                                                                    | V.Hariharan<br>M.Farhatyassir<br>S.Harinishree<br>R.Thelshath             | Bharath Institute of Higher Education and Research INDIA |
| STANDARDIZATION OF HERBAL MEDICINES                                                                                                                                                                                                        | V.Hariharan<br>M.Farhatyassir<br>S.Harinishree<br>R.Thelshath             | Bharath Institute of Higher Education and Research INDIA |
| PHYTOSOMES IN HERBAL DRUG DELIVERY                                                                                                                                                                                                         | V.Hariharan<br>M.Farhatyassir<br>S.Harinishree<br>R.Thelshath             | Bharath Institute of Higher Education and Research INDIA |
| ROLE OF PEPPERINE IN BIOENHANCEMENT                                                                                                                                                                                                        | V.Hariharan<br>M.Farhatyassir<br>S.Harinishree<br>R.Thelshath             | Bharath Institute of Higher Education and Research INDIA |
| LIPOSOMES IN DRUG DELIVERY                                                                                                                                                                                                                 | V.Hariharan<br>M.Farhatyassir<br>S.Harinishree<br>R.Thelshath             | Bharath Institute of Higher Education and Research INDIA |
| REVIEW ON CONGESTIVE HEART FAILURE                                                                                                                                                                                                         | K.Pooja<br>Dr. M.K. Vijayalakshmi<br>Puniparthi Sunitha                   | Bharath Institute of Higher Education and Research INDIA |
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**24.06.2025 / Session-2, Hall-5**

**Ankara Local Time: 12:30 – 14:30**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Dr. R. Saravanan**

| Title                                                                                                                                                                                                                                      | Author(s)                                                     | Affiliation                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|----------------------------------------------------------|
| RECENT DEVELOPMENTS IN THE DIAGNOSIS AND MANAGEMENT OF BLOOD CANCERS                                                                                                                                                                       | Dr. R. Saravanan                                              | Bharath Institute of Higher Education and Research INDIA |
| NEUROBIOLOGICAL CHANGES INDUCED BY MINDFULNESS AND MEDITATION                                                                                                                                                                              | Keerthana V.<br>Dr. R. Saravanan                              | Bharath Institute of Higher Education and Research INDIA |
| ISCHEMIC STROKE                                                                                                                                                                                                                            | Meenatchi.S.<br>Kishore.R<br>Keerthana V.<br>Dr. R. Saravanan | Bharath Institute of Higher Education and Research INDIA |
| A BRIEF REVIEW OF THYGESON'S SUPERFICIAL PUNCTATE KERATITIS                                                                                                                                                                                | Dr. Koosha Koorehpaz                                          | Tehran University of Medical Sciences IRAN               |
| AN OVERVIEW AND EMERGING TREATMENT STRATEGIES ABOUT ACANTHAMOEBA KERATITIS                                                                                                                                                                 | Dr. Koosha Koorehpaz                                          | Tehran University of Medical Sciences IRAN               |
| EPIDEMIOLOGY OF BREAST CANCER                                                                                                                                                                                                              | NOURANI Imane<br>BEICHI Fayçal<br>OUDJEHIH Messouada          | Batna University Hospital ALGERIA                        |
| EPIDEMIOLOGY OF NON-COMMUNICABLE DISEASES                                                                                                                                                                                                  | NOURANI Imane<br>BEICHI Fayçal<br>OUDJEHIH Messouada          | Batna University Hospital ALGERIA                        |
| GENETIC AND HUMORAL INFLUENCE ON OBESITY                                                                                                                                                                                                   | S. Punithavalli<br>V. Vijitha<br>Dr. R. Saravanan             | Bharath Institute of Higher Education and Research INDIA |
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**24.06.2025 / Session-2, Hall-6**

**Ankara Local Time: 12:30 – 14:30**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Roguai Sabrina**

| Title                                                                                                            | Author(s)                                                                                                                                                                                                                          | Affiliation                                                                                   |
|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| THE FORMATION OF LIFE SKILLS IN STUDENTS DURING THE EDUCATIONAL PROCESS: THE ROLE OF THE BIOLOGY SUBJECT         | Konul Mahmudova                                                                                                                                                                                                                    | Azerbaijan State Pedagogical University AZERBAIJAN                                            |
| INVESTIGATING THE POTENTIAL OF BIOMASS-DERIVED BIOGAS AS A SUSTAINABLE ENERGY ALTERNATIVE                        | Mohammad A.<br>Zuru A.A.<br>Muhammad C.<br>Musa M.<br>Shuaibu I. M<br>Adamu S.S                                                                                                                                                    | Usmanu Danfodiyo University NIGERIA                                                           |
| ENGINEERED EXOSOMES AS SMART DRUG CARRIERS: OVERCOMING BIOLOGICAL BARRIERS IN CNS AND CANCER THERAPY             | Tanvi Premchandani<br>Amol Tatode<br>Rahmuddin Khan<br>Mohammad Qutub<br>Jayshree Taksande<br>Milind Umekar                                                                                                                        | Kishoritai Bhoyar College INDIA<br>School of Pharmaceutical Education & Research (SPER) INDIA |
| POLYHERBAL FORMULATION IN THERAPEUTICS                                                                           | S.Harinisri<br>V.Hariharan<br>M.Farhatyassir<br>Mrs.E.Ellavarasi                                                                                                                                                                   | Bharath Institute of Higher Education and Research INDIA                                      |
| PHARMACOGENOMICS IN PERSONALISED MEDICINE                                                                        | S.Harinisri<br>V.Hariharan<br>M.Farhatyassir<br>Mrs.E.Ellavarasi                                                                                                                                                                   | Bharath Institute of Higher Education and Research INDIA                                      |
| 3D PRINTING IN PHARMACEUTICAL MANUFACTURING                                                                      | S.Harinisri<br>V.Hariharan<br>M.Farhatyassir<br>Mrs.E.Ellavarasi                                                                                                                                                                   | Bharath Institute of Higher Education and Research INDIA                                      |
| EVALUATION OF CLINICAL AND BIOCHEMICAL PARAMETERS IN TWO VARIANTS OF SCREW-RETAINED SINGLE IMPLANT CROWNS        | Alessandro Auletta<br>Andrea Luzi<br>Arianna Antonelli<br>Francesco Evolo<br>Nicholas Prosperi<br>Gualtiero Gherardi<br>Valeria Martini<br>Alessio Zanza<br>Sofia Leporale<br>Marta Cianfriglia<br>Luca Testarelli<br>Rodolfo Reda | Sapienza University of Rome ITALY                                                             |
| INVESTIGATION OF THE STRUCTURAL, OPTICAL, AND ELECTRICAL PROPERTIES OF 4%Co-SnO <sub>2</sub> FILMS BY USP METHOD | Roguai Sabrina                                                                                                                                                                                                                     | Abbes Laghrour University ALGERIA                                                             |

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**24.06.2025 / Session-3, Hall-1**

**Ankara Local Time: 15:00 – 17:00**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Assist. Prof. Dr. Mehmet Burak UYAROĞLU**

| Title                                                                                                                                                                                                      | Author(s)                                                                                                                           | Affiliation                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EFFICACY AND AWARENESS OF ADJUNCT PHYSIOTHERAPY TECHNIQUES IN NEUROLOGICAL REHABILITATION                                                                                                                  | Hamide Nur TÜRKYILMAZ<br>Ece ACAR                                                                                                   | Karabük University TÜRKİYE                                                                                                                                   |
| EVALUATION OF PUBLIC AWARENESS, ATTITUDES, AND KNOWLEDGE LEVELS REGARDING MANUAL THERAPY                                                                                                                   | Utku Mert KANAL<br>Ece ACAR                                                                                                         | Karabük University TÜRKİYE                                                                                                                                   |
| ECONOMIC IMPACT OF BRUCELLOSIS IN CATTLE BREEDING                                                                                                                                                          | Vet. Utku MERT<br>Assist. Prof. Dr. Mehmet KÜÇÜKOFLAZ                                                                               | Kafkas University TÜRKİYE                                                                                                                                    |
| STAIR ASCENT TIME AND WALKING SPEED UNDER SINGLE- AND DUAL-TASK CONDITIONS IN ADULTS WITH CHRONIC LOW BACK OR NECK PAIN                                                                                    | Eylem Çağla DANACI<br>Assist. Prof. Dr. Müge KIRMIZI<br>Assoc. Prof. Dr. Elif Umay ALTAŞ<br>Assoc. Prof. Dr. Sevtap GÜNAY<br>UÇURUM | İzmir Katip Çelebi University TÜRKİYE<br>İzmir Katip Çelebi University TÜRKİYE<br>İzmir Bakırçay University TÜRKİYE<br>İzmir Katip Çelebi University TÜRKİYE |
| SPINAL POSTURE AND BALANCE IN CHILDREN WITH AUTISM                                                                                                                                                         | Res. Assist. Muhammet Sertaç TUNÇ<br>Assist. Prof. Dr. Seda AYAZ TAŞ                                                                | Bolu Abant İzzet Baysal University TÜRKİYE                                                                                                                   |
| ASSOCIATIONS BETWEEN HANDGRIP STRENGTH, INSPIRATORY MUSCLE STRENGTH, AND FUNCTIONALITY IN MECHANICALLY VENTILATED PATIENTS                                                                                 | Assist. Prof. Dr. Mehmet Burak UYAROĞLU<br>Assoc. Prof. Dr. Esra PEHLİVAN<br>Ahmet AYTEKİN<br>Nezihe Çiftaslan GÖKŞENOĞLU           | Fenerbahçe University TÜRKİYE<br>Health Sciences University TÜRKİYE<br>İstanbul Medeniyet University TÜRKİYE<br>İstanbul Medeniyet University TÜRKİYE        |
| FORECASTING OBESITY RATES IN TÜRKİYE WITH A HYBRID ARTIFICIAL NEURAL NETWORK MODEL OPTIMIZED WITH GENETIC ALGORITHM                                                                                        | Assoc. Prof. Dr. Halil ÇOLAK<br>Emre ÇOLAK                                                                                          | Giresun University TÜRKİYE                                                                                                                                   |
| INVESTIGATION OF SECONDARY SCHOOL STUDENTS' SPORTSMANSHIP BEHAVIORS IN PHYSICAL EDUCATION CLASSES: THE CASE OF ELAZIĞ                                                                                      | Prof. Dr. Atalay GACAR<br>Res. Assist. Zeki VAİZOĞLU<br>Gönül BERK                                                                  | Fırat University TÜRKİYE<br>Hakkari University TÜRKİYE<br>Fırat University TÜRKİYE                                                                           |
| AN EXAMINATION OF PRE-SERVICE PHYSICAL EDUCATION AND SPORTS TEACHERS' ATTITUDES TOWARD TECHNOLOGY                                                                                                          | Prof. Dr. Atalay GACAR<br>Res. Assist. Zeki VAİZOĞLU<br>Gönül BERK                                                                  | Fırat University TÜRKİYE<br>Hakkari University TÜRKİYE<br>Fırat University TÜRKİYE                                                                           |
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**24.06.2025 / Session-3, Hall-2**

**Ankara Local Time: 15:00 – 17:00**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Umida MOVLYANOV**

| Title                                                                                                                                                                                                      | Author(s)                                                                           | Affiliation                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| DEEP LEARNING-BASED CHANNEL KNOWLEDGE MAPPING FOR MMWAVE 6G SYSTEMS USING PILOT SIGNAL ESTIMATION                                                                                                          | Maisarah Binti Saihun                                                               | İstanbul Gelişim University<br>TÜRKİYE                                                                               |
| LSTM-BASED CHANNEL KNOWLEDGE MAPPING FOR ULTRA-RELIABLE 6G SATELLITE NETWORKS                                                                                                                              | Amzar Khalili Bin Khalid                                                            | İstanbul Gelişim University<br>TÜRKİYE                                                                               |
| APPLICATIONS OF DRONES IN MODERN TELECOMMUNICATION NETWORKS                                                                                                                                                | Saif Alhusseini<br>Assist. Prof. Dr. Peri GÜNEŞ                                     | İstanbul Gelişim University<br>TÜRKİYE                                                                               |
| COMPARATIVE MODELING AND SIMULATION OF I-V CHARACTERISTICS IN SOLAR PANELS WITH RESISTANCE-BASED PERFORMANCE ANALYSIS                                                                                      | Amzar Khalili Bin Khalid<br>Maisarah Binti Saihun<br>Yusuf Gürcan ŞAHİN             | İstanbul Gelişim University<br>TÜRKİYE                                                                               |
| THE PERFORMANCE ANALYSIS OF KNN AND XGBOOST MODELS IN WIND ENERGY FORECASTING: A BAYESIAN OPTIMIZATION BASED APPROACH                                                                                      | Hatice ŞİMŞEK<br>Assoc. Prof. Dr. Zeynep HASIRCI<br>TUĞCU                           | Karadeniz Technical University<br>TÜRKİYE                                                                            |
| FEATURES OF ELECTROCARDIOGRAPHY REGISTRATION IN THE PROCESS OF REHABILITATION OF PATIENTS WITH INJURIES OF THE LIMBS                                                                                       | Prof. Dr. Kostyantyn BABOV<br>Prof. Dr. Alexander PLAKIDA<br>Prof. Dr. Iryna BABOVA | Ukrainian Research Institute of<br>Medical Rehabilitation and<br>Resort Therapy of the Ministry<br>of Health UKRAINE |
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**24.06.2025 / Session-3, Hall-3**

**Ankara Local Time: 15:00 – 17:00**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Assoc. Prof. Dr. Halil AKÇAY**

| Title                                                                                | Author(s)                                      | Affiliation                       |
|--------------------------------------------------------------------------------------|------------------------------------------------|-----------------------------------|
| AN ANALYSIS OF THE PHONETIC FEATURES IN TEREKEME JOKES AND HUMOUR                    | Assist. Prof. Dr. Özlem YILDIRIM KOÇ           | Kafkas University TÜRKİYE         |
| IMPRECATIONS (CURSES) IN THE POEM “BEYLER” BY ÂŞIK ŞENLİK                            | Assist. Prof. Dr. Özlem YILDIRIM KOÇ           | Kafkas University TÜRKİYE         |
| THE HEALING POWER OF NATURE IN CEMİL KAVUKÇU'S STORIES                               | Assoc. Prof. Dr. Arif YILMAZ Aysel AKDAĞ UYGUN | Uşak University TÜRKİYE           |
| THE SUBJECT OF ALLUSION IN ZEMAKHSHARI'S AL-KASHSHAF                                 | Assoc. Prof. Dr. Halil AKÇAY Abdulhamid BOZAN  | Mardin Artuklu University TÜRKİYE |
| LUVİS ŞEYHO'S WORK CALLED MECANUL-EDEB IN TERMS OF ITS POSITION IN ARABIC LITERATURE | Assoc. Prof. Dr. Halil AKÇAY Kevser ALĞAN      | Mardin Artuklu University TÜRKİYE |

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**24.06.2025 / Session-3, Hall-4**

**Ankara Local Time: 15:00 – 17:00**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Dr. Seyfaddin JAFAROV**

| Title                                                                                                                                                                                                                                      | Author(s)                                                                                               | Affiliation                                                                           |
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| INVESTIGATION OF STUDENT VIEWS ON POLYGON TEACHING IN INQUIRY- BASED LEARNING ENVIRONMENTS                                                                                                                                                 | Zeynep TOK<br>Prof. Dr. Çiğdem ASLAN                                                                    | Ministry of National Education<br>Bursa TÜRKİYE<br>Bursa Uludağ University<br>TÜRKİYE |
| APPROXIMATION PROPERTIES OF BERNSTEIN POLYNOMIALS IN TE TRIANGULAR REGION WITH SYMMETRIC INTERVAL                                                                                                                                          | Rahime DAMDAM<br>Prof. Dr. Aydın İZGİ                                                                   | Harran University TÜRKİYE                                                             |
| GENERAL EXPRESSION FOR ENERGY LOSSES IN THE PROCESS OF NEUTRINO PAIR EMISSION BY CHARGED LEPTONS (ANTILEPTONS) IN A MAGNETIC FIELD                                                                                                         | Əkbərova Nuridə Yaşar qızı<br>Şükürova Yaqut Telman qızı<br>Məmmədova Xuraman Ədalət qızı               | Nakhchivan State University<br>AZERBAIJAN                                             |
| STUDY OF THE PHYSICAL PROPERTIES OF QUANTUM DOTS BASED ON NANOTUBE COMPOSITE                                                                                                                                                               | Dr. Seyfaddin JAFAROV<br>Dr. Billura HAJIYEVA                                                           | Nakhchivan State University<br>AZERBAIJAN                                             |
| DEVELOPING MULTILINGUAL NATURAL LANGUAGE PROCESSING FRAMEWORKS FOR ENHANCED ACCESS TO NIGERIA'S INDIGENOUS KNOWLEDGE ARCHIVES                                                                                                              | Tanimu BALA<br>Hasiya Salihu YUSUF<br>Usman HASSAN                                                      | Aliko Dangote University of Science and Technology<br>NIGERIA                         |
| ASSESSMENT OF BEEKEEPERS' PARTICIPATION IN FOREST CONSERVATION ACTIVITIES AROUND GISHWATI-MUKURA NATIONAL PARK, RWANDA                                                                                                                     | Andrew KIBOGO<br>Assoc. Prof. Brako Kwaku DAKWA<br>Prof. K. Peter KWAPONG<br>Assoc. Prof. Rofela COMBEY | Cape Coast University GHANA                                                           |
| RINGS WHOSE SEMI-HOPFIAN MODULES ARE NOETHERIAN                                                                                                                                                                                            | Abderrahim El Moussaouy                                                                                 | Sidi Mohamed Ben Abdellah University MOROCCO                                          |
| MAPS PRESERVING THE - SPECTRUM OF GENERALIZED PRODUCTS OF OPERATORS                                                                                                                                                                        | Aukacha Daoudi<br>Prof. Dr. Hassane Ben Bouziane<br>Prof. Dr. Mustapha Ech-Chérif El Kettani            | Sidi Mohammed Ben Abdellah University MOROCCO                                         |
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**24.06.2025 / Session-3, Hall-5**

**Ankara Local Time: 15:00 – 17:00**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Dr. Mukadder GÜNERİ**

| Title                                                                                                                                                                                                      | Author(s)                       | Affiliation                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------|
| ADULT TRANSLATORS FOR CHILD READERS: A CASE STUDY OF THE GIVING TREE IN PERSIAN TRANSLATION                                                                                                                | Narjes Asgari<br>Mahmoud Afrouz | Isfahan University IRAN           |
| WHY TURKISH                                                                                                                                                                                                | Dr. Mukadder GÜNERİ             | Independent Researcher<br>TÜRKİYE |
| IS LIFELONG LEARNING A MUST IN TODAY'S WORLD?                                                                                                                                                              | Dr. Mukadder GÜNERİ             | Independent Researcher<br>TÜRKİYE |
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**24.06.2025 / Session-3, Hall-6**

**Ankara Local Time: 15:00 – 17:00**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Moses Adeolu AGOI**

| Title                                                                                                                                                                                                                                                                                                                     | Author(s)                                                                                             | Affiliation                                                                                                                                                       |
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| GRAPHENE OXIDE-ENHANCED CHITOSAN COMPOSITE BEADS FOR EFFICIENT CONGO RED ADSORPTION: A COMPREHENSIVE INVESTIGATION COMBINING DENSITY FUNCTIONAL THEORY (DFT) THEORETICAL ANALYSIS, RIGOROUS EXPERIMENTAL EVALUATION, AND PROCESS OPTIMIZATION USING RESPONSE SURFACE METHODOLOGY (RSM) TO ELUCIDATE ADSORPTION MECHANISMS | Soukaina El Bourachdi<br>Yassine Rakcho<br>Amal Lahkimi                                               | Sidi Mohamed Ben Abdellah University MOROCCO<br>Cadi Ayyad University MOROCCO<br>Sidi Mohamed Ben Abdellah University MOROCCO                                     |
| THE EFFICACY OF MACHINE LEARNING (ML) APPLICATIONS IN HEALTHCARE INDUSTRIES: EVOLVING FROM TRADITIONAL METHODS TO CONVENTIONAL APPROACHES                                                                                                                                                                                 | Moses Adeolu AGOI<br>Samuel Olayiwola AJAGA<br>Solomon Abraham UKPANA<br>Oluwanifemi Opeyemi AGOI     | Lagos State University NIGERIA<br>Lagos State University NIGERIA<br>Lagos State University NIGERIA<br>Obafemi Awolowo University NIGERIA                          |
| SUSTAINABLE ENERGY HARVESTING USING ENHANCED PERFORMANCE SOLAR THERMAL COLLECTORS                                                                                                                                                                                                                                         | Kazi Md Salim Newaz                                                                                   | Malaya University MALAYSIA                                                                                                                                        |
| MODELING AND CONTROL OF MATRIX CONVERTER FOR EFFICIENT DFIG WIND TURBINE OPERATION                                                                                                                                                                                                                                        | Aboubaker Essaddiq MAZOUZ<br>Said HASSAINE<br>Hamid BOUMEDIENE<br>Lallouani HELLALI<br>Oussama MOUSSA | Tiaret University ALGERIA<br>Tiaret University ALGERIA<br>Tiaret University ALGERIA<br>Mohamed Boudiaf - M'sila University ALGERIA<br>Ghardaia University ALGERIA |
| DIRECT TORQUE CONTROL APPLIED TO AN INDUCTION MOTOR WITH A FRACTIONAL PI-FUZZY LOGIC SPEED CONTROLLER                                                                                                                                                                                                                     | Younes Abdelbadie MABROUK<br>Mohamed ALI MOUSSA                                                       | Amar Telidji University ALGERIA<br>Hassiba Ben Bouali University ALGERIA                                                                                          |
| WIRELESS POWER TRANSFER                                                                                                                                                                                                                                                                                                   | Mohamed ALI MOUSSA<br>Younes Abdelbadie MABROUK                                                       | Hassiba Ben Bouali University ALGERIA<br>Amar Telidji University ALGERIA                                                                                          |
| PHOTOVOLTAIC (PV) AND WIND ENERGY SOURCES WITH A SOCIAL WEALTH-BASED CONTROLLER TO IMPROVE ELECTRICITY FLOW                                                                                                                                                                                                               | Alok Kumar Shrivastav<br>Anurag Kar<br>Suparna Pal                                                    | JIS College of Engineering INDIA                                                                                                                                  |
| HYDROPHOBIC PLA NANOFIBROUS MEMBRANE FOR WATER DESALINATION VIA MEMBRANE DISTILLATION                                                                                                                                                                                                                                     | Abdelhafid EL HADDAOUI<br>Ayoub Nadi<br>Mohamed Tahiri                                                | Hassan II University MOROCCO<br>Higher School of Textile and Clothing Industry (ESITH) MOROCCO<br>Hassan II University MOROCCO                                    |
| CLUSTERING BASED ENERGY EFFICIENCY OPTIMIZATION IN IOT-BASED WSN FOR HYDROPONIC FARMING MONITORING SYSTEMS                                                                                                                                                                                                                | BLESSINA PREETHI R<br>SARANYA NAIR M                                                                  | Vellore Institute of Technology INDIA                                                                                                                             |

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**25.06.2025 / Session-1, Hall-1**

**Ankara Local Time: 10:00 – 12:00**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Samet KUŞKIRAN**

| Title                                                                                                                                                                                                      | Author(s)                                                                                                    | Affiliation                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| CLASSIFICATION OF SIGN LANGUAGE GESTURES USING PRINCIPAL COMPONENT ANALYSIS AND CHI-SQUARE FEATURE SELECTION METHOD                                                                                        | Res. Assist. Dr. Narin ASLAN<br>Memet TÜRKER<br>Fatih Alperen KAPLAN<br>Assoc. Prof. Dr. Gonca ÖZMEN<br>KOCA | Fırat University TÜRKİYE                                                                    |
| OBJECT RECOGNITION AND ROBOT ARM CONTROL: RASPBERRY PI-STM32 INTEGRATION                                                                                                                                   | Assoc. Prof. Dr. Can Bülent FİDAN<br>Azarack Alkhalil SAAD                                                   | Karabük University TÜRKİYE                                                                  |
| EEG-BASED BRAIN-COMPUTER INTERFACE SYSTEMS FOR EXOSKELETON CONTROL: A REVIEW WITH CONCEPTUAL INSIGHTS                                                                                                      | Assoc. Prof. Dr. Can Bülent FİDAN<br>Ahmet Hüsrev AKDENİZ                                                    | Karabük University TÜRKİYE                                                                  |
| ELEVATOR MANAGEMENT SYSTEM SUPPORTED BY SIMULATION AND IMAGE PROCESSING FOR STOP OPTIMIZATION ACCORDING TO PASSENGER DENSITY                                                                               | Beyzanur ŞAHİN<br>Assist. Prof. Dr. Oğulcan EREN                                                             | Gazi University TÜRKİYE                                                                     |
| TRAJECTORY PLANNING AND CONTROL OF A QUADROTOR UAV                                                                                                                                                         | Hamza KÖSE<br>Prof. Dr. Vasfi Emre ÖMÜRLÜ                                                                    | Yıldız Technical University TÜRKİYE                                                         |
| COOLING OF ELECTRIC VEHICLE BATTERIES                                                                                                                                                                      | Saniye KARAGÜL<br>Prof. Dr. Necdet ALTUNTOP                                                                  | Erciyes University TÜRKİYE                                                                  |
| 3D STUDY OF CRANIAL, FACIAL AND PALATAL INDEX AND PALATE VOLUME: ANALYSIS OF MORPHOLOGICAL RELATIONSHIPS OF THE SKULL, FACE AND PALATE                                                                     | Assist. Dr. Spec. Kaltrina VESELI                                                                            | Alma Mater Europaea, Campus College Rezonanca, Department of Orthodontics, Prishtina KOSOVO |
| A SWITCHABLE HIGHLY SELECTIVE BANDPASS FILTER FOR DUAL-WIDEBAND AND TRI-WIDEBAND OPERATIONS                                                                                                                | Firmlı Maroua                                                                                                | Ibn Zohr University MOROCCO                                                                 |
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**25.06.2025 / Session-1, Hall-2**

**Ankara Local Time: 10:00 – 12:00**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Assoc. Prof. Dr. Emre TOPÇU**

| Title                                                                                                                                                                                                      | Author(s)                                                                                          | Affiliation                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| DROUGHT CHARACTERIZATION UTILIZING GRACE TERRESTRIAL WATER STORAGE DEFICIT AT ARTVİN STATION                                                                                                               | Assoc. Prof. Dr. Emre TOPÇU<br>Fatih KARAÇOR                                                       | Kafkas University TÜRKİYE                              |
| DETERMINATION OF FISH PASSAGE PROBLEMS OF RIVER TYPE HEPP PROJECTS IN ARTVİN                                                                                                                               | Ceren ÖZTÜRK<br>Assist. Prof. Dr. Esin ACAR                                                        | Artvin Çoruh University<br>TÜRKİYE                     |
| EVALUATION OF PLANNING PROCESSES WITHIN THE SCOPE OF THE ZONING LAW AND THE LAND AND PLOT REGULATION                                                                                                       | Bahriye DEMİR<br>Prof. Dr. Ali Türk                                                                | Süleyman Demirel University<br>TÜRKİYE                 |
| CHARACTERIZING AND ASSESSING DRINKING WATER TREATMENT PLANT SLUDGES AS A SOIL STABILIZER IN TRABZON, TÜRKİYE                                                                                               | Kemal AYDIN<br>Prof. Dr. Osman SIVRİKAYA<br>Assoc. Prof. Dr. Osman ÜÇÜNCÜ<br>Prof. Dr. Faruk AYDIN | Karadeniz Technical University<br>TÜRKİYE              |
| EXPERIMENTAL INVESTIGATION ON THE EFFECT OF DIFFERENT TYPES OF PLASTERED AND UNPLASTERED INFILL WALLS ON THE LATERAL LOAD-BEARING CAPACITY OF REINFORCED CONCRETE FRAMES                                   | Anıl Can GÜLBİTTİ<br>Prof. Dr. Orhan DOĞAN                                                         | Kırıkkale University TÜRKİYE                           |
| THE DESIGN OF REGRESSION MODELS FOR COMPARATIVE ANALYSIS OF A SILICA FUME AND FLY ASH IN THE INFUSED CONCRETE                                                                                              | Subhashish DE                                                                                      | Seshadri Rao Gudlavalleru<br>Engineering College INDIA |
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**25.06.2025 / Session-1, Hall-3**

**Ankara Local Time: 10:00 – 12:00**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Assoc. Prof. Dr. Mehmet Settar ÜNAL**

| Title                                                                                                             | Author(s)                                                                                 | Affiliation                                                                                        |
|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| CRANBERRY, A BERRY FRUIT                                                                                          | Assoc. Prof. Dr. Mehmet Settar ÜNAL                                                       | Şırnak University TÜRKİYE                                                                          |
| BERRIES, THEIR USES AND NUTRITIONAL VALUES                                                                        | Assoc. Prof. Dr. Mehmet Settar ÜNAL                                                       | Şırnak University TÜRKİYE                                                                          |
| OPTIMIZATION OF TAHINI-BASED SMOOTHIE FORMULATION USING RESPONSE SURFACE METHODOLOGY                              | Tuğba GÜL DİKME                                                                           | Harran University TÜRKİYE                                                                          |
| TEMPORAL VARIATION OF CHEMICAL AGEING ON THE AVAILABLE BORON CONTENT OF SOILS                                     | Prof. Dr. Uğur ŞİMŞEK<br>Assist. Prof. Dr. Fatih GÖKMEN                                   | Iğdır University TÜRKİYE                                                                           |
| DETERMINATION OF THE SENSORY AND PHYSICAL QUALITY CHARACTERISTICS OF DIFFERENT COMMERCIAL CHOCOLATE CUPCAKES      | Agr. Eng. Ferya KIRAN<br>Assist. Prof. Dr. Sultan ACUN                                    | Amasya University TÜRKİYE                                                                          |
| DETERMINATION OF PHYSICAL, CHEMICAL, AND FUNCTIONAL PROPERTIES OF JUJUBE (ZIZIPHUS JUJUBA MILL.) POWDER           | Assist. Prof. Dr. Sultan ACUN<br>Agr. Eng. Ferya KIRAN                                    | Amasya University TÜRKİYE                                                                          |
| EFFECTS OF NITROGEN FERTILIZATION ON YIELD AND QUALITY OF WHEAT UNDER DRY CONDITIONS                              | Agr. Eng. Abdullah Yiğit ÖZ<br>Prof. Dr. Mehmet YAĞMUR                                    | Kırşehir Ahi Evran University TÜRKİYE                                                              |
| EFFECTS OF PROLINE PRE-TREATMENT ON GERMINATION AND OXIDATIVE STRESS PARAMETERS IN BLACK PINE (PINUS NIGRA) SEEDS | Burak KILIÇ<br>Assoc. Prof. Dr. Mehmet DEMİRALAY<br>Prof. Dr. Fahrettin TILKİ             | Artvin Çoruh University TÜRKİYE<br>Artvin Çoruh University TÜRKİYE<br>Gümüşhane University TÜRKİYE |
| EXAMPLES OF NATIVE PLANT SPECIES IN THE FRAME OF SUSTAINABLE LANDSCAPE DESIGN: THE CASE OF ANKARA                 | Lect. Dr. Nihan ŞENSOY<br>Res. Assist. Seher Simay KUŞOĞLU<br>Prof. Dr. Mehmet Emin BARIŞ | Siirt University TÜRKİYE<br>Ankara University TÜRKİYE<br>Ankara University TÜRKİYE                 |

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**25.06.2025 / Session-1, Hall-4**

**Ankara Local Time: 10:00 – 12:00**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Prof. Dr. Sabeeha Hamza Dehham**

| Title                                                                                                                                                                                               | Author(s)                                                             | Affiliation                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| NURSES, ROLE AND PRACTICE IN WOMEN'S AWARENESS REGARDING CERVICAL SCREENING IN ERBİL CITY                                                                                                           | Iman Fadhil Omar<br>Awaz Aziz Saeid<br>Rabar Mohammed Huseein         | Erbil polytechnic University IRAQ<br>Hawler Medical University IRAQ<br>Noble Technical Institute IRAQ |
| GENDER EQUALITY AND GENDER STUDIES IN THE BLACK SEA REGION AND BEYOND: CASE STUDY ON THE IMPORTANCE OF PROVIDING A RICH CULTURAL REPRESENTATION AND THE PLACE OF WOMEN IN THE TRANSFER OF KNOWLEDGE | Prof. Dr. Habil. Cristina Raluca Gh. Popescu                          | Bucharest University ROMANIA                                                                          |
| THE INVISIBLE ENTREPRENEURS: EXPLORING THE INFORMAL ENTREPRENEURIAL ACTIVITIES OF WOMEN IN MOZAMBIQUE                                                                                               | Angélica Chiau                                                        | School of Economics and Management PORTUGAL                                                           |
| THE ROLE OF STATE POLICIES IN HELPING TO ACHIEVE THE PROCESS OF INCLUSIVE EDUCATION FOR CHILDREN WITH DISABILITIES                                                                                  | Dhurata TURKU<br>Ina DANAJ ÇEKREZI                                    | Aleksandër Xhuvani University ALBANIA                                                                 |
| PSYCHOSOCIAL CORRELATES OF UNATTAINABLE BEAUTY STANDARDS                                                                                                                                            | Muqaddas Ghafoor<br>Mishal Khan Lodhi                                 | University of Management And Technology PAKISTAN                                                      |
| CRITICALLY REFLECTING TEACHING STRATEGIES AND THEIR ROLE ON IRAQI EFL WRITING SKILLS: UNIVERSITY STUDENTS IN FOCUS                                                                                  | Prof. Dr. Sabeeha Hamza Dehham                                        | Babylon University IRAQ                                                                               |
| CULTIVATING SOFT SKILLS FOR THE INTERNATIONALIZATION OF THE CURRICULUM IN HIGER EDUCATION IN THE ERA OF AI                                                                                          | Prof. Dr. María Cruz CUEVAS ÁLVAREZ<br>Prof. Dr. Marcos PÉREZ MENDOZA | Juárez Autonomous University of Tabasco MEXICO                                                        |
| INVESTIGATING THE IMPACT OF LARGE CLASS SIZE ON TEACHERS' PERFORMANCE: A STUDY OF SECONDARY SCHOOLS IN SULAİMANİ                                                                                    | Dr. Tazhan Kamal Omer<br>Rabar Azad Mahmood                           | Sulaimani University IRAQ                                                                             |

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**25.06.2025 / Session-1, Hall-5**

**Ankara Local Time: 10:00 – 12:00**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Zohaib Hassan Sain**

| Title                                                                                                                                    | Author(s)                                                                                                                                                                          | Affiliation                                                                                                                                                                                                                                                                                                                                |
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| ADVANCED FORENSICS AND ILLICIT FINANCIAL FLOW ANALYSIS IN NIGERIA'S INFORMAL ECONOMY                                                     | Abdulgaffar Muhammad<br>Sarah Omoyemi Dede<br>Fidelis Owhe<br>Efezino Eniwo Aruoture<br>Power Akpevwe Isaac<br>Edirin Heroh<br>Micah Ezekiel Elton Mike<br>Anthony Kolade Adesugba | Ahmadu Bello University<br>NIGERIA<br>Patrick Uzoka & Co Chatered<br>Accountants Delta State<br>NIGERIA<br>Delta State University IGERIA<br>ANAN University NIGERIA<br>Delta State University of<br>Science and Technology<br>NIGERIA<br>Delta State University IGERIA<br>Federal University NIGERIA<br>Ahmadu Bello University<br>NIGERIA |
| UTILISATION OF FOREIGN REMITTANCES: A CASE STUDY OF RURAL HOUSEHOLDS IN BANGLADESH                                                       | Gazi Abu Horaira<br>Rabiul Islam<br>Kamrun Nahar Salma                                                                                                                             | Utara University MALAYSIA                                                                                                                                                                                                                                                                                                                  |
| STRENGTHENING TVET PROGRAMMES WITH OUTCOME-BASED CURRICULUM DELIVERY TO MEET INDUSTRY NEED FOR SUSTAINABLE NATIONAL DEVELOPMENT          | Jumoke Soyemi<br>Olugbenga Babajide Soyemi                                                                                                                                         | The Federal Polytechnic<br>NIGERIA                                                                                                                                                                                                                                                                                                         |
| LEGISLATION AND SUSTAINABLE ECONOMIC DEVELOPMENT- IMPACT ON YOUTH EMPLOYMENT – FOCUS KOSOVO                                              | Prof. Assist. Dr. Gazmend Deda<br>Prof. Assoc. Dr. Arben Terstena<br>MSc. Can. Shqipe Hajdini<br>MSc. Can. Erona Maloku<br>Prof. Asoc. Dr. Ismail Mehmeti                          | Ferizaj University of Applied<br>Sciences KOSOVO                                                                                                                                                                                                                                                                                           |
| THE ROLE OF GRAM SABHAS IN THE DEVELOPMENT OF KERALA: A STUDY ON DECENTRALIZATION AND LOCALIZATION OF POWER                              | Ramshad Khan R.                                                                                                                                                                    | Trivandum University INDIA                                                                                                                                                                                                                                                                                                                 |
| UNLOCKING THE POTENTIAL OF HELIANTHUS TUBEROSUS: A NUTRITIONAL AND MARKET ANALYSIS IN MALAYSIA                                           | Assoc. Prof. Dr. Risyawati<br>MOHAMED ISMAIL                                                                                                                                       | Utara University MALAYSIA                                                                                                                                                                                                                                                                                                                  |
| THE EFFECT OF GAMIFIED MOBILE LEARNING APPS ON ENHANCING CRITICAL THINKING SKILLS IN PRIMARY SCHOOL STUDENTS FOR ENVIRONMENTAL EDUCATION | Zohaib Hassan Sain                                                                                                                                                                 | Brawijaya University<br>INDONESIA                                                                                                                                                                                                                                                                                                          |
| THE EDUCATION SYSTEM IN CROATIA AND THE GOALS OF EDUCATION                                                                               | Mihailo KORUGIĆ                                                                                                                                                                    | Novi Sad University SERBIA                                                                                                                                                                                                                                                                                                                 |

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**25.06.2025 / Session-1, Hall-6**

**Ankara Local Time: 10:00 – 12:00**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Dr. Deema Dakakni**

| Title                                                                                                        | Author(s)                                                  | Affiliation                            |
|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------|
| WHAT DO FREQUENT ORONYMS IN THE BALKANS REVEAL?                                                              | Tamara LUKIĆ<br>Milka BUBALO ŽIVKOVIĆ<br>Branko RISTANOVIĆ | Novi Sad University SERBIA             |
| BIBLIOMETRIC ANALYSIS OF THE ROLE OF SOCIAL MEDIA IN PROMOTING PUBLIC LIBRARIES                              | Ashish Kumar<br>Assoc. Prof. Dr. Sanjiv Kadyan             | Maharshi Dayanand University INDIA     |
| SUBCONSCIOUS PROGRAMMING OF THE ENGLISH LANGUAGE                                                             | Dr. Deema Dakakni                                          | Lebanese American University LEBANON   |
| UNLOCKING MINDS BEHIND BARS: INMATES' PERCEPTIONS OF EDUCATIONAL SERVICES IN SOUTHEAST NIGERIAN PRISONS      | Ijeoma B. Uche<br>Okala A. Uche<br>Agatha U. Nzewuji       | Nigeria University NIGERIA             |
| SUPERSTITIONS AND CRIMINAL BEHAVIOR: THE ROLE OF WITCHCRAFT ACCUSATIONS IN NIGERIAN RURAL COMMUNITIES        | Ijeoma B. Uche<br>Okala A. Uche<br>Agatha U. Nzewuji       | Nigeria University NIGERIA             |
| SILENCE AS A PRAGMATIC AND PSYCHOLOGICAL STRATEGY: THE CASE OF AFRICAN WOMEN IN SOLA ADEBOWALE'S LONELY DAYS | Adesanmi, Moses Ademola                                    | Federal Polytechnic NIGERIA            |
| LANGUAGE POLUCY IN GEORGIA (HISTORICAL AND CONTEMPORARY CONTEXT)                                             | Prof. Mariam Manjgaladze                                   | Caucasus University GEORGIA            |
| AN INTEGRATED MEASUREMENT OF HIGH-QUALITY ECONOMIC DEVELOPMENT IN CHINA                                      | Huang Yi                                                   | MARA University of Technology MALAYSIA |

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**25.06.2025 / Session-2, Hall-1**

**Ankara Local Time: 12:30 – 14:30**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Prof. Dr. Mustafa Yüksel ERDOĞDU**

| Title                                                                                                                | Author(s)                                                   | Affiliation                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| THE PREDICTIVE EFFECT OF ATTITUDES TOWARDS READING HABITS ON ATTITUDES TOWARDS CHILDREN'S LITERATURE                 | Assoc. Prof. Dr. Alev ÜSTÜNDAĞ<br>Nurbanu AKBOLAT           | Health Sciences University<br>TÜRKİYE<br>Child Development Specialist<br>Nevşehir TÜRKİYE                                                 |
| EVALUATION OF EMOTIONAL WELL-BEING IN HOSPITALIZED CHILDREN                                                          | Assoc. Prof. Dr. Alev ÜSTÜNDAĞ                              | Health Sciences University<br>TÜRKİYE                                                                                                     |
| INVESTIGATING DEPRESSION AND ANXIETY IN DIALYSIS PATIENTS: A TRADITIONAL REVIEW                                      | Assoc. Prof. Dr. Nurten ÖZEN<br>Elif KIZMAZ<br>Gülsüm ALTIN | İstanbul University TÜRKİYE<br>Gaziosmanpaşa Medical Park<br>Hospital İstanbul TÜRKİYE<br>Acibadem Kozyatağı Hospital<br>İstanbul TÜRKİYE |
| THE FEBRUARY 21, 1940 KAYSERİ-DEVELİ EARTHQUAKE IN THE LIGHT OF ARCHIVAL DOCUMENTS                                   | Assoc. Prof. Dr. Mustafa SALEP<br>Öznur BEŞENK              | Kayseri University TÜRKİYE                                                                                                                |
| ADAPTATION OF THE MINDFULNESS DURING WORSHIP SCALE (MWS) TO TURKISH CULTURE                                          | Assist. Prof. Dr. Ekrem Sedat<br>ŞAHİN<br>Nuray AYDOĞDU     | Aksaray University TÜRKİYE                                                                                                                |
| THE MEDIATING ROLE OF TIME MANAGEMENT IN THE RELATIONSHIP BETWEEN COGNITIVE FLEXIBILITY AND ACADEMIC PROCRASTINATION | Cansu BETÜL GÜLER<br>Prof. Dr. Mustafa Yüksel ERDOĞDU       | İstanbul Sabahattin Zaim<br>University TÜRKİYE                                                                                            |
| EXAMINING THE RELATIONSHIP BETWEEN FAMILY COHESION AND LIFE SATISFACTION                                             | Prof. Dr. Mustafa Yüksel ERDOĞDU<br>Ülkü TÜLEK              | İstanbul Sabahattin Zaim<br>University TÜRKİYE                                                                                            |
| AMERICAN PERSONALISM                                                                                                 | Lect. Ruslan Niyaz oglu Khalilov                            | Khazar University<br>AZERBAIJAN                                                                                                           |

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**25.06.2025 / Session-2, Hall-2**

**Ankara Local Time: 12:30 – 14:30**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Prof. Dr. Ivan PAVLOVIC**

| Title                                                                                                                                                                                                                                      | Author(s)                                                                                                           | Affiliation                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| EFFECTS OF METHOTREXATE AND CHRYSIN ON BODY WEIGHT, TESTICULAR AND EPIDIDYMAL WEIGHTS IN RATS                                                                                                                                              | Assoc. Prof. Dr. Saadet BELHAN                                                                                      | Van Yüzüncü Yıl University<br>TÜRKİYE                       |
| FELINE CORONAVIRUS INFECTION AND CURRENT APPROACHES IN TREATMENT                                                                                                                                                                           | Nurperi KESKİN                                                                                                      | Ankara University TÜRKİYE                                   |
| COMMON ANALYSIS METHODS USED IN DNA DAMAGE ANALYSIS                                                                                                                                                                                        | Şeyma KÖKKAYA<br>Assist. Prof. Dr. Fadime DALDABAN<br>Prof. Dr. Bilal AKYÜZ<br>Prof. Dr. Korhan ARSLAN              | Erciyes University TÜRKİYE                                  |
| IMPORTANCE OF DEFENSINS IN GASTRIC MUCOSAL BARRIER                                                                                                                                                                                         | Necla BORA<br>M. Aydın KETANİ                                                                                       | Dicle University TÜRKİYE                                    |
| COMPARISON OF SALT TOLERANCE LEVELS IN S. LYCOPERSICUM AND S. NIGRUM AND THE CONTRIBUTION OF GRAFTING TO SALT TOLERANCE                                                                                                                    | Res. Assist. Cihad Said ALP<br>Assoc. Prof. Dr. Hakan BAŞAK<br>Lect. Ramazan GÜNGÖR<br>Assist. Prof. Dr. Alim AYDIN | Kırşehir Ahi Evran University<br>TÜRKİYE                    |
| EFFECTS OF PUMICE WITH DIFFERENT PARTICLE SIZES AS AN ALTERNATIVE GROWING MEDIUM IN SOILLESS AGRICULTURE ON THE GROWTH, YIELD, AND QUALITY CHARACTERISTICS OF CUCUMBER (CUCUMIS SATIVUS L.)                                                | Lect. Ramazan GÜNGÖR<br>Assist. Prof. Dr. Alim AYDIN<br>Assoc. Prof. Dr. Hakan BAŞAK<br>Res. Assist. Cihad Said ALP | Kırşehir Ahi Evran University<br>TÜRKİYE                    |
| COCCIDIOSIS IN JAPANESE QUAILS (COTURNIX JAPONICA) IN FARM BREEDING                                                                                                                                                                        | Prof. Dr. Ivan PAVLOVIC                                                                                             | Scientific Institute of<br>Veterinary Medicine SERBIA       |
| SUB-CHRONIC TOXICITY OF TOPIK80EC IN RABBITS: HEMATOLOGICAL AND MORPHOMETRICAL ALTERATIONS                                                                                                                                                 | Samia Rebahi<br>Alouani Abdelouaheb<br>Meguini Mohamed Nadir<br>Khenenou Tarek                                      | Mohamed Cherif Messadia<br>Souk-Ahras University<br>ALGERIA |
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**25.06.2025 / Session-2, Hall-3**

**Ankara Local Time: 12:30 – 14:30**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Prof. Dr. Alper Veli ÇAM**

| Title                                                                                                                                                                                                                                      | Author(s)                                                                                                                 | Affiliation                                                                                                                  |
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| CALCULATION OF HORIZONTAL AND DEPTH AXIS DISPLACEMENT OF AN OBJECT USING MONOCULAR VISION                                                                                                                                                  | Kadir YILDIZ<br>Ersan OKATAN                                                                                              | Burdur Mehmet Akif Ersoy University TÜRKİYE                                                                                  |
| HARNESSING DIGITAL TRANSFORMATION IN HEALTHCARE: A LITERATURE-BASED EXPLORATION OF HEALTH 4.0 AND THE ROLE OF ARTIFICIAL INTELLIGENCE                                                                                                      | Prof. Dr. Alper Veli ÇAM<br>Emmanuel Neba NUMFOR                                                                          | Gümüşhane University TÜRKİYE                                                                                                 |
| TRUST-WEIGHTED SENTIMENT FILTERING AND QUERY-BASED RECOMMENDATION FOR TURKISH E-COMMERCE REVIEWS                                                                                                                                           | Mustafa ERŞAHİN<br>Utku GEZENSOY                                                                                          | Commencis Technology, R&D Department, İstanbul TÜRKİYE<br>Dokuz Eylül University TÜRKİYE                                     |
| AN END-TO-END PIPELINE FOR BUILDING MCP-BASED MULTIAGENT SYSTEMS: A BENCHMARK-DRIVEN APPROACH                                                                                                                                              | Pınar ERSOY<br>Mustafa ERŞAHİN                                                                                            | Commencis Technology, R&D Department, İstanbul TÜRKİYE                                                                       |
| CONCRETE STRUCTURE FRACTURES IMAGE CATEGORIZATION UTILIZING CUSTOMIZED LENET-5 ARCHITECTURE                                                                                                                                                | Ashwan A. Abdulmunem<br>Zainab Rida ABAS<br>Fatima Hashim Mohamed ALİ                                                     | Kerbala University IRAQ                                                                                                      |
| EXPLORING APPLICATION OF HIGHER RADIX MULTI-VALUED LOGIC (MVL) IN SEMICONDUCTOR DESIGN                                                                                                                                                     | Prof. Dr. Afaq Ahmad<br>Ms. Shamseera M. K.<br>Assist. Prof. Dr. Chia Zargeh<br>Dr. Lakshmi Pulipaka<br>Ms. Aameefa P. K. | Modern College of Business and Science OMAN                                                                                  |
| UNDERSTANDING GLOBAL PERCEPTIONS OF E-AGRICULTURE: A TWITTER-BASED SENTIMENT ANALYSIS AND TOPIC MODELING STUDY                                                                                                                             | Assoc. Prof. Dr. Anila BOSHNIJAKU<br>Endri PLASARI<br>Irena FATA                                                          | Tirana Agricultural University ALBANIA<br>Tirana Agricultural University ALBANIA<br>Canadian Institute of Technology ALBANIA |
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**25.06.2025 / Session-2, Hall-4**

**Ankara Local Time: 12:30 – 14:30**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Dr. Madan Lal Regar**

| Title                                                                                                                                        | Author(s)                                                               | Affiliation                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-------------------------------------------------------------------------|
| THE ROLE OF GUPTA EMPIRE CLOTHING ON CURRENT FASHION TRENDS                                                                                  | Dr. Madan Lal Regar                                                     | National Institute of Fashion Technology INDIA                          |
| TANGLIYA WEAVING: A DANA WEAVING                                                                                                             | Dr. Madan Lal Regar                                                     | National Institute of Fashion Technology INDIA                          |
| BIO CONJUGATED SILICA NANOPARTICLES: DEVELOPMENT AND APPLICATION                                                                             | Tamilarasan. R.<br>Sarukesh. K.<br>Jayaramakani. N.                     | Bharath Institute of Higher Education and Research INDIA                |
| HABITAT-DRIVEN ECOPHYSIOLOGICAL AND ANATOMICAL VARIABILITY IN AERVA JAVANICA: FROM PLAINS TO DESERTS AND ELEVATION                           | Iqra<br>Syed Mohsan Raza Shah<br>Muhammad Bedar Bekhat Naseem           | Education University PAKISTAN<br>Government College University PAKISTAN |
| SMART ANTIBACTERIAL TEXTILES FROM NATURE: MICROENCAPSULATED EUCALYPTUS OIL USING BIOPOLYMERIC SHELL SYSTEMS                                  | Rimika Upadhyay<br>Assoc. Prof. Selvakumar Andiappan                    | Vellore Institute of Technology INDIA                                   |
| INFLUENCE OF LAND USE TYPES ON SOIL CARBON SEQUESTRATION IN CLIMATE CHANGE ERA IN IKWO SOUTH-EAST NIGERIA                                    | ORJI, JEPHTER EBUKA                                                     | Alex Ekwueme Federal University NIGERIA                                 |
| CHEMICAL ANALYSIS OF ATMOSPHERIC DUST AROUND THE KISHNICA AREA IN THE MUNICIPALITY OF GRACANICA                                              | Prof. Assoc. Skender Demaku<br>Msc. Muhamet Kiqina<br>Msc. Arbnorë Aliu | Prishtina University KOSOVO                                             |
| MIGRATION, MOBILITY, AND THE MAKING OF AFRICA'S FUTURE: IMPACTS ON TRADE, INNOVATION, AND IDENTITY                                           | Aliyu Mohammed Shamsudeen                                               | Ibrahim Badamasi Babangida University NIGERIA                           |
| PHYSIOLOGY OF LAMP 1 (LYSOSOMAL-ASSOCIATED MEMBRANE PROTEIN), A MARKER OF LYSOSOMAL ORGANELLES AND ITS EFFECTS ON SOME PHYSIOLOGICAL SYSTEMS | Assist. Prof. Dr. Gülbabahar BÖYÜK ÖZCAN                                | Ankara Medipol University TÜRKİYE                                       |

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**25.06.2025 / Session-2, Hall-5**

**Ankara Local Time: 12:30 – 14:30**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Shadab UDDIN**

| Title                                                                                                                                                                                                                                      | Author(s)                                              | Affiliation                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|------------------------------------------|
| UNDERSTANDING DEPRESSION IN CHRONIC LOW BACK PAIN: THE THERAPEUTIC POTENTIAL OF PHYSICAL THERAPY                                                                                                                                           | Shadab UDDIN                                           | Jazan University SAUDI ARABIA            |
| LASER-ASSISTED COLLISIONS OF ELECTRON WITH HYDROGEN-ATOM ATOMIC DRESSING, ELECTRON DRESSING                                                                                                                                                | Mohammed EL ALLAM<br>Mourad BAOUABI<br>Moha EL IDRISSI | Sultan Moulay Slimane University MOROCCO |
| PARAMETRIC PROGRAMMING IN NEUTROSOPHIC VACATION QUEUEING SYSTEMS                                                                                                                                                                           | Mukil M<br>V Vidhya                                    | Vellore Institute of Technology INDIA    |
| FROM BLACKBOARDS TO TOUCHSCREENS: ARCHITECTURAL IMPLICATIONS OF DIGITAL PEDAGOGY                                                                                                                                                           | Melik Sami<br>Khelil Sara<br>Tallal Abdel Karim Bouzir | Mohamed Khider Biskra University ALGERIA |
| FROM CONCRETE TO CALM: NATURAL MATERIALS AND SENSORY DESIGN IN URBAN STRESS RELIEF                                                                                                                                                         | Melik Sami<br>Khelil Sara<br>Tallal Abdel Karim Bouzir | Mohamed Khider Biskra University ALGERIA |
| HYBRID PRACTICES: MERGING ARTISTIC SENSIBILITIES WITH SPATIAL DESIGN THINKING                                                                                                                                                              | Melik Sami<br>Khelil Sara<br>Tallal Abdel Karim Bouzir | Mohamed Khider Biskra University ALGERIA |
| DESIGNING WITH NUMBERS: ENHANCING PROBLEM-SOLVING THROUGH MATHEMATICAL PEDAGOGY                                                                                                                                                            | Melik Sami<br>Khelil Sara<br>Tallal Abdel Karim Bouzir | Mohamed Khider Biskra University ALGERIA |
| <p><b>All participants must join the conference 10 minutes before the session time.</b><br/> <b>Every presentation should last not longer than 10-12 minutes.</b><br/> <b>Kindly keep your cameras on till the end of the session.</b></p> |                                                        |                                          |

**25.06.2025 / Session-2, Hall-6**

**Ankara Local Time: 12:30 – 14:30**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Khan Wajahat Ahmed**

| Title                                                                                                                                                              | Author(s)                                                                                                                                                                                                                                                 | Affiliation                                                                                                                                                                                                                                                                   |
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| COMPARISON OF SCREW-RETAINED AND CEMENT-RETAINED CR-CO-CERAMIC IMPLANT-SUPPORTED SINGLE CROWNS: RADIOGRAPHIC, CLINICAL, AND BIOCHEMICAL OUTCOMES IN A COHORT STUDY | F.Evolo<br>L.Adamo<br>S.Leporale<br>A.Antonelli<br>N.Carrai<br>G.Ferri<br>L.Testarelli<br>M.Galli<br>G.Miccoli<br>R.Palumbo<br>L.Lucente<br>R.Redá                                                                                                        | Sapienza University of Rome<br>ITALY                                                                                                                                                                                                                                          |
| IN VITRO ANALYSIS OF MARGINAL ADAPTATION AND FRACTURE RESISTANCE OF CAD/CAM FABRICATED ENDO-CROWNS MADE FROM TWO DIFFERENT MATERIALS                               | Arianna Antonelli<br>Giuseppe Ferri<br>Andrea Morgante<br>Gualtiero Gherardi<br>Niccolò Carrai<br>Rebecca Palumbo<br>Roberta Moramarco<br>Luca Testarelli<br>Anamaria Beatrice Burete<br>Dario Di Nardo<br>Alessio Zanza<br>Elisa Maccari<br>Rodolfo Reda | Sapienza University of Rome<br>ITALY                                                                                                                                                                                                                                          |
| IMPROVING JAW SURGERY OUTCOMES WITH 3D IMAGING: WHAT WE LEARNED FROM USING THE TOTAL FACE APPROACH                                                                 | S. Leporale<br>M. Cianfriglia<br>R. Moramarco<br>V. Martini<br>C. Marocco<br>C. Bramucci<br>F. Sestito<br>R. Reda<br>L. Testarelli<br>T. Testori<br>G. Perrotti                                                                                           | Sapienza University of Rome<br>ITALY<br>Campus Bio-Medico University<br>Hospital Foundation ITALY<br>Sapienza University of Rome<br>ITALY<br>"IRCCS Galeazzi Orthopedic<br>Institute ITALY<br>Milan University ITALY<br>Michigan University USA"<br>Lake Como Institute ITALY |
| FROM SCALPEL TO SIMULATION: REVIEWING THE FUTURE OF CADAVERIC DISSECTION IN THE UPCOMING ERA OF VIRTUAL AND AUGMENTED REALITY AND ARTIFICIAL INTELLIGENCE          | Wajid Ali CHATHA                                                                                                                                                                                                                                          | Northern Border University<br>SAUDI ARABIA                                                                                                                                                                                                                                    |
| CARBON NANOMATERIALS FOR THE ENHANCEMENT OF SOLAR THERMAL COLLECTORS                                                                                               | Khan Wajahat Ahmed                                                                                                                                                                                                                                        | Malaya University MALAYSIA                                                                                                                                                                                                                                                    |
| NUTRITIONAL EDUCATION AND ITS ROLE IN PREVENTING EATING DISORDERS AND EMOTIONAL EATING IN POLISH YOUTH (15–17 YEARS) - APILOT STUDY                                | MSc. Marlena Zięba<br>Assoc. Prof. Sabina Lachowicz-<br>Wiśniewska                                                                                                                                                                                        | Kalisz University POLAND                                                                                                                                                                                                                                                      |

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**25.06.2025 / Session-3, Hall-1**

**Ankara Local Time: 15:00 – 17:00**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Hilal OK BOSTAN**

| Title                                                                                                                           | Author(s)                                                                                                                                                       | Affiliation                                                                                                                                                                                                                                                      |
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| THE ROLE OF PINK AESTHETICS AND ESTHETIC PROSTHETIC MATERIALS IN SMILE DESIGN: CONTEMPORARY APPROACHES AND DIGITAL TECHNOLOGIES | Exp. Rd. Sümeyye YILMAZ                                                                                                                                         | İnegöl Oral and Dental Health Hospital Bursa TÜRKİYE                                                                                                                                                                                                             |
| THE IMPORTANCE OF DENTAL PHOTOGRAPHY IN AESTHETIC DENTISTRY: CLINICAL AND TECHNICAL APPROACHES                                  | Exp. Rd. Sümeyye YILMAZ                                                                                                                                         | İnegöl Oral and Dental Health Hospital Bursa TÜRKİYE                                                                                                                                                                                                             |
| ISOLATED ODONTOMA LOCALIZED IN THE ANTERIOR MAXILLA: A CASE REPORT WITH CLINICAL EVALUATION AND SURGICAL MANAGEMENT             | Şükran AYRAN<br>Çağla KONUK<br>Selma Ece KARABIYIKOĞLU<br>İsmail Hakan AVSEVER<br>Ümit KARAÇAYLI                                                                | Health Sciences University TÜRKİYE                                                                                                                                                                                                                               |
| THE EFFECT OF THE PERCEIVED FEELING OF SECURITY DURING THE POSTPARTUM PERIOD ON WOMEN'S POSTPARTUM COMFORT                      | Dilek BİNGÖL<br>Assoc. Prof. Dr. Melike DİŞSİZ                                                                                                                  | Health Sciences University TÜRKİYE                                                                                                                                                                                                                               |
| REASONS FOR ERAS IN ELDERLY CANCER PATIENTS UNDERGOING COLORECTAL SURGERY?                                                      | Perihan ARAÇLIOĞLU<br>Assoc. Prof. Dr. Elif KARAHAN<br>Assist. Prof. Dr. Sibel ALTINTAŞ<br>Prof. Dr. Sevim ÇELİK                                                | Bartın University TÜRKİYE                                                                                                                                                                                                                                        |
| PROSTHETIC REHABILITATION FOR AESTHETIC PURPOSES IN ANTERIOR TEETH LOST DUE TO CHILDHOOD TRAUMA: A CASE REPORT                  | Nedaa RAGABI<br>Hilal OK BOSTAN                                                                                                                                 | Recep Tayyip Erdoğan University TÜRKİYE                                                                                                                                                                                                                          |
| THE USE OF DIGITAL TECHNOLOGY IN RESTORATIVE DENTISTRY                                                                          | Dr. Art BERISHA                                                                                                                                                 | Aura Dent Dental Clinic KOSOVO                                                                                                                                                                                                                                   |
| SAFER 3D IMAGING FOR SOFT TISSUES: EXPLORING ALTERNATIVES TO CBCT SCANS                                                         | S. Leporale<br>M. Cianfriglia<br>R. Moramarco<br>V. Martini<br>C. Marocco<br>C. Bramucci<br>F. Sestito<br>R. Reda<br>L. Testarelli<br>T. Testori<br>G. Perrotti | Sapienza University of Rome ITALY<br>Campus Bio-Medico University Hospital Foundation ITALY<br>Sapienza University of Rome ITALY<br>"IRCCS Galeazzi Orthopedic Institute ITALY<br>Milan University ITALY<br>Michigan University USA"<br>Lake Como Istitute ITALY |

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**25.06.2025 / Session-3, Hall-2**

**Ankara Local Time: 15:00 – 17:00**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Assoc. Prof. Dr. Bahar SARIBOĞA**

| Title                                                                                                                                                                                                      | Author(s)                                                    | Affiliation                                                                                                                |
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| THE EFFECT OF DIGITALIZATION ON NARRATIVE FORMS: THE CASE OF OPERA                                                                                                                                         | Öykü ARIBAŞ                                                  | Dokuz Eylül University<br>TÜRKİYE                                                                                          |
| THE PLACE OF CLARINET MAKERS IN THE MUSICAL CULTURE OF ORDU PROVINCE                                                                                                                                       | Assoc. Prof. Dr. Bahar SARIBOĞA<br>AKCA<br>Rasim TOPAL       | Ordu University TÜRKİYE<br>Bölükyaşı Tekel Edip Safder<br>Gaydalı Boarding Regional<br>Secondary School, Bitlis<br>TÜRKİYE |
| DETERMINATION AND EVALUATION OF STRATEGIES FOR REDUCING DIGITAL ADDICTION IN CHILDREN USING THE AHP METHOD                                                                                                 | Mustafa DEMİRBİLEK<br>Bünyamin ÇALIŞKAN<br>Kerim Mehti ERBAY | Gaziantep Islam Science and<br>Technology University<br>TÜRKİYE                                                            |
| INSUFFICIENCIES OF STUDIO FACILITIES IN TURKISH FOLK MUSIC VOICE EDUCATION                                                                                                                                 | Gülcan ERTAN<br>HACISÜLEYMANOĞLU                             | Karabük University TÜRKİYE                                                                                                 |
| EFFECTS OF ZNSO <sub>4</sub> APPLICATIONS ON THE GROWTH PARAMETERS OF CANOLA (BRASSICA NAPUS L.)                                                                                                           | Assoc. Prof. Dr. Vedat BEYYAVAŞ                              | Harran University TÜRKİYE                                                                                                  |
| SEED GERMINATION OF COTTON (GOSSYPIMUM HIRSUTUM L.) UNDER ABIOTIC STRESS: A META ANALYSIS                                                                                                                  | Assoc. Prof. Dr. Vedat BEYYAVAŞ                              | Harran University TÜRKİYE                                                                                                  |
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**25.06.2025 / Session-3, Hall-3**

**Ankara Local Time: 15:00 – 17:00**

**Meeting ID: 860 5266 6988 / Passcode: 070707**

**Moderator: Dr.Jogendra Kumar**

| Title                                                                                                                                                                                                               | Author(s)                                                                                       | Affiliation                                               |
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| REAL-TIME DRIVER FATIGUE DETECTION USING A DEEP LEARNING- BASED APPROACH TO MAKING OUR ROADS SAFER                                                                                                                  | Manya Bisht<br>Dr.Jogendra Kumar<br>Rishit Rawat<br>Neha Angaria<br>Ravi Kumar<br>Aanchal Singh | G.B.Pant Institute of Engineering and Technology<br>INDIA |
| REAL-TIME DRIVER SLEEPINESS DETECTION WITH CNN VISION- BASED DROWSINESS DETECTION                                                                                                                                   | Manya Bisht<br>Dr.Jogendra Kumar<br>Rishit Rawat<br>Neha Angaria<br>Ravi Kumar<br>Aanchal Singh | G.B.Pant Institute of Engineering and Technology<br>INDIA |
| ENHANCING ROAD SAFETY WITH A CNN-BASED DRIVER DROWSINESS DETECTION AND ALERT SYSTEM                                                                                                                                 | Manya Bisht<br>Dr.Jogendra Kumar<br>Rishit Rawat<br>Neha Angaria<br>Ravi Kumar<br>Aanchal Singh | G.B.Pant Institute of Engineering and Technology<br>INDIA |
| LEARNING TO MOVE, MOVING TO LEARN: MACHINE LEARNING IN ROBOTICS                                                                                                                                                     | Ismail Olaniyi MURAINA                                                                          | Lagos State University of Education NIGERIA               |
| PLUMERIA PUDICA USE AS BREST CANCER THERAPY                                                                                                                                                                         | Mrs.E.Elavarasi<br>Yuvaraj AR<br>J.Jayadurka<br>Dr.R.Srinivasan                                 | Bharath Institute of Higher Education and Research INDIA  |
| UV-VISIBLE SPECTROMETER AND MASS SPECTROSCOPY IN PHARMACEUTICAL ANALYSIS                                                                                                                                            | Mrs.E.Elavarasi<br>Yuvaraj AR<br>J.Jayadurka<br>Dr.R.Srinivasan                                 | Bharath Institute of Higher Education and Research INDIA  |
| COMPUTER AIDED DRUG DESIGN IN DRUG DELIVERY SYSTEM                                                                                                                                                                  | Mrs.E.Elavarasi<br>Yuvaraj AR<br>J.Jayadurka<br>Dr.R.Srinivasan                                 | Bharath Institute of Higher Education and Research INDIA  |
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## ASSOCIATIONS BETWEEN HANDGRIP STRENGTH, INSPIRATORY MUSCLE STRENGTH, AND FUNCTIONALITY IN MECHANICALLY VENTILATED PATIENTS

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### ABSTRACT

**Introduction and Purpose:** Prolonged intubation may affect not only the respiratory muscles but also the musculoskeletal structure, leading to acquired muscle weakness in the extremities. Therefore, sample and practical data related to functionality may reflect the course of the intubation process. The objective of the study was to examine the association between the inspiratory muscle strength, hand grip strength and functionality in intubated patients.

**Materials and Methods:** This prospective cross-sectional study included 47 intubated patients treated in the intensive care unit of a city hospital. Hand Grip Strength(HGS), Negative Inspiratory Force (NIF), and the Physical Function ICU Test (PFIT), which are used to assess functional status, were measured once prior to extubation. Age, gender, diagnosis, APACHE II and Glasgow Coma Scale (GCS) values were recorded. Spearman's test was used to analyze correlations.

**Results:** Among the patients included in the study, 53.2% were male and 46.8% were female, with a mean age of  $71.53 \pm 12.51$  years. The mean dominant HGS was  $6.94 \pm 4.59$  kg (range: 1.5–18.30), mean NIF was  $-25.81 \pm 9.72$  mmHg (range: –48 to –11) and mean P-FIT score was  $4.79 \pm 2.19$  (range: 1–8). There was a weak positive correlation between grip strength and NIG ( $r=0.337$ ,  $p<.05$ ). In addition, a moderate positive correlation was found between grip strength and P-FIT score ( $r=0.584$ ,  $p<.01$ ). A weak positive correlation was also found between P-FIT score and NIG ( $r=0.398$ ,  $p<.01$ ).

**Discussion and Conclusion:** The findings of the study revealed that handgrip strength is associated not only with physical function but also with respiratory muscle strength. In mechanically ventilated patients, handgrip strength may serve as an indirect clinical indicator of both functional capacity and inspiratory muscle strength.

**Key Words:** Functionality ; Grip Strength ; Mechanical Ventilation; Respiratory Muscle Strength

## THE HEALING POWER OF NATURE IN CEMİL KAVUKÇU'S STORIES

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### ABSTRACT

This study examines how sentiments of solitude, oppression, and existential disorientation induced by urban life in Cemil Kavukçu's short stories compel his protagonists to engage with nature. In these narratives, nature emerges not merely as a scenic backdrop but as a dynamic locus where characters revisit their pasts, delve into introspection, and seek psychological equilibrium. Confronted by the constraints of modern existence, these individuals navigate natural settings to reconnect with their memories and grapple with their inner selves. Kavukçu's fiction thus acquires particular significance for its interrogation of what modern urban life has estranged from the individual, constructing a narrative universe that facilitates critical reflection on human existence and solitude.

This paper contends that in Kavukçu's stories, nature functions as more than a peripheral environment; it operates as a narrative catalyst intricately intertwined with memory, self-questioning, and the characters' psychic burdens, ultimately affording them a figurative space to breathe. The corpus of this inquiry comprises the stories "Gemiler de Ağlarmış," "DOÇ," "Balyozla Balık Avı," "Fidan," "Sessizlik," "İkizce," "Yosun Tuttu Gözlerim," and "Ambar Günleri." Employing Lawrence Buell's theoretical framework on environmental narrative, the analysis undertakes an ecocritical reading of these texts.

Findings indicate that nature in Kavukçu's stories alternately facilitates the characters' processes of recuperation and precipitates the surfacing of repressed vulnerabilities. Significantly, Kavukçu refrains from rendering nature as an unequivocal refuge or an absolute therapeutic agent; rather, he configures it as a space that incites remembrance, contemplation, and existential inquiry. While this study is circumscribed to a selection of stories, the evidence underscores that in Kavukçu's oeuvre, nature transcends its status as an external milieu to become a narrative device that activates memory, provokes critical questioning, and fosters the cathartic resolution of psychological encumbrances. Future comparative analyses—whether across Kavukçu's different narrative phases or through lenses such as gender, class, and spatial transformations—could yield more nuanced insights into the entanglements between the human subject and the environment.

**Keywords:** Cemil Kavukçu, nature, ecocriticism, modern Turkish short story

## LEGISLATION AND SUSTAINABLE ECONOMIC DEVELOPMENT – IMPACT ON YOUTH EMPLOYMENT – FOCUS KOSOVO

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### Abstract

The aim of the paper is to identify the role of legal acts for sustainable economic development and its impact on youth employment – with a focus on Kosovo. The legislation of a country - including Kosovo - has a crucial role in guiding and effectively implementing sustainable economic policies, with a special emphasis on creating employment opportunities, especially for young people, by identifying sectors that comply with the principles of the green economy. Modern policies are oriented towards sustainable economic development, through this approach a balance is sought between economic growth, environmental protection and the social aspect of inclusion in development trends. The methodology used focuses on a combined analysis approach - which includes statistical data from relevant local and international institutions (as comparisons), interviews with representatives of government institutions and youth organizations, a questionnaire distributed to 145 businesses (in period February - May '25), analysis of laws and strategies for sustainable development in Kosovo, as well as information from educational institutions. The conclusions drawn from the paper show: there are legal provisions that promote sustainable economic development in Kosovo, but the practical implementation of these legal provisions is not efficient and often uncoordinated, then there is a lack of monitoring mechanisms, limited institutional capacities, and a lack of financial incentives for sustainable employment - these are among the main obstacles identified in this research, therefore, as a general finding, it is that the direct impact of legislation on youth employment remains limited. The recommendations drawn from the paper are: strengthening the implementation of legislation for sustainable development, including youth employment components in green policies, creating partnerships between the public section, private and youth organizations - to have a positive impact on youth employment in Kosovo, these recommendations are useful for all stakeholders affected by the field of sustainable economic development.

**Key Words:** Legislation, Employment, Sustainable economic development, Green economy, etc.

## EXAMPLES OF NATIVE PLANT SPECIES IN THE FRAME OF SUSTAINABLE LANDSCAPE DESIGN: THE CASE OF ANKARA

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### ABSTRACT

In the current landscape design and project application works carried out in Ankara, located in the Central Anatolia Region, plant species found in "storage nursery gardens", which are brought from producers and kept ready for sale, are used. However, these plants are produced in grower/producer nursery gardens in different regions of Türkiye, sold in storage nursery gardens in Ankara, and used in application studies. As the production regions differ from the Central Anatolia Region in terms of climate, soil and sunshine duration, the plant species found in the nursery gardens are not from the natural vegetation of Ankara. In some cases, these species can be adaptable to Ankara's climate, but in other cases they become invasive species. International campaigns to cope with climate change, ozone depletion and global warming have already begun, and one of the most important resources to be considered in this regard is the limited amount of clean water resources. Landscape architects, who are primarily focused on protecting and preserving nature, are taking on a major role in this struggle and developing designs with an approach which will protect fundamental resources, especially clean water resources. 'Water Efficient Design', which is one of the design methods to minimize water use, is part of the current sustainable landscape design concepts. The sustainability of landscape design works is dependent on maintenance work in many areas such as regular watering, trimming, pruning, fertilization and spraying pesticides, since the designs are made with imported species and/or species that are not involved in native vegetation. Choosing species with low water and maintenance needs in landscape design will reduce the need for watering and minimize the use of maintenance materials such as fertilizers and pesticides that pose a threat to groundwater resources and will be beneficial in the context of climate change, which is being struggled against on a global scale. Besides, the use of natural species will also ensure the conservation of biodiversity. Within the scope of this study, plant examples found in native vegetation, which are recommended to be preferred in landscape design and application works to be carried out in Ankara, were examined and sampled in terms of different uses.

**Key Words:** Water Efficient Design; Sustainability in Design; Landscape Design; Ankara

## **THE EFFECT OF GAMIFIED MOBILE LEARNING APPS ON ENHANCING CRITICAL THINKING SKILLS IN PRIMARY SCHOOL STUDENTS FOR ENVIRONMENTAL EDUCATION**

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### **Abstract**

Gamified mobile learning applications are revolutionizing primary education by engaging young learners in the development of critical thinking, particularly in the context of environmental education. With the Single National Curriculum (SNC) in Pakistan emphasizing both critical thinking and environmental awareness, there is an increasing need for innovative educational tools to address these areas from early education stages. This study explores the impact of gamified mobile learning apps focused on environmental science topics in enhancing the critical thinking abilities of elementary school students in Pakistan. Adopting a quasi-experimental design, 120 students were randomly placed into either an experimental group (using gamified environmental education apps) or a control group (receiving traditional teaching). Standardized instruments assessed students' critical thinking on topics like climate change, sustainability, and ecological problem-solving before and after an eight-week intervention. The quantitative results indicated that the experimental group showed a 24% improvement in critical thinking scores (from 58.3 to 72.4), while the control group experienced an 8% improvement (from 59.1 to 63.9). Qualitative interviews with teachers and students revealed that those using the gamified apps demonstrated enhanced problem-solving skills and a more profound understanding of environmental challenges. The findings suggest that integrating gamified mobile learning platforms focused on environmental education into Pakistan's primary curriculum could significantly improve critical thinking and climate literacy. The paper advocates for policy changes and teacher training to encourage the use of gamified mobile learning in promoting environmental awareness and developing 21st-century cognitive skills in early education.

**Keywords:** Critical thinking, Environmental education, Gamified learning, Mobile apps.

## **UNLOCKING MINDS BEHIND BARS: INMATES' PERCEPTIONS OF EDUCATIONAL SERVICES IN SOUTHEAST NIGERIAN PRISONS**

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### **Abstract**

This study explores the lived experiences and perceptions of inmates regarding educational services within correctional institutions in Southeast Nigeria, with a focus on their relevance for rehabilitation and reintegration. Grounded in the capability approach and using a qualitative design informed by interpretive phenomenological analysis, the research aimed to understand how incarcerated individuals interpret their access to, participation in, and benefits from correctional education. Fifteen convicted inmates were purposively selected from three correctional facilities in Enugu, Anambra, and Imo States. Data were collected through in-depth, semi-structured interviews conducted in English and Nigerian Pidgin, and analyzed using interpretive phenomenological approach procedures supported by NVivo 12 software. Findings revealed three core themes: the perceived availability and relevance of educational programs, the benefits of educational participation (including enhanced self-worth, skill acquisition, and hope for post-release reintegration), and significant barriers such as inconsistent access, resource inadequacy, and institutional apathy. While the capability approach has been critiqued for limited operational guidance, its emphasis on individual agency and valued capabilities offered a robust lens for examining how inmates experience educational opportunities in relation to their broader life goals and social reintegration.

The study underscores the transformative potential of correctional education and highlights the need for policy reforms that prioritize the expansion and contextualization of educational services in Nigerian prisons. It contributes to forensic social work by centering inmate voices in policy discourse and emphasizing education as a critical pathway to rehabilitation, justice, and social inclusion.

**Keywords:** Capability approach, correctional education, forensic social work, inmates, rehabilitation, reintegration.

**A BRIEF REVIEW OF THYGESON'S SUPERFICIAL PUNCTATE KERATITIS****Dr. Koosha Koorehpaz**

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**ABSTRACT**

Thygeson's Superficial Punctate Keratitis (TSPK) is an uncommon, long-standing, and recurring inflammatory disorder that affects the surface layer of the cornea. Although the condition is usually mild, it can lead to significant eye discomfort and visual issues. Patients often report symptoms in both eyes, including irritation, a gritty or foreign body sensation, tearing, sensitivity to light, and blurry vision. A defining feature of TSPK is the appearance of numerous small, grayish-white lesions on the central cornea, which are slightly raised and may show minimal staining when examined with fluorescein dye. The precise cause of TSPK is still undetermined. Some researchers have proposed a viral origin—particularly involving herpesviruses—but no definitive link has been established. Diagnosis is primarily clinical, relying on typical signs and symptoms. It is crucial to distinguish TSPK from other forms of superficial punctate keratitis, including those caused by adenoviruses, herpes simplex virus, and dry eye syndrome. The slit-lamp exam remains the cornerstone of diagnosis. Although TSPK often resolves on its own, recurrent flare-ups may necessitate long-term treatment. Standard therapies include artificial tears, corticosteroid eye drops, immunosuppressive agents like cyclosporine or tacrolimus, and occasionally, soft contact lenses to ease symptoms. While traditional treatments such as lubricants and steroids are widely used, newer approaches are aiming to reduce steroid dependency and target immune responses more precisely. Lifitegrast 5% eye drops (Xiidra), initially designed for dry eye disease, act by blocking LFA-1/ICAM-1 interactions and decreasing inflammation on the ocular surface. Early reports and limited studies suggest this drug may benefit TSPK patients by alleviating inflammation and discomfort. In addition, biologic therapies—including monoclonal antibodies directed at immune mediators like IL-17 and IL-6—are under study for their potential in treating ocular surface inflammation. Though not yet sanctioned for TSPK, they may offer promising alternatives for difficult or persistent cases in the future. The therapeutic landscape for TSPK is gradually shifting, with an emphasis on reducing corticosteroid use in favor of immunomodulatory agents such as cyclosporine, tacrolimus, and lifitegrast. These newer treatments provide better disease control with fewer long-term complications, ultimately enhancing patient quality of life. Overall, TSPK has a favorable prognosis. While relapses can occur over many years, permanent vision loss is rare. In most cases, the condition resolves on its own, though some individuals may continue to experience periodic episodes for a decade or more. Despite its chronic nature, TSPK is generally mild, with clear clinical signs. As such, timely recognition and effective treatment are essential to managing symptoms and improving outcomes.

**KEYWORDS:** Thygeson's Superficial Punctate Keratitis, Review, Treatment, Keratitis.

## **A SWITCHABLE HIGHLY SELECTIVE BANDPASS FILTER FOR DUAL-WIDEBAND AND TRI-WIDEBAND OPERATIONS**

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### **Abstract**

A compact microstrip switchable bandpass filter using PIN diode switching technology is explored in this paper. The filter topology consists of three E-shape stub-loaded resonators, alongside two coupled half-wavelength resonators directly linked to the feeding lines, each tailored to support a specific frequency band. By selectively activating or deactivating specific resonators through integrated PIN diodes, the filter response can be flexibly switched between dual-wideband and tri-wideband operations without degrading performance.

Taken shape in microstrip technology, the filter leverages copper metallization on a Rogers RO4350 substrate, which features a thickness of 0.508 mm, a dielectric constant of 3.66, and a dielectric loss tangent of 0.004. The Cu interconnect thickness is chosen as 17  $\mu\text{m}$ . The structure is modelled and simulated using a full-wave analysis tool to ensure accuracy of the predicted frequency response and performance in both dual-wideband and tri-wideband operating modes.

**Keywords:** Microstrip technology, Switchable bandpass filter, Dual-wideband, Tri-wideband, Stub-loaded resonators, Half-wavelength resonators, PIN diode.

## WILD EDIBLE PLANTS FROM MOROCCO AS POTENTIAL SOURCES OF ANTIMICROBIAL AGENTS AGAINST PATHOGENIC MICROBES

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### Abstract

**Background and Objective:** Although numerous studies have investigated plant-derived antimicrobials, little attention has been given to wild edible plants. This study, therefore, aimed to assess the *in vitro* antimicrobial activity of methanolic extracts from selected common wild edible species.

**Methods:** Disc diffusion and broth micro dilution methods were used to evaluate the antimicrobial activity of extracts of *Mercurialis annua*, *Papaver rhoeas*, *Foeniculum vulgare*, *Chenopodium murale* and *Scolymus hispanicus* against known human microorganisms' pathogens

**Results:** The results showed that most of the plant extracts exhibited varying degrees of *in vitro* growth inhibition against all tested bacterial strains and yeasts. The inhibition zones ranged from 11 mm to 20 mm, with minimum inhibitory concentration (MIC) values between 0.097 and 12.5 mg/mL, and minimum bactericidal/fungicidal concentration (MBC/MFC) values ranging from 0.097 to 100 mg/mL. Among the five plant extracts tested, *F. vulgare* was the most effective, demonstrating strong antimicrobial activity against all microbial strains tested, except *Cryptococcus neoformans*. All plant extracts exhibited bactericidal activity against the tested bacterial strains, except for *Chenopodium murale* and *Papaver rhoeas*, which showed bacteriostatic effects against *Escherichia coli*. Moreover, *F. vulgare* and *P. rhoeas* extracts also exhibited bacteriostatic activity against *Pseudomonas* species.

**Conclusion:** These findings highlight the potential of wild edible plants to control human pathogenic microbes and demonstrate that these plants could be used as starting points for the development of novel antimicrobial compounds.

**Keywords:** antimicrobial activity, Wild edible plants, MIC, MBC, MFC, Morocco

## SUBCONSCIOUS PROGRAMMING OF THE ENGLISH LANGUAGE

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### **Abstract**

The English language has become one of the most spoken languages globally. With over 1.5 billion learners of English, and spoken in more than 62 countries, English has indeed established itself as a dominant medium of communication in economic, educational, technological and scientific fields. However, while this lexicon is being taught in different parts of the globe, it is not without its dark side. Studies seem to assert that English is rich with negative connotations far exceeding their positive counterparts. Coupled with ambiguous and sad music at high and low tempos on minor, such songs become likened to mantras which may prove to be harmful at the cognitive, emotional and even physical level.

**Keywords:** English language learning; negative connotations; Frequency following technique; music mantras

## WHITE TURMERIC AS A FUNCTIONAL INGREDIENT: ANTIOXIDANT PROPERTIES OF CURCUMA ZEDOARIA EXTRACTS

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### ABSTRACT

**Introduction and Purpose:** Curcuma zedoaria, commonly known as white turmeric, has been traditionally employed in herbal medicine across Asia for its therapeutic properties. Recent scientific interest centers on validating its ethnomedicinal applications, particularly its antioxidant potential. This study was conducted to investigate the antioxidant activities present in different parts of the Curcuma zedoaria plant and explore their implications for use in the cosmeceutical and functional food sectors.

**Materials and Methods:** The research involved the collection and extraction of rhizomes from Curcuma zedoaria, followed by phytochemical analysis. The total phenolic content was determined using the Folin-Ciocalteu method, employing gallic acid as a standard. Antioxidant activity was assessed via DPPH free radical scavenging assays to measure the plant extract's capacity to neutralize oxidative agents.

**Results:** Results indicated that both the above-ground and below-ground extracts exhibited significant antioxidant activity, with notable phenolic content. The findings support the therapeutic potential of Curcuma zedoaria and validate its traditional uses. The strong antioxidant properties suggest possible applications in food preservation and skincare formulations.

**Key Words:** Curcuma zedoaria, antioxidant activity, phenolic content, white turmeric, medicinal plant

## UNLOCKING THE POTENTIAL OF HELIANTHUS TUBEROSUS: A NUTRITIONAL AND MARKET ANALYSIS IN MALAYSIA

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### ABSTRACT

**Introduction and Purpose:** The Jerusalem artichoke (*Helianthus tuberosus*), known for its high inulin content and prebiotic properties, is gaining global attention as a functional food. This study aimed to analyze the nutritional composition, evaluate health benefits, and assess the market potential of Jerusalem artichoke cultivation in Malaysia. The research was motivated by a *Helianthus tuberosus* pilot farm in the state of Perlis, Malaysia as part of the initiative to introduce this crop as part of the food security diversification strategy.

**Materials and Methods:** The study used a two-pronged approach. Nutritional profiling of Jerusalem artichoke was conducted using established laboratory methods including HPLC, AAS, calorimetry, and Soxhlet extraction. In parallel, a systematic literature review was performed following PRISMA guidelines, incorporating 37 peer-reviewed studies published from 2000 to 2023. The inclusion focused on articles related to the health benefits and functional properties of the tuber.

**Results:** Nutritional analysis revealed high inulin content (15g/100g), significant potassium (420mg), vitamin C (5mg), and iron (3mg), with low fat (<0.4g). The literature review supported its health benefits in digestive, metabolic, immune, and cardiovascular functions, with emerging evidence for anticancer potential. However, market readiness in Malaysia remains low, with limited consumer awareness and demand, leading to the discontinuation of the cultivation project despite agronomic success.

**Key Words:** Jerusalem artichoke, inulin, functional food, Malaysia agriculture

## SMART ANTIBACTERIAL TEXTILES FROM NATURE: MICROENCAPSULATED EUCALYPTUS OIL USING BIOPOLYMERIC SHELL SYSTEMS

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### ABSTRACT

#### **Introduction and Purpose:**

The increasing concern over nosocomial infections in hospitals has encouraged the application of microencapsulated essential oils on the uniforms of medical personnel.

**Materials and Methods:** In this context, microcapsules were developed to provide both antibacterial and fragrant properties to cotton fabric, with eucalyptus oil serving as the core material. Chitosan and gum Arabic were used as wall-forming agents in the preparation of microcapsules through the complex coacervation method.

**Results:** The experimental results showed that the treated cotton fabric exhibited a 25 mm zone of inhibition against both gram-positive *Staphylococcus* bacteria and gram-negative *Pseudomonas* bacteria, indicating strong antibacterial activity. Furthermore, GC-MS analysis of the microcapsules confirmed the presence of key fragrance compounds such as linalool and alpha-terpineol, contributing to the pleasant aroma of the treated fabric. Optical microscopy verified the presence and uniform distribution of microcapsules, along with their approximate size. FTIR spectroscopy confirmed the incorporation of the essential oil compounds onto the cotton fabric.

**Discussion and Conclusion:** The primary objective of applying these microcapsules to cotton fabric is to reduce the transmission of bacteria among healthcare workers and patients by offering sustained antibacterial protection and added fragrance.

**Key Words:** Cotton Fabric; Microencapsulation; Eucalyptus globulus; Complex coacervation method

## A COMPARISON OF MALE AND FEMALE TEACHER SCHOOLS IN THE OTTOMAN EMPIRE THROUGH THE DARULMUALLIMAT AND DARULMUALLIMIN SCHOOLS

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### ABSTRACT

**Introduction and Purpose:** Since the mid-19th century, the Ottoman Empire had initiated a series of profound reforms and regulations in many fields, including education. The traditional medrese education system fell behind the times and could no longer meet the demands of modern education, creating a need to modernize education and educational institutions. Within this scope, “muallim mektepleri” (teacher schools) were established to train teachers who could provide education in these new and modern institutions. The first of these was the male teacher school “Darülmualimin,” opened in Istanbul in 1848, followed by the female teacher school “Darülmualimat,” also in Istanbul, in 1870. This study aims to compare these two muallim mekteps.

**Materials and Methods:** Primary and secondary sources were reviewed for this study, including Ottoman archival documents, the Maarif Salnamesi (Education Yearbooks), various regulations, as well as academic theses, articles, and books related to the topic. The method used is a comparative analysis of these two muallim mekteps in terms of their establishment, student profiles, courses taught, and the graduates’ professional lives.

**Results:** It is understood that the girls’ and boys’ muallim mekteps established to train teachers in the Ottoman Empire held a significant place in the modernization of the education system and especially in the inclusion of women in educational life. The necessary modern teaching staff was aimed to be met by these schools, and a new, modern education system was attempted to be created with curricula including positive sciences. However, differences also existed between the girls’ and boys’ muallim mekteps.

**Discussion and Conclusion:** The establishment of girls’ and boys’ muallim mekteps in the Ottoman Empire is an important indicator of both modernization and social development. While the opening and spread of the boys’ muallim mektep stemmed from the need to train teachers, the establishment of the girls’ muallim mektep was driven both by the need to train female teachers and by the aim to increase women’s participation and productivity in social life. As a result, these two muallim mekteps appear to have been quite effective in ensuring gender equality in educational opportunities.

**Key Words:** Darülmualimat; Darülmualimin; school; female; male

## PSYCHOSOCIAL CORRELATES OF UNATTAINABLE BEAUTY STANDARDS

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### **Abstract**

Unattainable Beauty Standards refer to culturally and socially constructed ideals of physical appearance that are often unrealistic and difficult to achieve. These standards are increasingly perpetuated through social media, influencing individuals' self-perception and mental health. Adolescents are particularly vulnerable due to developmental and environmental pressures. This study aimed to investigate the predictive roles of Social Media Use, Self-Concept, and Unattainable Beauty Standards in relation to Mental Health Problems among male adolescents in Pakistan. Data was collected from  $N = 200$  male adolescents aged 11–16 years from schools and colleges through purposive sampling. Participants were divided into early (ages 11–13) and late adolescents (ages 14–16). Tools included the SMES-A, SCQ, DASS-21, and an indigenously developed Unattainable Beauty Standards Scale. Hierarchical regression analysis revealed that Social Media Engagement, Self-Concept, and Unattainable Beauty Standards significantly predicted Mental Health Problems, explaining 98% of the variance in depression, anxiety, and stress. Emotional and cognitive involvement in social media, low self-worth, and internalization of hyper-masculine appearance emerged as key predictors. Whereas, *t*-test results showed that late adolescents had significantly higher social media use, internalized unattainable beauty standards, and poorer mental health than early adolescents, who had stronger self-concepts. These findings highlight the urgent need for age-sensitive mental health interventions and digital literacy programs. Conclusively, addressing these predictors early may safeguard adolescent well-being in a media-driven society.

**Keywords:** Unattainable Beauty Standards, Self-Concept, Social Media Usage, Mental Health Problems, Male Adolescents

## MAPS PRESERVING THE $\partial$ -SPECTRUM OF GENERALIZED PRODUCTS OF OPERATORS

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### ABSTRACT

Let  $\mathfrak{B}(X)$  be the algebra of all bounded linear operators on an infinite-dimensional Banach space  $X$ . A map  $\Delta$ , from  $\mathfrak{B}(X)$  into a closed subset of  $\mathbb{C}$ , is said to be a  $\partial$ -spectrum if  $\partial(\sigma(T)) \subseteq \Delta(T) \subseteq \sigma(T)$  for all  $T \in \mathfrak{B}(X)$ , where  $\sigma(T)$  is the spectrum of  $T$  and  $\partial(\sigma(T))$  is its boundary. For an integer  $k \geq 2$ , let  $(i_1, \dots, i_k)$  be a finite sequence with terms belonging to  $\{1, \dots, k\}$ , such that at least one of the terms in  $(i_1, \dots, i_k)$  appears exactly once. The generalized product of  $k$  operators  $T_1, \dots, T_k \in \mathfrak{B}(X)$  is defined by:  $T_1 * T_2 * \dots * T_k = T_{i_1} T_{i_2} \dots T_{i_k}$ . The integer  $k$  is called the width of the generalized product.

Fixing a  $\partial$ -spectrum map  $\Delta$ , in this work we describe all maps  $\varphi : \mathfrak{B}(X) \rightarrow \mathfrak{B}(X)$  for which the range contains all operators with rank at most two and satisfy:

$$\Delta(T_1 * \dots * T_k) = \Delta(\varphi(T_1) * \dots * \varphi(T_k)) \text{ for all } T_1, \dots, T_k \in \mathfrak{B}(X).$$

Precisely, our main result is stated as follows.

**Key Words:** Preservers Problem,  $\partial$ -spectrum, Rank One Operators, Generalized Product.

## ANALYSIS OF MIR-1302 RS6631 VARIANT IN INFERTILE MEN BY PCR-RFLP

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### ABSTRACT

**Background:** Male infertility is a multifactorial condition in which genetic and epigenetic factors play significant roles. Among these, microRNAs (miRNAs) have emerged as critical post-transcriptional regulators in involved spermatogenesis. miR-1302, in particular, has been implicated in cell cycle regulation and embryonic development. However, its role in male infertility remains poorly understood. The present study investigates the association of the rs6631 variant in the miR-1302 gene with male infertility, focusing on men in men diagnosed with oligoasthenoteratozoospermia (OAT) and non-obstructive azoospermia (NOA).

**Objective:** To evaluate the potential association between the miR-1302 rs6631 variant and male infertility, and to assess its relationship with semen parameters.

**Materials and Methods:** This case-control study included 159 infertile men (55 OAT and 104 azoospermic) as the patient and 39 normospermic men as controls group. Genomic DNA was extracted from peripheral blood samples, and genotyping of the miR-1302 rs6631 variant was performed using the PCR-RFLP method. Genotype and allele frequencies were compared between groups by chi-square test. Associations between genotypes and semen parameters were assessed using Kruskal-Wallis and Mann-Whitney U tests.  $P < 0.05$  was considered statistically significant.

**Results:** No significant differences were found in genotype or allele frequencies between the infertile and control groups, or between the OAT and NOA subgroups ( $p > 0.05$ ). Similarly, genotype groupings (AA vs. TA+TT and TT vs. TA+AA) did not differ significantly between groups. While overall semen parameters did not vary significantly among genotypes, progressive motility was significantly lower in individuals with the TT genotype compared to those with TA+AA genotypes ( $p = 0.029$ ). Total motility showed a borderline association ( $p = 0.053$ ).

**Conclusion:** The miR-1302 rs6631 variant does not appear to be associated with male infertility at the genotype or allele level. Nonetheless, the observed association between the TT genotype and progressive motility suggests a potential functional impact that warrants further investigation with larger sample sizes.

**Keywords:** miRNA, Male infertility, oligoasthenoteratozoospermia (OAT) and non-obstructive azoospermia (NOA)

**STRENGTHENING TVET PROGRAMMES WITH OUTCOME-BASED  
CURRICULUM DELIVERY TO MEET INDUSTRY NEED FOR SUSTAINABLE  
NATIONAL DEVELOPMENT**

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**ABSTRACT**

Technical and Vocational Education and Training (TVET) has the mandate to train technically skilled manpower for the nation's technological innovations and developments. Traditional TVET models often fall short of equipping learners with the dynamic skills required in modern labour markets. An outcome-based approach shifts the focus from content delivery to the achievement of specific competencies, ensuring that graduates are job-ready and capable of adapting to technological and economic changes. This study examined the current curricula (particularly in Computer Science and Civil Engineering, as the case study) used in Nigerian Polytechnics and carried out a statistical analysis of the relevance of products from TVET Institutions to the expectations of the world of work. The statistical analysis was conducted through quantitative research that administered a well-structured questionnaire to fifty (50) samples for companies and factories within Lagos and Ogun States. The results of the test showed that 78% of TVET products are not able to fit into the industries directly without training, 7% are not able to cope at all even after training, and the remaining 15% fit into the system without training. The analysis from this study confirmed that the TVET curriculum has not delivered on its mandate and that most employed TVET graduates are trained on the skills needed by the industry to cope with the tasks and demands at work. Therefore, an outcome-based curriculum where 75% of each course is skill-based, practically oriented, and tailored towards the needs of the world of work is canvassed.

**Keywords:** Curriculum, Skill, Sustainable Development, Outcome-based curriculum, TVET

## PHOTOVOLTAIC (PV) AND WIND ENERGY SOURCES WITH A SOCIAL WEALTH-BASED CONTROLLER TO IMPROVE ELECTRICITY FLOW

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### **Abstract**

In modern transmission systems, it is crucial to maximise the efficiency of current resources and accelerate the incorporation of renewable energy sources. The optimal allocation of resources results in cost savings for end users of electrical energy. This paper introduces a new methodology for addressing a multi-objective optimal power flow (OPF) issue when Flexible AC Transmission System (FACTS) devices are incorporated into a unified transmission system. The unique aspect of this paper is the careful choice of the multi-objective function. The objective function is defined as the minimization of voltage deviation, power loss, and negative social welfare (NSW). The utilisation of loss reduction techniques and Network Service Works (NSW) leads to a reduction in the per-unit cost of electricity for customers, resulting in increased levels of customer satisfaction. The designated solution for resolving the problem is the Unified Power Flow Controller (UPFC). The hypothesis has undergone testing on an IEEE 30 bus system. The Mouth Flame Optimisation Algorithm has been utilised for the optimisation of an objective function. The acquired outcomes have been formally presented, extensively compared, and meticulously analysed.

**Keywords** Optimal Power Flow, Negative Social Welfare, Unified Power Flow Controller, Mouth Flame Optimization Algorithm.

## HARNESSING DIGITAL TRANSFORMATION IN HEALTHCARE: A LITERATURE-BASED EXPLORATION OF HEALTH 4.0 AND THE ROLE OF ARTIFICIAL INTELLIGENCE

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### ABSTRACT

**Introduction and Purpose:** The global healthcare landscape is undergoing a revolutionary shift, driven by the integration of advanced digital technologies and intelligent systems. Central to this transformation is the concept of Health 4.0, a model inspired by Industry 4.0 that promotes a data-driven, interconnected, and patient-centric approach to healthcare delivery. Health 4.0 envisions a healthcare ecosystem that leverages cutting-edge innovations such as Artificial Intelligence (AI), Internet of Things (IoT), big data analytics, robotics, cloud computing, and cyber-physical systems to improve outcomes, reduce inefficiencies, and support personalized care. This proposed study aims to conduct a comprehensive literature review on the convergence of Health 4.0 and AI, examining their roles in reshaping clinical practices, decision-making, diagnostics, treatment planning, patient monitoring, and administrative processes.

**Materials and Methods:** Special attention will be given to how AI supports automation in diagnostics, predictive analytics, image recognition, and clinical decision support systems, while also considering its implications for ethical governance, data privacy, and healthcare equity. The review will critically analyze peer-reviewed articles, empirical studies, institutional reports, and current frameworks to map the opportunities, challenges, and gaps in the implementation of these technologies. Moreover, the research will as well explore the varied impacts of Health 4.0 and AI in both developed and developing health systems, acknowledging the infrastructural, policy, and human resource disparities that may hinder or enable their adoption.

**Results:** By systematically organizing and interpreting existing academic knowledge, this paper aims to contribute to an informed understanding of digital health transformation, provide strategic insights for stakeholders, and offer direction for future research and policy development. This proposal is submitted for approval as a foundation for a broader academic inquiry into the digital future of healthcare. The study's findings are expected to be valuable for healthcare professionals, policymakers, digital health innovators, and researchers interested in leveraging technology to drive sustainable, efficient, and equitable healthcare solutions

**Key Words:** Health 4.0, Digital Transformation, Artificial Intelligence, Healthcare

## CONCRETE STRUCTURE FRACTURES IMAGE CATEGORIZATION UTILIZING CUSTOMIZED LENET-5 ARCHITECTURE

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### ABSTRACT

**Introduction and Purpose:** Cracks that develop on the surfaces of buildings are inevitable as structures age. If left unaddressed, these cracks can deteriorate over time. Due to the vastness of many buildings, automating the inspection process is crucial for enhancing and optimizing inspection efficiency.

**Materials and Methods:** Deep learning has already achieved considerable success in categorizing images for various civil infrastructure uses, including roads and bridges. Nonetheless, its implementation within the building sector remains limited. To bolster national efforts for smarter infrastructure, it is becoming increasingly vital to incorporate advanced technologies into the construction field. This research assesses the effectiveness of deep learning in categorizing images of building cracks.

**Results:** The primary contributions of the paper include: reviewing existing defect detection methodologies and their shortcomings, presenting a CNN-based method for identifying wall cracks, and evaluating the performance of standard CNNs against those improved by transfer learning. Overall, the research illustrates that deep learning models.

**Discussion and Conclusion:** This research demonstrates the capability of deep learning techniques, especially through transfer learning, in automating the categorization of building facade images. It underscores the advantages of transfer learning compared to conventional CNN approaches, even when facing restricted data accessibility

**Key Words:** Crack detection; Building façade images, Transfer learning; Deep learning; LeNet-5.

## HABITAT-DRIVEN ECOPHYSIOLOGICAL AND ANATOMICAL VARIABILITY IN *AERVA JAVANICA*: FROM PLAINS TO DESERTS AND ELEVATION

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### ABSTRACT

Plants live in changing environments constantly, which can be stressful for their development and growth. Plants have evolved heterogeneous adaptations to survive with numerous environmental stressors, such as heat, salinity, and water scarcity. Water deficit is one of the major abiotic stresses. Plants which cope with water deficit stress are known as xerophytes. Xerophytic plants shorten the leaf area, waxy or woolly layer on leaves and reactive oxygen species formation etc. to survive in stressful factors. *Aerva javanica* is also a xerophytic plant which belongs to family Amaranthaceae. *A. javanica* is found in dryland and desert habitats. *Aerva javanica* was collected to study morpho-anatomical and physiological adaptations from different ecological regions of Punjab. Plant height was measured at the time of survey. Mana Ahmadani population showed maximum plant height. At elevation and in the desert, plant faces drought stress. Leaf area was the minimum in Derawar fort and Barkat Wala populations. Reduced leaf size resulted to reduce stomatal transpiration. Anatomical analyzation was done by free-hand sectioning. Drought stress causes the formation of aerenchyma to acquire water. Aerenchyma was observed in three different populations, while the maximum was observed in Derawar Fort population. Sakhi Sarwar is a dry and desert area, plant faces water scarcity. So, metaxylem area was the minimum in Sakhi Sarwar population to avoid cavitation under water scarcity. Reactive oxygen species work as signaling in unfavorable environment to cope with, hydrogen peroxide is released as signaling which is highly reactive molecule. To detoxify hydrogen peroxide catalase enzyme is released by plant. Mana Ahmadani population showed the maximum value of hydrogen peroxide and showed that hydrogen peroxide was detoxified at the time by catalase. In conclusion, *Aerva javanica* showed very specific modifications in morpho-anatomical and physiological traits that expose its ecological success in xerophytic habitats.

**Keywords:** Saline deserts, *Aerva javanica*, Anatomical modifications, Koh-e-Suliman, Antioxidant, Osmolytes

## **LASER-ASSISTED COLLISIONS OF ELECTRON WITH HYDROGEN-ATOM**

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### **ABSTRACT**

Laser-assisted processes are phenomena that are altered by the presence of a laser field, as opposed to laser-induced processes like multiphoton ionization and high harmonic production, which can only take place in the presence of a laser field. Atom-atom collisions in the presence of a laser field and electron-atom collisions are two instances of laser-assisted processes.

Electron-atom collisions aided by lasers are intriguing for a number of reasons. First of all, as we will see below, they make it possible to see multi-photon processes at comparatively low laser intensity from an experimental perspective. Second, from a theoretical perspective, they need novel ways to explain how the laser field affects the collisions. In fact, the laser field adds a number of additional factors to the issue (such as the laser's frequency, intensity, and polarization), and adjusting these parameters enables a greater understanding of the underlying mechanisms. Laser-assisted electron-atom collision cross sections show novel phenomena such as laser-induced resonances and various prominent characteristics depending on the values of these factors. Since we shall consider multiphoton processes at laser intensities beyond the limit of validity of perturbation theory, we will need theoretical methods which possess the required non-perturbative features. Thirdly, laser-assisted electron-atom (ion) collisions are also important in several applied areas such as plasma heating by electromagnetic waves.

Our study describes the influence of the laser polarization (elliptical, circular) on the electron impact excitation of atomic hydrogen (DCS). Our method takes into account the "dressing" of the target states by including the laser-atom interaction to first order time-dependent perturbation theory, while the interaction of the laser field with the incident electron is treated to all orders by using the non relativist Gordon-Volkov wave function. The interaction of the fast projectile with the target atom is treated in the first Born approximation.

Our findings demonstrated the presence of a deep minimum for particular scattering angle values. Destructive interference between the "electronic" and "atomic" amplitudes is the source of these minima (the differential cross section (DCS) cancels out).

**Key words:** DCS, Atomic-Electron dressing Elliptical polarization

## **CARBON NANOMATERIALS FOR THE ENHANCEMENT OF SOLAR THERMAL COLLECTORS**

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### **Abstract**

Enhancing the efficiency of existing energy transport systems is essential to meet the growing global energy demand. Among various renewable energy sources, solar energy exhibits one of the highest potentials for sustainable utilization. A promising passive approach to improve the thermal performance of solar collectors involves replacing conventional heat transfer fluids with engineered nanofluids. Although several studies have explored the enhancement of solar thermal collectors using nanofluids, most have focused on ceramic or carbon-based nanoparticles. However, the preparation of stable nanofluids remains a significant challenge. This study investigates the use of carbon nanomaterials to improve the efficiency of a flat plate solar collector (FPSC). The nanoparticles were synthesized from green sources and covalently functionalized to ensure stable suspension in the base fluid. Zeta potential measurements confirmed the effectiveness of the functionalization method in producing stable nanofluids. The thermal performance of nanofluids at various weight concentrations was evaluated under controlled indoor conditions based on ASHRAE standards. The results demonstrate that the efficiency of the solar collector improves with increasing flow rate and nanoparticle concentration, highlighting the potential of green-synthesized carbon nanofluids for advanced solar thermal applications.

**Keywords:** Flat plate solar thermal collector, thermal performance, green synthesis, covalent functionalization

## EFFECTS OF METHOTREXATE AND CHRYSIN ON BODY WEIGHT, TESTICULAR AND EPIDIDYMAL WEIGHTS IN RATS

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### ABSTRACT

**Introduction and Purpose:** Methotrexate is used as a chemotherapeutic agent in many diseases such as testicular tumors, breast cancer, bladder cancer, and inflammatory bowel disease. Chrysin is a flavonoid found naturally in honey, pollen, and propolis. It is important that the testicles, where spermatogenesis occurs, and the cauda epidymis, where sperm are stored, maintain their physiological limits in terms of both functionality and weight. In this study, the effect of chrysin on body weight, testicular, and epididymal weight in rats treated with methotrexate was evaluated.

**Materials and Methods:** Twenty-eight male Wistar albino rats were divided into four groups. Group 1 was the control group and only physiological saline was administered orally. Group 2 was administered a single dose of 20 mg/kg methotrexate i.p. Group 3 was administered 50 mg/kg chrysin orally for 7 days. Group 4 was administered a single dose of 20 mg/kg methotrexate i.p. followed by 50 mg/kg chrysin orally for 7 days. The rats were sacrificed under inhalation anesthesia with sevoflurane one day after the end of drug administration. The testes of all rats were immediately removed, their epididymises were separated and their weights were determined immediately using a digital measuring device. The body weights of the rats were recorded while they were under anesthesia at the beginning and end of the study.

**Results:** It was determined that there were statistically significant decreases in body weight, testicular and epididymal weights in the methotrexate group. It was determined that the decreases in body weight, testicular and epididymal weights were attenuated in the group given chrysin in addition to methotrexate. It was determined that there were increases in body weight, testicular and epididymal weights in the group given only chrysin and these values were close to the control group values.

**Discussion and Conclusion:** In conclusion, it was determined in the study that chrysin attenuated the decreases in body weight, testicular and epididymis weights caused by methotrexate.

**Key Words:** Chrysin; Epididymal weight; Methotrexate; Rat; Testicular weight

## IMPROVING JAW SURGERY OUTCOMES WITH 3D IMAGING: WHAT WE LEARNED FROM USING THE TOTAL FACE APPROACH

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### Abstract

**Aim:** Cephalometry is fundamental in diagnosis, analysis, and planning of orthodontic surgical treatment as it reveals skeletal relationship between the upper and lower jaw as well as facial aesthetic parameters. Nevertheless, 3D cephalometry has still not become the exam of choice in orthognathic treatment even though today CBCT (Cone Beam Computed Tomography) is routinely used in other branches of dentistry. The aim of this study is to evaluate the advantages and disadvantages of the two methods in orthognathic surgery.

**Materials and Methods:** In a sample of 13 patients undergoing bimaxillary orthognathic surgery a chin-vertex CBCT exam was prescribed prior to orthodontic treatment (OT) and 12 months after surgery (T1). The DICOM files uploaded to Materialise Simplant Ortho software pro 2.1 (Materialise Co., Leuven, Belgium) were analyzed following the multiplane 3D Total Face cephalometry protocol (TFA).

**Results:** Results comparing pre-op and post-op TFA 3D cephalometry, were then evaluated considering reference values reported in literature. The CBCT, carried out pre and post-surgery, were subsequently analyzed employing the superimposition method using cranial base as reference.

**Discussion and Conclusions:** The TFA 3D cephalometry allows the assessment of various bones not only singularly but also considering the right proportion with others. The advantages of TFA cephalometry are mostly due to speed of execution thanks to a user-friendly interface requiring a learning curve that is similar to traditional 2D cephalometry methods. This 3D analysis was carried out evaluating the relationship between skeletal structures making the approach especially flexible and dynamic. The 3D visualization allows the determination of the extent of skeletal disharmony. Multiplane 3D TFA allows the clinician to locate where major or minor skeletal discrepancies are

found with respect to ideal parameters and is also useful in classifying skeletal intermaxillary relation. The superimposition method is highly intuitive but does not provide information on the quantity and location of osteotomic movement.

**Keywords:** total face approach; superimposition; orthognathic surgery.

## APPROXIMATION PROPERTIES OF BERNSTEIN POLYNOMIALS IN THE TRIANGULAR REGION WITH SYMMETRIC INTERVAL

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### ABSTRACT

**Introduction and Purpose:** Bernstein polynomials have an important place in the fields of mathematical analysis and numerical solution. They are generally used in the approximate representation of continuous functions, especially in the framework of the 'Approximation Theorem'. Bernstein polynomials are used in the calculation of some geometric structures. They are also one of the approximate solution methods used in cryptographic algorithms. Bernstein polynomials are also used in the fields of machine learning and artificial intelligence. Approximation of functions has also found a place in the training of machine learning models. Bernstein polynomials are especially used in kernel methods and some optimization algorithms. Studies on these topics generally cover a wide range from theoretical mathematical analysis to applied engineering problems.

**Materials and Methods:** The basic definitions and theorems in the theory of approximations were examined. The studies done so far on the Bernstein polynomials in the triangular region were examined. A study was done that was not done in the symmetric interval, which was seen to be lacking.

**Results:** In the present study, we considered Bernstein polynomials in the symmetric interval studied by Cilo (2012), Stancu's (1968) Bernstein polynomials in the triangular region for functions of two variables to Cilo's work. In approximation theory, Bernstein polynomials have been studied extensively for functions of one and more variables. Many generalizations and modifications of the linear positive operators defined in approximation theory have been made. Probably the most important of these is the Bernstein polynomials. They have also been studied in quadratic and triangular regions for functions of two variables. We studied the approximation, the rate of approximation by using complete modulus, continuity and partial modulus of continuity and the Voronovskaja-type asymptotic theorem (formula) are studied for these operators. Also, graphical representations are added to demonstrate the consistency of theoretical findings for our operators approximating functions on the triangular domain by using Maple software. We aimed to apply Stancu's (1968) study of Bernstein polynomials in the triangular region for functions of two variables to Cilo's thesis. We studied the approximation, the rate of approximation and the Voronovskaya type approximation.

**Key Words:** Approximation, Voronovskaya theorem, rate of approximation

## SAFER 3D IMAGING FOR SOFT TISSUES: EXPLORING ALTERNATIVES TO CBCT SCANS

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### Abstract

**Aim:** The aim of the present study is to evaluate whether a “radiation free” method using 3D facial scan can replace Cone Beam Computed Tomography (CBCT) volumetric rendering of soft tissue of the patient to assess maxillofacial surgery outcomes and compare the reference points and angular measurements of patient facial soft tissue.

**Methods:** Facial soft tissue scan of the patient’s face, before and after orthognathic surgery and a CBCT of the skull for volumetric rendering of soft tissues were carried out. The 3D acquisitions were processed using Planmeca ProMax 3D ( ProFace® software Planmeca USA, Inc.; Roselle, Illinois, USA). The positioned in a natural position during the skull participant were scanning. Three sagittal angular measurements were performed (Tr-NA, Tr-N-Pg, Ss-N-Pg) and two verticals (Go-N-Me, Tr-Or-Pg) on facial soft tissue scan and on the patient’s 3D soft tissue CBCT volumetric rendering.

**Results:** A certain correspondence has been demonstrated between the measurements obtained on the Proface and those on the CBCT.

**Conclusion:** A radiation free method was to be considered an important diagnostic tool that works in conditions of not subjecting the patient to harmful ionizing radiation and it was therefore particularly suitable for growing subjects. The soft tissue analysis based on the realistic facial scan has shown sufficient reliability and reproducibility even if further studies are needed to confirm the research result.

**Keywords:** CBCT; Ionizing radiation; Soft tissue; Orthodontics; Diagnosis.

## EVALUATION OF 2-HYDROXY-1-(2-HYDROXY-4-SULFO-1-NAPHTHYLAZO)-3-NAPHTHOIC ACID AS AN INNOVATIVE CORROSION INHIBITOR FOR C38 STEEL IN HCL MEDIUM

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### Abstract

**Introduction and Purpose:** Steel corrosion remains a major concern in both academic research and industrial applications, attracting significant attention due to its economic and structural implications. Inorganic acids are commonly employed in processes such as pickling, cleaning, and descaling, making corrosion prevention in such environments critically important. Among the available protection strategies, the use of corrosion inhibitors is considered one of the most practical, particularly in acidic media. A wide range of organic compounds has been investigated for their corrosion inhibition properties. In this context, 2-hydroxy-1-(2-hydroxy-4-sulfo-1-naphthylazo)-3-naphthoic acid (HHSNNA) is a typical organic molecule that incorporates O, S, and N atoms. The objective of this work is to evaluate the inhibitory effect of HHSNNA on the corrosion of steel in HCl medium.

**Materials and Methods:** The effect of HHSNNA on the corrosion of carbon steel in 1 M HCl solution was investigated using potentiodynamic polarization (PDP) and the electrochemical impedance spectroscopy (EIS) technique at different concentrations.

**Results:** Polarization curves showed that the HHSNNA behaves as a mixed-type inhibitor. EIS spectra exhibit one capacitive loop and confirm the inhibitive ability. The effect of concentration for the inhibitor on the corrosion behavior of carbon steel in 1M HCl was also studied, and a Langmuir adsorption isotherm was found.

**Discussion and Conclusion:** It was found that the presence of HHSNNA hugely decreases the corrosion rate, while its inhibition efficiency (E%) increases with concentration to attain 93.8 % at  $10^{-3}$  M.

**Keywords:** Corrosion, Steel, Inhibitor, HCl medium, HHSNNA

## UTILISATION OF FOREIGN REMITTANCES: A CASE STUDY OF RURAL HOUSEHOLDS IN BANGLADESH

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### ABSTRACT

Foreign remittance is an important way for many emigrant families to make money to pay for their basic needs. This study analyses the impact of foreign remittances on household expenditures in rural regions of the Jessore district, located in the Khulna division of Bangladesh, utilising primary data. Descriptive statistics and ordinary least squares (OLS) regression models are employed to analyse the randomly selected household survey data. Based on what we know so far, overseas remittances have positive and significant effects on household spending. Most of the money that is sent overseas is used to buy food, household goods, and comforts. Furthermore, a substantial portion of foreign remittances is allocated for residential building and land acquisition; yet the inclination towards investment and savings among remittance-receiving households is somewhat evident. The household incurs essential medical expenses, while expenditure on education are comparatively lower. The study shows that remittances from migrant workers have a positive effect on household spending. However, it is still important to make sure that households use these foreign remittances effectively.

**Keywords:** Rural Economy, Expenditure, Jessore, Bangladesh, Remittance, Consumption Patterns.

## BIBLIOMETRIC ANALYSIS OF THE ROLE OF SOCIAL MEDIA IN PROMOTING PUBLIC LIBRARIES

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### Abstract

**Purpose and Objective:** Public libraries are the major players for promoting lifelong learning, and social media nowadays is not only used for the purpose of entertainment but is also being developed as a tool for marketing and promotional activities. The current study is the bibliometric picture of this domain.

**Methodology:** The study analysed 41 documents indexed in the Scopus database to get valuable insights about the integration of social media in the promotional activities of public libraries across the world.

**Results:** The publications were found to be distributed from 2010 to 2025, with the Social Science subject area being the one having the most publications. Articles emerged as the most preferred document type (31 out of 41) and the US as the most productive country, followed by Australia, Canada, and others. Journal of Librarianship and Information Science, along with Public Library Quarterly, are the most prolific sources, and Joo, S. is the most prominent author with the most number of publications. Subscription-based documents are more common than open-access documents.

**Conclusion:** The study offers insights into the gaps in the research as well as the future direction for the researchers who are working or aim to work in the related areas.

**Keywords:** Social media, Marketing, Public libraries, bibliometrics, citation analysis, thematic analysis, Bibliometric indicators.

## **POTENTIAL APPLICATIONS OF ENDOPHYTES AS A SOURCE OF BIOACTIVE COMPOUNDS IN VARIOUS SECTORS**

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### **Abstract**

Endophytes are microorganisms (fungi, bacteria, and actinomycetes) that coexist peacefully with their host plants and produce metabolites that are good for the plant, such as phytoestrogens, biofertilizers, and boosted immunity against diseases. Endophytes are thought to be a vast source of bioactive substances, including anti-cancer, anti-fungal, antibacterial, and antioxidants. They are utilized in a variety of fields, including industrial production, agriculture (Auxin, Gibberellin, etc.), and the most crucial field medicine, which deals with the issue of multi-drug resistance. The purpose of this review is to enhance the number of environmentally friendly chemicals and highlight the significance of endophytes as a source of new substances in these sectors.

**Keywords:** Endophytes, Fungi, Bacteria, enzymatic activity, medicine, agriculture.

## **ANCIENT SYSTEM OF GLOBALIZATION AND TRADE TRENDS: UNVEILING INTERACTIONS THROUGH COMMODITIES IN WESTERN INDIAN SOCIETY**

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### **Abstract**

The paper attempts to explain that the concept of globalization which is often used in the context of trade and commerce of the world market is a modern age phenomenon though the symptoms of this system had started to register itself from the ancient times. The focus of the paper is on early medieval western India, stretching from c. 600-1300 CE. The paper seeks to throw light on the nature and pattern of interactions between trading communities of western India and those of other parts of the world especially during the early medieval period via exchange of trading commodities which formed part of both inland and foreign trade. Attempts have also been made in the paper to provide a broad overview of the commodities of exchange which ultimately paved the way for the different levels of interactions among people of western India and with different regions. The study is primarily based on epigraphical and literary sources.

**Keywords:** Inland Trade, Foreign trade, Commodities of Exchange, Globalization, Trading Networks, Patterns of Interaction.

## INVESTIGATING THE POTENTIAL OF BIOMASS-DERIVED BIOGAS AS A SUSTAINABLE ENERGY ALTERNATIVE

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### **Abstract**

The increasing emission of greenhouse gases, particularly CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O, poses significant challenges to climate stability, necessitating a shift from fossil fuels to renewable energy sources. This study investigates the potential of biomass-derived biogas as a sustainable energy alternative, focusing on the enhancement of methane concentration through carbon dioxide scrubbing. The research involves the fabrication of a 25 L jerrycan digester for biogas generation from cow dung and the development of a testing unit to evaluate various CO<sub>2</sub> scrubbing agents, including CaO, Ca(OH)<sub>2</sub>, NaOH, and wood ash. The scrubbing efficiency was assessed through a series of experiments measuring the time taken for lime water to turn milky, indicating CO<sub>2</sub> absorption. Results indicate that sodium hydroxide exhibits superior scrubbing efficiency at lower concentrations, while calcium-based absorbents perform better at higher concentrations. Wood ash emerges as a cost-effective option, performing well at lower concentrations, making it suitable for small-scale applications. Overall, the study highlights the critical role of CO<sub>2</sub> scrubbing in optimizing biogas for energy applications, contributing to the transition toward sustainable energy systems and addressing climate change challenges.

**Keywords:** Biogas, CO<sub>2</sub> Scrubbing, Renewable Energy, Biomass, Methane Concentration

## **CHEMICAL ANALYSIS OF ATMOSPHERIC DUST AROUND THE KISHNICA AREA IN THE MUNICIPALITY OF GRACANICA**

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### **Abstract**

Kosovo is a very specific country, geographically, surrounded by all sides with the range, which is fundamentally protected, however, from The influence of the global climate, but in fact, how can this be defined when in many cases we encounter Prishtina, as a city that has the primacy. In the world, of the day-to-day pollution of the environment, what is it that causes all this contamination, with a weak economy, why all this contamination, we have them, they are too weak filters (or have not installed them at all), then old vehicles, forest cutting, lakes contamination, Above all, our awareness of a clean environment is lacking, almost `will be ours. Therefore, in this project, we will present our findings, based on Chemical analysis, in the cities; Prishtina, Gracanica, the cities considered as the most polluted, therefore, the impact on the health of residents and many other environmental impacts, in the areas analyzed will bring a realistic picture of environmental pollution, a perimeter of approximately 30km, including a triangle of the three cities analyzed.

**Keywords:** Heavy metals; Air, Cars, Households, Thermal power plants

## **INVESTIGATING THE IMPACT OF LARGE CLASS SIZE ON TEACHERS' PERFORMANCE: A STUDY OF SECONDARY SCHOOLS IN SULAIMANI**

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### **Abstract**

This study examines the impact of large class sizes on teacher performance in secondary schools in Sulaimani within the Kurdistan Regional Government in Iraq. The research addresses the challenges that English language teachers face in managing overcrowded classrooms, including difficulties in maintaining discipline, providing individualized attention, and ensuring student engagement and participation. A mixed-methods approach was employed, combining quantitative and qualitative data collected through questionnaires administered to 42 English teachers across 23 secondary schools. The findings reveal that large class sizes significantly hinder teachers' ability to control classrooms, assess student understanding, and manage workload, leading to increased stress and reduced instructional effectiveness. Key stressors identified include classroom noise, cheating during exams, and limited student engagement. Suggested solutions include reducing the number of students per class, increasing the use of technology, implementing structured classroom management strategies, and fostering positive relationships between teachers and students. The study underscores the need for policy adjustments and practical interventions to create a more conducive learning environment in large-class settings.

**Keywords:** Large class size, teachers of the English language teaching, secondary schools

**GRAPHENE OXIDE-ENHANCED CHITOSAN COMPOSITE BEADS FOR EFFICIENT CONGO RED ADSORPTION: A COMPREHENSIVE INVESTIGATION COMBINING DENSITY FUNCTIONAL THEORY (DFT) THEORETICAL ANALYSIS, RIGOROUS EXPERIMENTAL EVALUATION, AND PROCESS OPTIMIZATION USING RESPONSE SURFACE METHODOLOGY (RSM) TO ELUCIDATE ADSORPTION MECHANISMS**

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**Abstract**

In this study, graphene oxide-enhanced chitosan composite beads were developed and thoroughly investigated as an efficient adsorbent for the removal of Congo Red dye from aqueous solutions. The synthesis process was optimized using Response Surface Methodology (RSM) based on a Box–Behnken design to maximize adsorption capacity under various experimental conditions including pH, contact time, adsorbent dose, and initial dye concentration. Comprehensive characterization techniques confirmed the successful incorporation of graphene oxide into the chitosan matrix, enhancing surface area and active sites for adsorption. A theoretical insight into the adsorption mechanism was provided by Density Functional Theory (DFT) calculations, revealing the molecular-level interactions between Congo Red molecules and the composite beads, including hydrogen bonding,  $\pi$ – $\pi$  interactions, and electrostatic attractions. The integration of experimental and theoretical approaches allowed for an in-depth understanding of the adsorption process, contributing to the design of more effective adsorbents for wastewater treatment. The results demonstrate that chitosan@graphene oxide beads are a promising, sustainable, and cost-effective material for dye removal, offering significant potential for environmental remediation applications.

**Keywords:** Chitosan composite beads; Box–Behnken design; DFT analysis; Wastewater treatment; Green synthesis

### 3D STUDY OF CRANIAL, FACIAL AND PALATAL INDEX AND PALATE VOLUME: ANALYSIS OF MORPHOLOGICAL RELATIONSHIPS OF THE SKULL, FACE AND PALATE

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#### **Abstract**

**Introduction and Purpose:** Cranial, facial, and palatal indices—together with palatal volume—are key anthropometric parameters used in orthodontics, maxillofacial surgery, and forensic anthropology. Although each metric is well documented individually, their three-dimensional (3-D) inter-relationships have not been comprehensively synthesized in the literature. Aim: To review and integrate current evidence on 3-D measurement techniques for cranial, facial, and palatal indices and to examine how these metrics correlate with palatal volume and clinical outcomes.

**Methods:** A narrative review was conducted across PubMed, Scopus, and Web of Science (January 2000 – March 2025). Search terms included “*cranial index*,” “*facial index*,” “*palatal index*,” “*palate volume*,” “*3-D imaging*,” and “*orthodontics*.” Inclusion criteria: English-language studies employing 3-D modalities (structured-light scanning, CBCT, CT, MRI, stereophotogrammetry) that reported at least one of the target indices or palatal volume. Methodological quality was appraised qualitatively; data were summarized thematically.

**Results:** Fifty-eight papers met the criteria. 3-D techniques consistently outperformed two-dimensional methods in accuracy ( $\leq 0.5$  mm error) and reproducibility for all indices. Evidence indicates moderate-to-strong positive correlations ( $r = 0.45\text{--}0.70$ ) between palatal index and palatal volume, and clinically relevant links between cranial type and arch form. Structured-light and intra-oral scanners provide rapid, radiation-free acquisition suitable for large-scale studies, whereas CBCT remains the reference for volumetric bone assessment. Gaps persist in normative 3-D databases, especially for non-Western populations, and in standardized protocols for index–volume integration.

**Conclusions:** Three-dimensional imaging has redefined craniofacial anthropometry, enabling simultaneous assessment of cranial, facial, and palatal morphology with high precision. Correlations among these measures hold promise for improved orthodontic diagnostics, personalized appliance design, and refined forensic identification. Future work should focus on multicenter validation studies, creation of open-access 3-D normative datasets, and development of unified analytic software to merge index and volume data.

**Keywords:** cranial index; facial index; palatal index; palate volume; 3-D imaging; structured-light scanning; CBCT; orthodontic anthropology; narrative review.

## EXPERIMENTAL AND MULTI-CRITERIA ANALYSIS OF CO<sub>2</sub> LASER CUTTING QUALITY IN CARBON FIBER-REINFORCED THERMOPLASTIC PLATES

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### Abstract

**Introduction and Purpose:** This study investigates the influence of selected CO<sub>2</sub> laser cutting parameters on kerf quality characteristics during the cutting of 3D printed acrylonitrile butadiene styrene reinforced with carbon fiber (ABS-CF) plates. With the growing adoption of fused filament fabrication (FFF) in functional prototyping and end-use parts, understanding the machinability of fiber-reinforced thermoplastics becomes increasingly important. The purpose of this study is to analyze the effects of plate thickness, laser power, and cutting speed on three key output variables: top kerf width, bottom kerf width, and kerf angle, and to determine the most optimal parameter settings for improved kerf geometry.

**Materials and Methods:** A total of 12 experimental trials were performed using 3D printed ABS-CF plates with thicknesses of 2 mm and 3 mm. The CO<sub>2</sub> laser cutting parameters included power levels of 90 W, 95 W, and 100 W, and cutting speeds of 10 mm/s and 15 mm/s. Following laser cutting, kerf characteristics were measured, and statistical analysis was conducted using ANOVA to evaluate the significance of each parameter. Additionally, Grey Relational Analysis-based Multi-Criteria Decision-Making (MCDM) was employed to rank experimental runs according to kerf performance.

**Results:** The analysis revealed that cutting speed had the highest effect on top kerf width, while a combination of plate thickness, power, and speed influenced the bottom kerf width. The kerf angle was found to be predominantly affected by plate thickness, explaining 99% of its variation. Among the trials, experiment E8 (plate thickness: 3 mm, power: 90 W and cutting speed: 15 mm/s) achieved the best overall kerf quality. **Discussion and Conclusion:** This study highlights that optimal selection of laser cutting parameters can significantly enhance kerf quality in 3D printed ABS-CF materials. The integration of MCDM techniques offers an effective approach for parameter optimization in laser post-processing of FFF-fabricated parts. **Key Words:** Laser cutting; ABS-CF composite; Grey Relational Analysis; Multi-Criteria Decision-Making; Kerf geometry

## CHARACTERIZING AND ASSESSING DRINKING WATER TREATMENT PLANT SLUDGES AS A SOIL STABILIZER IN TRABZON, TÜRKİYE

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### ABSTRACT

**Introduction and Purpose:** With the increase in population and industrialization, the amount of waste is rapidly rising. Evaluating these wastes is crucial to reduce economic losses, ensure efficient resource use, and protect the environment and public health. Accurate characterization of waste materials is a necessary first step for their proper utilization. This enables the selection of the most appropriate method for waste management and reuse in construction applications.

**Materials and Methods:** In this study, it was aimed to determine the characterization of waste sludges from some drinking water treatment plants in Trabzon and to evaluate them in terms of soil stabilization. In this context, the sludge samples from Esiroğlu (WS-1), Akçaabat (WS-2) and Derecik (WS-3) Drinking Water Treatment Plants with conventional treatment systems were firstly dewatered and specific gravity, liquid limit (Casagrande), plastic limit, Standard Proctor, unconfined compressive strength and consolidation tests were performed. In addition to these tests, SEM, XRF and XRD analyses were performed. With the help of both laboratory tests and analytical methods, the sludges were characterized in terms of their mineralogical, chemical, physical and mechanical properties.

**Results:** As the material properties of the treatment sludges in the drinking water treatment plants were evaluated, the WS-1 was found to be the most suitable material that could be used in the stabilization of soils. Therefore, the use of this sludge will be both ecological and economical. **Discussion and Conclusion:** This study has demonstrated that the characteristics of waste sludges from different drinking water treatment plants vary, and that these sludges can be used in soil stabilization. The characterization results of the WS-1 sludge, in particular, support this conclusion.

**Key Words:** Stabilization of soils; Waste sludge; Sludge characterization

## REMOVAL OF COPPER FROM WASTEWATER ORIGINATING FROM METAL SURFACE TREATMENT BY ELECTROCOAGULATION

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### ABSTRACT

#### **Introduction and Purpose:**

The presence of heavy metals in aquatic ecosystems constitutes a critical environmental threat due to their toxicity, persistence, and potential for bioaccumulation. Industrial processes, particularly those involving metal surface treatment, often discharge effluents directly into surface water bodies, leading to significant contamination. Among these metals, copper (Cu) is of particular concern. This study aimed to evaluate the efficiency of copper removal from industrial wastewater using the electrocoagulation technique under varying operating conditions.

#### **Materials and Methods:**

Industrial wastewater containing copper ions was treated using an electrocoagulation system equipped with aluminum electrodes. The effects of key parameters such as electrolysis time, sodium chloride (NaCl) concentration, and applied current intensity were systematically investigated. The experiments were conducted at different pH levels, with removal efficiency calculated based on residual copper concentrations determined via spectrophotometric analysis.

#### **Results:**

The results indicated that copper removal efficiency increased with longer electrolysis duration, higher NaCl concentration, and stronger electric current. Optimal conditions were identified at a pH of approximately 4, an applied current of 2 A, and an electrolysis time of 60 minutes, leading to significant copper removal.

#### **Discussion and Conclusion:**

The findings demonstrate that electrocoagulation is an effective, low-cost, and environmentally friendly technique for removing copper from industrial effluents. The process efficiency can be significantly enhanced by optimizing operational parameters. These results support the potential integration of electrocoagulation in industrial wastewater treatment systems to reduce heavy metal pollution and mitigate environmental and health risks.

**Key Words:** Copper removal; Electrocoagulation; Industrial wastewater; Heavy metals; Wastewater treatment.

## PHARMACOGENOMICS IN PERSONALISED MEDICINE

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### **Abstract**

Pharmacogenomics is a cutting-edge field that combines pharmacology and genomics to develop effective, safe medications and doses tailored to a person's genetic makeup. The principle behind pharmacogenomics is that genetic differences among individuals influence their response to drugs. This variability can lead to adverse drug reactions, ineffective treatment, or optimal therapeutic results depending on the patient's genetic profile. The integration of pharmacogenomics into clinical practice supports the advancement of personalized medicine, reducing trial-and-error prescribing and enhancing patient care.

The use of genomic information enables healthcare professionals to predict which patients will benefit from a specific drug, who will not respond at all, and who might suffer from adverse drug reactions. Technologies such as genome-wide association studies (GWAS), next-generation sequencing (NGS), and bioinformatics play a significant role in identifying gene variants that impact drug response. Pharmacogenomic testing is increasingly being applied in the treatment of cancer, cardiovascular diseases, and psychiatric disorders.

While challenges such as cost, ethical concerns, and limited awareness exist, the future of pharmacogenomics holds immense promise. The development of pharmacogenomic databases and decision-support tools is vital to making personalized medicine a standard in healthcare systems worldwide.

**Keywords:** Pharmacogenomics, Personalized medicine, Genetic variation, Drug response, Genomic testing

## 3D PRINTING IN PHARMACEUTICAL MANUFACTURING

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### **Abstract**

3D printing, also known as additive manufacturing, is transforming pharmaceutical manufacturing by enabling the creation of complex drug formulations and personalized dosage forms. This innovative technology allows precise control over drug release profiles, shapes, and sizes, enhancing therapeutic outcomes and patient compliance. With 3D printing, it is possible to fabricate multi-drug combinations in a single tablet, also known as polypills, and tailor medications for individual patient needs.

The most common 3D printing techniques used in pharmaceuticals include inkjet printing, fused deposition modeling (FDM), and stereolithography. These methods have been successfully applied to produce fast-dissolving tablets, controlled-release systems, and even implantable drug delivery devices. One of the most significant milestones in this field was the FDA approval of Spritam, a 3D-printed epilepsy drug, highlighting the potential for regulatory acceptance of 3D-printed medications.

Despite the advantages, there are still challenges to be addressed, such as scalability, material compatibility, and regulatory hurdles. However, continuous advancements in printer technologies, software, and biocompatible materials promise a future where on-demand, patient-specific pharmaceuticals can become a reality. This paradigm shift can revolutionize not only drug manufacturing but also healthcare delivery.

**Keywords:** 3D printing, Pharmaceutical manufacturing, Personalized medicine, Polypills, Drug delivery

## POLYHERBAL FORMULATION IN THERAPEUTICS

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### **Abstract**

Polyherbal formulation, the combination of multiple medicinal plants in a single preparation, is a traditional practice that has gained renewed attention in modern therapeutic systems. The synergistic action of various phytochemicals from different herbs enhances efficacy and minimizes side effects compared to single-herb formulations. These formulations are commonly used in Ayurvedic, Siddha, and Unani systems for treating chronic conditions such as diabetes, arthritis, and respiratory disorders.

The rationale behind polyherbal therapy lies in the complementary and synergistic effects of multiple herbs that target various aspects of a disease. For example, one herb may possess anti-inflammatory properties while another supports immune modulation or detoxification. Together, they provide a holistic therapeutic effect. Scientific validation and standardization of polyherbal formulations through phytochemical screening, pharmacological studies, and clinical trials have further established their safety and effectiveness.

Despite their traditional use, challenges like batch-to-batch consistency, quality control, and lack of regulatory frameworks still exist. Advances in biotechnology, analytical chemistry, and pharmacognosy can address these issues and promote the global acceptance of polyherbal formulations. The integration of traditional knowledge with modern science opens new avenues for the development of novel therapeutics in a cost-effective and sustainable manner.

**Keywords:** Polyherbal formulation, Synergistic effect, Traditional medicine, Phytochemicals, Therapeutics

## IN VITRO ANALYSIS OF MARGINAL ADAPTATION AND FRACTURE RESISTANCE OF CAD/CAM FABRICATED ENDO-CROWNS MADE FROM TWO DIFFERENT MATERIALS

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### Abstract:

**Background:** An endocrown is a restoration that can be defined as a one-piece restoration, which replaces the entire crown of the tooth, retained with an extension at the level of the pulp chamber, and with the occlusal adhesion principles of adhesive restorations. Endocrowns represent, in some contexts, a valid alternative for restoring endodontically treated teeth with severe coronal damage.

**Materials and methods:** After preparation, and 7 days of storage at 37 °C and 100% humidity, a digital impression was obtained with a Trios 5 scanner, and sent to the lab, where the endocrown design was performed on EXOCAD, same design in two different materials (ZR and LD). From the digital files, 4 epoxy resin framework models were produced as to proceed with the bonding procedures and marginal gap analyses. To proceed with bonding the endocrowns, the internal surface was treated with 5% hydrofluoric acid (IPS Ceramic Gel Etching; Ivoclar Vivadent AG) for 20 seconds for the LD group, while, for the ZR group, endocrowns were airborne particle abraded (Rocatec System; 3M ESPE). The samples were bonded with PANAVIA SA cement universal (Kuraray), a dual-polymerizing resin cement, under finger pressure for 60seconds.

**Results:** Statistical tests revealed a statistically significant difference between the different groups. Tukey testing demonstrated that ZR has the highest fracture toughness values compared to LD. At significantly lower values the LD showed fractures (often however with irregular patterns, typical of ceramics) which were sometimes even restorable. Conversely, Zr showed clear fracture margins (with a particularly rough separation surface).

**Conclusions:** The choice of different materials affected the fracture resistance of this kind of restoration. The possibility of producing these restorations in a full digital workflow, also considering the coronal position of the finishing line compared to other restorations, guarantees a favorable factor.

**Keywords:** Endo-Crowns; endocrown; intra-radicular retention; post; core; post-core; fiber-post; adhesive; Lithium-Disilicate; Lithium-Disilicate; Katana; Zirconia.

## INVESTIGATING DEPRESSION AND ANXIETY IN DIALYSIS PATIENTS: A TRADITIONAL REVIEW

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### ABSTRACT

**Introduction and Purpose:** It is observed that depressive symptoms in dialysis patients are not adequately investigated and treated. This study aims to synthesize existing knowledge and identify gaps regarding the prevalence, effects, and management of depression and anxiety in dialysis patients by examining postgraduate theses and published research articles on depression and anxiety in dialysis patients.

**Materials and Methods:** The data for this study, written in the review format, were obtained through searches conducted in the National Thesis Center and PubMed databases. The population of the study consisted of postgraduate theses containing the terms "dialysis" and ("depression" or "anxiety") in the National Thesis Center, and research articles obtained through searches with the keywords (((depression) OR (anxiety)) AND (dialysis)) in the PubMed database. The sample of the study consisted of all the theses accessed from the start of postgraduate education in nursing in the National Thesis Center in 1968 up to 2023, and research articles published in nursing journals in the years 2019-2023 and whose full texts were accessed in the PubMed database.

**Results:** Thirty-one studies were included in the research. The prevalence of depression and anxiety in dialysis patients and the effectiveness of various interventions on these disorders were examined. The findings showed that various interventions provided significant results in managing depression and anxiety in dialysis patients. Additionally, it was found that some interventions did not show a significant effect. Music Therapy, Benson's Relaxation Technique, and Lavender Aromatherapy interventions were frequently preferred among the interventions examined for their effectiveness.

**Discussion and Conclusion:** Depression and anxiety are commonly seen in individuals undergoing dialysis treatment, and it is possible to manage them with various interventions. The differences in the scales used in research and inconsistencies in the effectiveness of some interventions indicate the need for standardization in measurement and evaluation for future research.

**Key Words:** Dialysis; Depression; Anxiety; Dialysis Nursing

**GENDER EQUALITY AND GENDER STUDIES IN THE BLACK SEA REGION AND BEYOND: CASE STUDY ON THE IMPORTANCE OF PROVIDING A RICH CULTURAL REPRESENTATION AND THE PLACE OF WOMEN IN THE TRANSFER OF KNOWLEDGE**

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**Abstract**

To begin with, the United Nations Development Program has placed a particular emphasis in the last years on the countries' gender equality performance, in particular starting from the idea that education represents the crucial factor in both female and male human development. In continuation, according to the most recent reports published by the United Nations Educational, Scientific and Cultural Organization centering on gender equality and equity as well as studding the inter-sectorial approaches to environmental, social, and gender policy are regarded as one of the greatest accomplishments on which the success of the Sustainable Development Goals rely on. The current research addresses some of the most important policies on gender equality and women empowerment, especially since this trend has significantly evolved over time. Also, the study proposes several gender-oriented approaches offering key insights into the key role that women have played over time and are currently playing today. What is more, the paper provides significant data on the role and importance of gender equality as a means to generate and provide on-going support to advance social and economic development, offering interesting perspectives to the manner in which women lead to development. The case study focuses on the Black Sea Region and beyond, the purpose being to provide a rich cultural representation and the place of women in the transfer of knowledge. The outcomes show that there are numerous countries that have recorded impressive gender equality performance levels, hence becoming valuable examples due to be followed. In like manner, the findings show there is a strong nexus between gender equality and sustainable development, having in mind that women's leadership and participation are crucial in these days environment. All in all, it has become of great essence to integrate the knowledge and lived experiences of women in order to harness social protection for gender equality, transformation, and resilience for a better future for all.

**Keywords:** Black Sea Region; Labor Force Work; Employment Indicators; Sustainable Development Goals; Sustainable Management; Communication; Economics; Finance; Management; Accounting; Auditing; Governance Frameworks; United Nations Educational, Scientific and Cultural Organization; United Nations Development Program.

## STAIR ASCENT TIME AND WALKING SPEED UNDER SINGLE- AND DUAL-TASK CONDITIONS IN ADULTS WITH CHRONIC LOW BACK OR NECK PAIN

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### ABSTRACT

**Introduction and Purpose:** Walking speed is reduced in adults with chronic low back pain (CLBP) or neck pain (CNP) compared to asymptomatic controls. Although single- and dual-task walking speeds have been examined separately in these populations, comparative data on stair ascent time and dual-task cost remain limited. We aimed to compare stair ascent time and walking speed across CLBP, CNP, and asymptomatic groups under single- and dual-task conditions.

**Materials and Methods:** Thirty-one individuals with CLBP, 31 with CNP, and 31 asymptomatic adults (aged 18–60 years) participated. The Timed 10-Step Stair Ascent Test and 10-Meter Walk Test were performed under four conditions: preferred speed, fast speed, preferred speed while turning the head through their full range at 40 beats per minute, and preferred speed while counting backward by threes from 100. Dual-task cost was calculated for the conditions in which head turning or backward counting was performed concurrently. Stair ascent time, walking speed, and dual-task cost were compared between groups using ANCOVA adjusted for demographic variables.

**Results:** Stair ascent times were higher in the CLBP and CNP groups compared to controls in the head-turning and backward-counting conditions ( $p < 0.05$ ). Walking speed was higher in controls than in the CLBP and CNP groups in all conditions ( $p < 0.05$ ). Furthermore, all dual-task cost values were greater in the CLBP and CNP groups compared to controls ( $p < 0.05$ ). No significant differences were found between the CLBP and CNP groups ( $p > 0.05$ ).

**Discussion and Conclusion:** Adults with CLBP or CNP showed slower mobility performance and greater dual-task cost than asymptomatic controls.

**Key Words:** Low Back Pain; Neck Pain; Physical Performance; Dual-task; Functional Mobility

## HYDROPHOBIC PLA NANOFIBROUS MEMBRANE FOR WATER DESALINATION VIA MEMBRANE DISTILLATION

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### ABSTRACT

**Introduction and Purpose:** Global water scarcity, driven by rapid urbanization, population growth, and climate change, has prompted the need for sustainable freshwater alternatives. While reverse osmosis (RO) is widely used in seawater desalination, it is energy-intensive and poses operational challenges, such as high-pressure requirements and brine disposal. Membrane distillation (MD) has emerged as a promising alternative due to its ability to operate under low pressure, use renewable energy, and treat hypersaline solutions. This study aimed to develop and optimize bio-based polylactic acid (PLA) nanofiber membranes for application in MD systems.

**Materials and Methods:** PLA nanofiber membranes were fabricated and characterized for their structural and surface properties. Scanning electron microscopy (SEM) was used to analyze membrane morphology. Key performance parameters including contact angle, membrane thickness, liquid entry pressure (LEP), Young's modulus, surface roughness, and structural integrity were evaluated. The membranes were then tested in a direct contact membrane distillation (DCMD) setup to assess desalination performance.

**Results:** The PLA nanofiber membranes demonstrated high porosity (89%), excellent hydrophobicity (contact angle of 126°), a LEP of 0.1 bar, and strong mechanical stability. During DCMD testing, the membranes maintained a stable permeate flux and achieved a high salt rejection rate of 99%.

**Discussion and Conclusion:** The results confirm that bio-based PLA nanofiber membranes exhibit favorable structural and performance characteristics for membrane distillation applications. Their sustainable origin, coupled with excellent permeability and selectivity, makes them a promising candidate for energy-efficient and environmentally friendly desalination technologies.

**Key Words:** Membrane Distillation; PLA Nanofibers; Desalination; Hydrophobic Membranes; Sustainable Water Treatment

**ASSESSMENT OF BEEKEEPERS' PARTICIPATION IN FOREST  
CONSERVATION ACTIVITIES AROUND GISHWATI-MUKURA NATIONAL  
PARK, RWANDA**

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**ABSTRACT**

**Introduction and Purpose:** Beekeepers have a vested interest in protecting forests, as their livelihoods depend on the availability of nectar-producing plants. This paper aimed to assess beekeepers' participation in forest conservation activities around Gishwati-Mukura National Park (GMNP) area in Rwanda.

**Materials and Methods:** A field survey was carried out between 2023 and 2024 using an open-ended questionnaire through a Kobo toolbox. A total of 147 beekeepers and 10 key informants were interviewed in 8 villages adjacent to the park. All statistical analyses were conducted using R statistical software (version 4.3.3; R Core Team, 2024) Descriptive statistics were computed using functions from the dplyr package.

**Results:** The results demonstrated a highly significant difference in conservation participation ( $\chi^2 = 37.51$ ,  $df = 1$ ,  $p = 9.109e-10$ ) with majority of respondents (75.3%) reporting active involvement in forest conservation activities, Chi-square analysis revealed highly significant differences in activities ( $\chi^2 = 108.95$ ,  $p = 3.39e-21$ ), majority (99.3%) of beekeepers affirmed that the park is important to them, while only a negligible proportion (0.7%) indicated it was not important with Chi-square showing significance ( $\chi^2 = 143.03$ ,  $df = 1$ ,  $p < 2.2e-16$ ). The perceptions regarding community participation in conservation activities around the Park revealed highly significant differences in assessment distribution ( $\chi^2 = 128.56$ ,  $df = 3$ ,  $p < 2.2e-16$ ) totaling 83.6% with positive assessment. **Discussion and Conclusion:** findings revealed a positive attitude towards the park through participation in different forest activities around the GMNP.

**Key Words:** Beekeepers; Forest conservation; Participation; Gishwati-Mukura; Rwanda

## AN OVERVIEW AND EMERGING TREATMENT STRATEGIES ABOUT ACANTHAMOEBA KERATITIS

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### ABSTRACT

Acanthamoeba keratitis (AK) is a rare but potentially sight-threatening corneal infection caused by free-living protozoa of the *Acanthamoeba* genus. Most commonly associated with contact lens use, the infection can be challenging to diagnose and treat due to its resistance to conventional therapy and the ability of the organism to form cysts. Acanthamoeba keratitis is an ocular infection characterized by severe pain, photophobia, and visual impairment. It primarily affects contact lens wearers but can also occur following corneal trauma or exposure to contaminated water. The organism exists in two forms: active trophozoites and dormant cysts, the latter of which are highly resistant to treatment. Patients typically present with disproportionate ocular pain, redness, tearing, and blurred vision. A ring-shaped stromal infiltrate and perineural infiltrates are characteristic findings in advanced stages. Diagnosis is confirmed through in vivo confocal microscopy, culture, PCR, or staining methods such as calcofluor white. Standard therapy involves a combination of biguanides (e.g., polyhexamethylene biguanide [PHMB], chlorhexidine) and diamidines (e.g., propamidine, hexamidine). These agents are used frequently (e.g., hourly) for the first few days to weeks. However, treatment is often prolonged—lasting several months—and recurrence is common due to cyst survival. Novel and emerging treatment techniques include photodynamic therapy (PDT), nanoparticle drug delivery, corneal cross-linking (CXL), immunomodulatory therapy, and antisense oligonucleotides and CRISPR-based approaches (experimental). PDT uses a photosensitizing agent (e.g., rose bengal or riboflavin) activated by specific wavelengths of light to destroy *Acanthamoeba* cells. It has shown promise in early studies as an adjunctive or alternative therapy with minimal tissue toxicity. Another novel treatment method involves drug-loaded nanoparticles (e.g., silver, chitosan, or liposomes) that enhance corneal penetration and provide sustained release of anti-amoebic drugs. Additionally, nanocarriers may increase efficacy while reducing dosing frequency and toxicity. Finally, gene-targeted therapies aim to disrupt essential genes in *Acanthamoeba*. These remain experimental but could offer selective and potent anti-amoebic action in the future. Acanthamoeba keratitis remains a difficult-to-treat condition with potentially serious consequences. While conventional therapies are effective in many cases, new techniques such as photodynamic therapy, nanomedicine, and corneal cross-linking offer promising advances. Ongoing research into targeted and less toxic therapies is crucial for improving patient outcomes and reducing treatment duration.

**KEYWORDS:** Acanthamoeba keratitis, Treatment strategies, Keratitis, Novel methods.

## ANTI-INFLAMMATION DRUGS

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### Abstract

Anti-inflammation drugs, also known as anti-inflammatory agents, play a crucial role in the management and treatment of various inflammatory conditions, ranging from acute injuries to chronic autoimmune disorders. Inflammation is a biological response of the immune system to harmful stimuli such as pathogens, damaged cells, or irritants, and while it is an essential protective mechanism, excessive or prolonged inflammation can lead to tissue damage and disease progression. Anti-inflammatory drugs are categorized mainly into two groups: non-steroidal anti-inflammatory drugs (NSAIDs) and corticosteroids, with emerging classes including disease-modifying antirheumatic drugs (DMARDs) and biologic agents. These drugs function by modulating the inflammatory cascade, primarily through the inhibition of pro-inflammatory mediators like prostaglandins, cytokines, and leukotrienes. NSAIDs, including common agents such as ibuprofen, naproxen, and aspirin, exert their effects by inhibiting cyclooxygenase (COX) enzymes, particularly COX-1 and COX-2, thereby reducing prostaglandin synthesis responsible for pain, fever, and swelling. Selective COX-2 inhibitors like celecoxib have been developed to minimize gastrointestinal side effects commonly associated with non-selective NSAIDs. Corticosteroids, such as prednisone and dexamethasone, work by suppressing multiple inflammatory genes and cytokines, offering potent anti-inflammatory effects but with significant potential for systemic side effects when used long-term, including immunosuppression, osteoporosis, and hyperglycemia. In chronic inflammatory diseases like rheumatoid arthritis, inflammatory bowel disease, and psoriasis, DMARDs such as methotrexate and sulfasalazine, and biologics like tumor necrosis factor (TNF) inhibitors, interleukin blockers, and Janus kinase (JAK) inhibitors, have revolutionized treatment. These drugs target specific immune pathways, providing better disease control and reduced joint damage or organ involvement, although they often require monitoring for infection risk and other adverse effects. The pharmacokinetics and pharmacodynamics of anti-inflammatory drugs vary widely depending on their class, route of administration, and individual patient factors such as age, liver and kidney function, and comorbid conditions. Recent advancements in nanomedicine and targeted drug delivery systems have enhanced the efficacy and safety profiles of anti-inflammatory agents, allowing for localized drug release, reduced systemic exposure, and minimized side effects. Additionally, natural anti-inflammatory compounds like curcumin, resveratrol, and omega-3 fatty acids are gaining attention for their potential role in integrative therapy, especially in patients seeking alternative to conventional pharmacotherapy. Despite the clinical benefits, the use of anti-inflammatory drugs must be balanced against their potential for adverse reactions, including gastrointestinal bleeding, cardiovascular events, renal impairment, and immunosuppression. Therefore, proper diagnosis, individualized therapy, and patient education are essential in optimizing treatment outcomes. Ongoing research continues to explore novel anti-inflammatory targets and safer therapeutic options.

**Keywords:** Anti-inflammatory drugs, NSAIDs, corticosteroids, inflammation, COX inhibitors, cytokines, DMARDs, biologics, rheumatoid arthritis, targeted therapy, curcumin, pharmacokinetics, immunosuppression, nanomedicine, chronic inflammation.

**ANTIMICROBIAL ACTIVITY OF NEEM EXTRACT**

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**Abstract:**

Neem (*Azadirachta indica*), a tree native to the Indian subcontinent, has long been recognized for its diverse medicinal properties, particularly its potent antimicrobial activity. This study explores the antimicrobial efficacy of neem extracts derived from various parts of the plant, including leaves, bark, and seeds, against a range of pathogenic microorganisms. Phytochemical analysis reveals that neem contains bioactive compounds such as nimbin, azadirachtin, quercetin, and nimbidin, which exhibit strong antibacterial, antifungal, and antiviral properties. These compounds disrupt microbial cell walls, inhibit enzyme activity, and interfere with microbial DNA replication, leading to the suppression of microbial growth. Experimental results demonstrate that neem extracts exhibit significant inhibitory effects on both Gram-positive and Gram-negative bacteria, including *Escherichia coli*, *Staphylococcus aureus*, *Pseudomonas aeruginosa*, and *Bacillus subtilis*. Antifungal activity was also observed against species such as *Candida albicans* and *Aspergillus niger*. The antimicrobial action of neem is dose-dependent and varies based on the solvent used for extraction, with ethanol and methanol extracts showing higher potency compared to aqueous extracts. Neem's broad-spectrum antimicrobial activity suggests its potential as an alternative to synthetic antimicrobial agents, especially in the face of rising antibiotic resistance. Furthermore, neem extracts are biodegradable, non-toxic, and environmentally friendly, making them ideal candidates for integration into herbal formulations, antimicrobial coatings, and personal care products. This study reinforces the traditional knowledge surrounding neem's medicinal uses and highlights its relevance in modern antimicrobial strategies. Continued research and clinical trials are necessary to optimize extraction methods and validate neem's efficacy in therapeutic applications.

**Keywords:**

Neem extract, *Azadirachta indica*, antimicrobial activity, antibacterial, antifungal, phytochemicals, bioactive compounds, herbal medicine, antibiotic resistance, natural antimicrobials.

## CHINA-RUSSIA COOPERATION IN AFGHANISTAN FOLLOWING THE UNITED STATES' WITHDRAWAL

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### ABSTRACT

**Introduction and Purpose:** The United States' (U.S.) withdrawal from Afghanistan has resulted in a significant security vacuum in the country. In this context, China and Russia, as the two main actors in the region, are deeply concerned about the situation in post-U.S. Afghanistan. We hypothesize that the basis for China-Russia cooperation at the regional level stems from security concerns that have emerged following the U.S. exit. On a global scale, both nations seek to denounce U.S. actions and reduce Western influence. Consequently, this study aims to examine the cooperation between China and Russia in relation to their security concerns arising from the U.S. withdrawal from Afghanistan.

**Materials and Methods:** This research employs a descriptive method grounded in contextual analysis. This analysis encompasses significant bilateral meetings, conferences, and formal declarations from both nations. Major activities conducted by China and Russia, including military exercises near Afghanistan, are thoroughly examined. The study covers the period from 2021 to November 2024, incorporating relevant elements of previous cooperation and addressing significant developments to date.

**Results:** China and Russia have primarily facilitated their cooperation in the security domain regarding post-U.S. Afghanistan. The potential threat of extremism to areas such as Xinjiang in China and Central Asia has prompted both countries to align their policies. Their main policy objective is to prevent Afghanistan from becoming a safe haven for extremist groups and to support the establishment of a sustainable and effective government capable of countering such threats.

**Key Words:** China and Russia; Security Concerns; Extremism; Cooperation

## APPLICATIONS OF DRONES IN MODERN TELECOMMUNICATION NETWORKS

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### ABSTRACT

**Objectives:** This study investigates the integration of drones, also known as Unmanned Aerial Vehicles (UAVs), into modern telecommunication networks. The primary goal is to assess the potential of drones to enhance network coverage, facilitate rapid disaster recovery, and extend connectivity to remote or underserved regions where traditional infrastructure is lacking or has been compromised. The research also aims to identify key technical and operational challenges that must be addressed for successful implementation.

**Methods:** A comprehensive approach is adopted, combining an extensive literature review with the analysis of recent real-world case studies and network simulations. The study evaluates various deployment scenarios, focusing on technical issues such as limited battery life, interference management, payload constraints, and backhaul connectivity. Additionally, the effectiveness of proposed solutions-such as energy-efficient flight algorithms, advanced antenna and beamforming technologies, autonomous operation through artificial intelligence, and hybrid integration with terrestrial and satellite networks-is examined.

**Results:** The findings demonstrate that drones can significantly improve the flexibility, scalability, and resilience of telecommunication networks. They are particularly effective in providing temporary communication infrastructure during emergencies, bridging coverage gaps in rural or hard-to-reach areas, and supporting the deployment of advanced wireless networks like 5G. The study also highlights the economic and environmental benefits of drone-assisted networks, including cost-effectiveness and reduced carbon footprint compared to conventional approaches.

**Conclusions:** Despite persistent challenges related to battery limitations, regulatory compliance, and security concerns, ongoing technological advancements and multidisciplinary research are accelerating the adoption of drones in telecommunications. Drones are poised to become a fundamental element of next-generation telecommunication infrastructure, enabling enhanced connectivity, rapid response capabilities, and improved service delivery on a global scale.

**Keywords:** Drones, UAVs, Telecom Networks, Coverage, Disaster Recovery, 5G, AI, Battery Life, Security, Hybrid Networks.

## WHAT DO FREQUENT ORONYMS IN THE BALKANS REVEAL?

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### ABSTRACT

**Introduction and Purpose:** The hilly Balkans consist of dozens of mountain massifs and ranges that differ in their geological structure, age and morphology. The purpose of the paper is to draw attention to recurring oronyms. Their frequency reveals what are the most common motives for which they are so named.

**Materials and Methods:** The research results were obtained through the analysis of scientific papers, various geographical maps, geographic databases (such as Geonames and OpenStreetMap) and in communication with competent people.

**Results:** The most common oronyms are Ravna planina (2 mountains in Serbia and 2 in Bosnia and Herzegovina), Velika planina (one each in Serbia, Bosnia and Herzegovina and Montenegro) and Crni vrh. Oronym Crni vrh can be found all over the Balkans. There are 15 of them in Serbia. There are 15 of them in Serbia, but in the entire Balkans, that number reaches 50.

**Discussion and Conclusion:** A “Ravna planina” (Flat Mountain) should not be too hilly. It should have gentle slopes. It is used for mountains with plateaus. “Velika planina” (Big Mountain) often carries the symbolism of large and spacious mountain areas that are extremely beautiful, but also relatively inaccessible. However, all three mountains are not big or so famous and well-known. There are many “Crnih vrhova” (black peaks). In addition to peaks and mountains, villages and localities bear this name. Therefore, among the most frequently mentioned oronyms are those that describe the appearance of the terrain.

**Key Words:** Oronyms, Balkans, mountains, peaks

## EXPERIMENTAL INVESTIGATION ON THE EFFECT OF DIFFERENT TYPES OF PLASTERED AND UNPLASTERED INFILL WALLS ON THE LATERAL LOAD-BEARING CAPACITY OF REINFORCED CONCRETE FRAMES

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### ABSTRACT

A significant part of Turkey takes place within a high-risk seismic zone. Although walls in reinforced concrete frame buildings are typically considered non-structural elements, it is known that infill walls can contribute to the lateral resistance of these structures up to a certain earthquake magnitude. Based on the level of damage in the structural elements and/or the cost of retrofitting, demolition or strengthening is generally recommended. In retrofitting strategies, the potential contribution of newly reconstructed infill walls and plaster is usually disregarded. While this approach might be appropriate as a conservative measure in buildings constructed with low-strength bricks, mortar, and plaster, it is neither scientifically accurate nor economically justified for buildings located in low seismic risk areas and built with high-quality infill walls. In this study, the effects of vertical load, infill walls, and plaster on the lateral load-bearing capacity of reinforced concrete frames were experimentally investigated.

Considering a typical story height of 3 meters, four single-span, half-scale reinforced concrete frames were prepared: three were undamaged, and one had previously sustained damage under vertical and lateral loads. The damaged frame was rebuilt with horizontally perforated brick infill walls and cement-based plaster without applying any structural retrofitting. The influence of vertical load, infill wall, and plaster on the lateral load-bearing capacity of the reinforced concrete frames was evaluated under applied lateral loads.

Evaluation of the experimental data revealed that vertical load, infill walls, and plaster significantly enhance the lateral load capacity of the frames. The study concluded that vertical load contributed approximately 28%, infill walls approximately 44%, and plaster approximately 82% to the total lateral load-bearing capacity of the frames. These findings demonstrate that non-structural elements such as plastered infill walls can play a crucial structural role in the assessment of lateral load performance.

**Keywords:** Reinforced Concrete Frame, Infill Wall, Cement-Based Plaster, Horizontally Perforated Brick, Lateral Seismic Load

## THE ROLE OF STATE POLICIES IN HELPING TO ACHIEVE THE PROCESS OF INCLUSIVE EDUCATION FOR CHILDREN WITH DISABILITIES

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### ABSTRACT

**Introduction and Purpose:** As technologies and the products offered increase, it is becoming more and more difficult. Inclusive education means “everyone in school”, without any distinction and equal, conceiving children with disabilities as an individuality, with qualities and potential, regardless of the disorders they have, creating opportunities for the child to be rehabilitated in all areas of development.

**Materials and Methods:** Firstly, this study is based on and draws conclusions from questionnaires, developed with 70 parents and 90 teachers from the city of Elbasan, which aim to obtain data on the reality of the inclusion of students with disabilities in the selected sample 9-year schools. Secondly, this study is based on focus groups in relation to the findings of the first phase, with the main aim of analyzing the current situation and raising awareness among key institutions, in order to implement in practice the combination of social policies with educational policies, in support of inclusive education.

**Results:** Teachers who responded that inclusive education was difficult in practice. Teachers who stated that they needed more training for children with disabilities. Parents and teachers who stated that socio-economic difficulties are an obstacle to the lack of education and treatment of children with disabilities. From the focus group, it resulted that students with disabilities need more help and economic support from the state.

**Discussion and Conclusion:** Creation of a sub-legal package with which certain social and educational policies would influence the support and real implementation in practice of inclusive education. Schools need to develop their curricula to include art and sports classes in the function of inclusive education. Creation of a specialized training program for inclusive education.

**Keywords:** Educational policy, social policy, inclusion, students with disabilities, teachers, parents

## STUDY OF THE PHYSICAL PROPERTIES OF QUANTUM DOTS BASED ON NANOTUBE COMPOSITE

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### ABSTRACT

**Introduction and Purpose** This article is devoted to the application of quantum dots. The relationship between the energy spectrum and the size of the quantum dot creates great potential for their practical application. Another practically important property of the dots is their ability to exist in the form of solutions (sols), which allows producing coatings from thin layers of quantum dots by inexpensive methods. For example, the spin coating of quantum dots on any surface changes. Here, the concept of a quantum dot and the uniqueness of its optical properties are investigated, and the application of quantum dots in the creation of electronic devices and medical objects is shown. Also, a theoretical analysis of the vibrational and electronic experimental spectra of the +nanotube nanocomposite was carried out. Based on the analysis of vibrational spectra, it is shown that aspartic and glutamic acids can form covalent, the fluorescence enhancement of BSA+SWCNT is the result of the formation of quantum dots.

**KEYWORDS;** quantum dots, practical, Vibration, Energy spectrum, optic

**DFT STUDIES INCLUDING FMO, MULLIKEN CHARGES, NLO, MEP, ESP, HOMO-LUMO, SPECTROSCOPIC, THERMODYNAMIC AND ELECTRONIC OF 1-(1-METHYLPIPERAZIN-4-YL-METHYL)-3-METHYL-4-(3-METHOXY-4-ISOBUTYRYLOXY-BENZYLIDENEAMINO)-4,5-DIHYDRO-1H-1,2,4-TRIAZOL-5-ONE MANNICH BASE**

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**ABSTRACT**

All quantum chemical computations of the 1-(1-methylpiperazin-4-yl-methyl)-3-methyl-4-(3-methoxy-4-isobutyryloxy-benzylideneamino)-4,5-dihydro-1H-1,2,4-triazol-5-one (MPMI) molecule, recorded in the literature, have been analyzed theoretically using the 6-311G(d,p) basis set with the B3LYP function of the density functional theory (DFT) approach. The three-dimensional structure of the molecule is shown using GaussView 5.0. Molecular optimization was performed to find the molecular structure of the target Mannich base that reaches the minimum energy. Some other theoretical parameters were calculated based on the optimized structure. The Gaussian G09 software package was used to determine the target molecule's Proton Nuclear Magnetic Resonance and Carbon-13 Nuclear Magnetic Resonance ( $^1\text{H}$  /  $^{13}\text{C}$ -NMR) isotropic shift values using the gauge independent atomic orbital (GIAO) approach. Regression analysis was carried out using calculated and experimental data in accordance with the  $\delta_{\text{exp}}=a+b \cdot \delta_{\text{calc}}$  equation, and correlation graphs were created. The literature was consulted to get experimental spectroscopic values. The IR vibration frequency was estimated using the Veda 4 software, and the results were multiplied by the scala factor. Theoretical infrared graphs were produced by comparing the computed theoretical IR data with experimental data. Additional, DFT calculations such as the molecular electrostatic potential (MEP), frontier molecular orbitals (FMO), mulliken charges, Non-Linear Optical NLO (the first hyperpolarizability  $\beta$  and the polarizability  $\alpha$ ), Electron spin potential (ESP), HOMO-LUMO,  $\Delta E$  energy gap, thermodynamic (enthalpy  $H^0$ , heat capacity  $CV^0$ , and entropy  $S^0$ ) and electronic parameters (chemical potential ( $\mu$ ), electrophilicity index ( $\omega$ ), ionization potential (I), electronegativity ( $\chi$ ), electron affinity (A), global hardness ( $\eta$ ), nucleophilic index (IP) and global softness (S)) were calculated.

**Key Words:** GIAO, FMO, Mannich base, HOMO-LUMO, NLO.

**DFT COMPUTATIONAL STUDIES OF 1-ACETYL-3-METHYL-4-(3-METHOXY-4-ACETOXY BENZYLIDENE AMINO)-4,5-DIHYDRO-1H-1,2,4-TRIAZOL-5-ONE**

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**ABSTRACT**

A new Schiff base, 1-Acetyl-3-Methyl-4-(3-Methoxy-4-Acetoxy Benzylidene Amino)-4,5-Dihydro-1H-1,2,4-Triazol-5-One (AMMAB), was obtained from condensation reaction a acetylation of acetic anhydride with 3-Metil-4-(3-metoksi-4-hidroksibenzilidenamino)-4,5-dihidro-1H-1,2,4- triazol-5-on. Some theoretical calculations of this newly synthesized molecule were made in accordance with the Density Functional Theory (DFT) procedure. For this purpose, the three-dimensional structure of the molecule was drawn with the Gauss view 5.0 program. After obtaining the most stable structure of the molecule, its optimized form, its geometric (bond angle, bond length), electronic (electron affinity (A), ionization potential (I), electronegativity ( $\chi$ ), global hardness ( $\eta$ ), electrophilicity index ( $\omega$ ), nucleophilic index (IP), chemical potential ( $\mu$ ), and global softness (S)) and thermodynamic (heat capacity  $CV^0$ , entropy  $S^0$  and enthalpy  $H^0$ ) properties were calculated using the B3LYP function and the 6-311G(d,p) basis set of the Gaussian 09 program. The highest occupied molecular orbital (HOMO) and the lowest unoccupied molecular orbital (LUMO) values, visual shapes and  $E_{LUMO}-E_{HOMO}$  energy gap ( $\Delta E_g$ ) were calculated. In addition, the molecular electrostatic potential map (MEP), Mulliken charges, dipole moment, total energy, Non-linear optical (NLO) analysis, structure activity relationship (SAR) of the newly synthesized molecule were also investigated theoretically. Some theoretically calculated parameters were compared with experimental data. One of the aims of this study is to investigate whether theoretical data support experimental data.

**Key Words:** 1,2,4-Triazol-5-one, DFT, Gaussian 09, NLO, MEP.

## IMPRECATIONS (CURSES) IN THE POEM “BEYLER” BY ÂŞIK ŞENLİK

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### ABSTRACT

One of the important elements that contribute to the vocabulary of a language, such as proverbs, idioms, slang words, and reduplication, is acclamations (prayers) and imprecations (curses). Prayers and curses, which hold an important place among the elements of vocabulary that constitute the pillars of culture of a nation, have a distinct significance and importance as language elements that vary according to the geography, region, and locality in which they live. Moreover, our minstrels—one of the values of Turkish folk culture—have made important contributions to the language they have been raised and to the vocabulary of that language by reflecting the dialectal features of the societies in which they have been raised on their sayings. As the abundance of the vocabulary of a language is manifested in the sayings of minstrels, the elements of vocabulary that minstrels use skilfully in their sayings also contribute greatly and significantly to the language and the vocabulary of that language. In particular, the curses (imprecations), reflecting intimacy and sincerity in the expression of feelings and thoughts and actually having a great depth of meaning, appear to be one of the elements of vocabulary that require special attention. Besides the contributions of minstrels to the vocabulary, the wealth, subtlety, and depth established by the vocabulary in the sayings of minstrels constitute two inseparable parts that almost complement each other. Therefore, this study aims to analyse the curses (imprecations) in the poem “Beyler” by Âşık Şenlik, one of our important minstrels who shed light on the feelings and thoughts of the society in which he was raised and skilfully employed the vocabulary of the language to which he belonged.

**Key Words:** Vocabulary, imprecations (curses), Âşık Şenlik, Beyler poem.

## EFFECTS OF NITROGEN FERTILIZATION ON YIELD AND QUALITY OF WHEAT UNDER DRY CONDITIONS

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### ABSTRACT

This study is a review article.

**Introduction and Purpose:** This study investigates the effects of nitrogen fertilization on the yield and quality of wheat under dry farming conditions. Although wheat cultivation areas in Turkey are quite extensive, the yield remains below the global average. One of the reasons for this is the mistakes made in nitrogen fertilization. Wheat is highly sensitive to nitrogen, and properly applied nitrogen fertilization can increase both yield and quality.

Plants primarily absorb nitrogen in the forms of ammonium and nitrate. The main forms of nitrogen fertilizers include ammonium sulfate, ammonium nitrate, calcium ammonium nitrate (CAN), and urea.

In addition to the application rate, the timing of nitrogen application is also crucial. Research shows that splitting the nitrogen application across sowing, tillering, and stem elongation stages is more effective than a single application. Such a practice improves quality parameters like the number of spikes, number of grains, and protein content. According to studies, the optimal nitrogen dose for wheat generally ranges between 12–16 kg/da.

Moreover, excessive use of nitrogen fertilizers can lead to negative outcomes such as lodging, increased disease risk, and higher costs, while insufficient use results in low yield and quality. The effectiveness of nitrogen depends on factors such as timing of application, soil moisture, rainfall conditions, and the plant's growth stage. Late-stage applications have been shown to positively affect protein content and other quality criteria.

**Conclusion:** In wheat production, determining the appropriate form, dose, and timing of nitrogen fertilizers is of great importance. It is recommended that farmers conduct soil analysis and base their fertilization practices on existing nitrogen levels and environmental conditions. This approach will help prevent economic losses while enhancing yield and quality. This study highlights the importance of nitrogen fertilization in wheat cultivation and outlines key considerations for sustainable agriculture.

**Keywords:** Wheat, Nitrogen Fertilization, Yield, Quality

## FEATURES OF ELECTROCARDIOGRAPHY REGISTRATION IN THE PROCESS OF REHABILITATION OF PATIENTS WITH INJURIES OF THE LIMBS

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**Introduction and Purpose:** The number of patients with limb amputations increases annually worldwide. Since the beginning of the large-scale war in Ukraine, the number of amputees has increased by 50 thousand per year, and their number continues to grow. The severity of the injury and the need for complex surgical interventions (often repeated) lead to a deterioration in the functional state of the cardiovascular system. **Materials and Methods:** The ECG of military personnel aged 25 to 38 years (mean age  $32.1 \pm 4.8$  years) with various types of limb amputations at the stage of inpatient rehabilitation in the post-acute rehabilitation period, which they underwent in order to prepare for further prosthetics, was analyzed. 5 clinical cases were considered: two patients with amputations of one upper limb at the level of the upper 1/3 of the shoulder and three patients with lower limb amputations, of which one with an amputation at the level of the middle 1/3 of the lower leg, one with an amputation above the knee, and one with an amputation of both lower limbs above the middle of the thigh. **Discussion and Conclusion:** Electrocardiography is one of the primary non-invasive methods; however, performing a standard ECG can be difficult in patients with limb amputations since the classic 12-lead ECG involves placing electrodes on the wrists and ankles. The main problems are the lack of standard points for applying electrodes, violation of the symmetry of currents and electrical axes, changes in tissue resistance, and the possibility of artifacts appearing. To overcome these difficulties, ECG recording in patients with amputated limbs requires an individual approach, careful selection of electrode placement sites, and careful interpretation of the data obtained.

**Key Words:** Electrocardiography, Injuries of the limbs, Amputations

## EVALUATION OF PLANNING PROCESSES WITHIN THE SCOPE OF THE ZONING LAW AND THE LAND AND PLOT REGULATION

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### ABSTRACT

The proper, effective, and sustainable management of planning processes is of vital importance in the construction of livable cities. With increasing population, rural-to-urban migration, and economic development, the orderly growth of cities can only be achieved through comprehensive and coherent planning. In this context, Law No. 3194 on Zoning and the Land and Land Readjustment (LLR) Regulation play a critical role as the main regulatory tools governing urbanization and land use in Turkey. These legal frameworks aim to guide spatial planning practices in line with the public interest by defining the legal structure of planning processes.

However, certain deficiencies in the legislation fail to fully meet current needs, and inconsistencies and ambiguities encountered during implementation hinder the effective execution of planning efforts. In particular, legal, technical, and administrative issues experienced during land readjustment procedures and zoning implementations prevent planning objectives from being fully realized on the ground.

This study aims to comprehensively examine the impacts of Law No. 3194 and the LLR Regulation on planning processes through the lens of implemented zoning practices. Research methods such as literature review, legislative analysis, and case study evaluation were employed to assess the strengths and weaknesses of the current regulations. Furthermore, the practical implications of legislative amendments were analyzed, and concrete recommendations were developed to address the identified issues. In this regard, the study outlines detailed proposals for restructuring the legal framework in a more effective, coherent, and sustainable manner.

**Keywords:** Zoning Law, Land and Plot Regulation (LPR), Planning process, Legislative changes

## AN INTEGRATED MEASUREMENT OF HIGH-QUALITY ECONOMIC DEVELOPMENT IN CHINA

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### **Abstract**

China is currently undergoing a phase of high-quality economic development (HQED), characterized by the integration of five core development concepts: coordination, innovation, sharing, openness, and green development. Although this phase has been underway for several years, a clear and consistent measurement of HQED remains underdeveloped. Most existing methods are still in their early stages and do not fully capture the multidimensional nature of HQED. To address this gap, this study integrates both the causal factors and outcome indicators of HQED through a comprehensive review of the existing literature. The findings identify four primary causal factors: coordination, innovation, sharing, and openness, as well as three key outcome indicators: sustainable development, green development, and economic growth. By distinguishing between these two dimensions, the study contributes to greater conceptual clarity and enhances the analytical robustness of HQED frameworks for the future. This distinction also provides a more effective means of assessing development quality across provinces in China by clearly separating the drivers of HQED from the outcomes that reflect its realization.

**Keywords:** high-quality economic development, HQED, causal factors, outcome indicators, China, sustainable development.

## **AN EXAMINATION of PRE-SERVICE PHYSICAL EDUCATION and SPORTS TEACHERS' ATTITUDES TOWARD TECHNOLOGY**

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### **ABSTRACT**

The use of technology-assisted tools in sports education enhances the effectiveness and efficiency of instructional processes. Through technological applications, students' motivation in physical education classes increases, and interdisciplinary learning is supported. Moreover, the quality of lessons delivered with technology-supported content is also improved. In this context, it can be stated that the use of technology in physical education and sports classes is of significant importance. The aim of this study is to examine the attitudes of prospective physical education and sports teachers towards technology. The population of this study consists of 258 students enrolled in the Department of Physical Education and Sports Teaching at Fırat University Faculty of Sport Sciences during the 2024–2025 academic year. The sample size was determined as 132 participants based on Sekaran's sampling table; ultimately, data were collected from 152 students. As the data collection instrument, the "Attitude Towards Technology Scale" developed by Akbaba (2002) was used. Data were analyzed using the SPSS 25 statistical software. In order to determine whether the data were normally distributed, skewness and kurtosis values were examined, and it was found that the data did not exhibit a normal distribution. Accordingly, the Mann-Whitney U test was employed to compare the attitudes towards technology across binary variables, while the Kruskal-Wallis test was used for variables with more than two categories. In all statistical analyses, the level of significance was set at  $p < .05$ . The study revealed that the mean attitude score towards technology among prospective physical education and sports teachers at Fırat University was  $\bar{x} = 122.34$ , indicating a moderate level of attitude towards technology among the participants. As a result, it was observed that the participants' gender and engagement in regular physical activity had an impact on their attitudes towards technology

**Key Words:** Physical Education and Sports, Teacher, Technology, Attitude

## ELEVATOR MANAGEMENT SYSTEM SUPPORTED BY SIMULATION AND IMAGE PROCESSING FOR STOP OPTIMIZATION ACCORDING TO PASSENGER DENSITY

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### ABSTRACT

**Introduction and Purpose:** In buildings with high usage such as hospitals and workplaces, unnecessary elevator stops at every floor—even when there are no passengers intending to exit—lead to increased waiting times and reduced energy efficiency. This study aims to develop a recommendation system that optimizes elevator stops based on passenger density at each floor, with the goal of minimizing waiting times and energy consumption. By doing so, the system seeks to enhance traffic performance and overall efficiency by enabling elevators to respond more effectively to real-time conditions.

**Materials and Methods:** An original simulation infrastructure was developed using the Python programming language, based on time data collected from a real five-story apartment building. A camera module was integrated into the system to detect the number of waiting passengers using image processing techniques. These data were designed to form the basis for future elevator control decisions. The system was intentionally designed with a modular structure to allow easy adaptation to different types of buildings. Furthermore, care was taken to ensure compatibility with physical elevator systems in terms of both hardware and software.

**Results:** The proposed system reduced unnecessary stops when the elevator was full, thereby decreasing waiting times and energy consumption. In five-story buildings, the system achieved an average of 25% time savings across all three passenger density scenarios. In seven-story buildings, this rate increased to 26–27%, while in ten-story buildings, approximately 30% improvement was observed. These results demonstrate that the proposed solution is effective and applicable not only in high-rise structures but also in low-rise buildings.

**Keywords:** Image processing, Elevator optimization, Simulation system

## CHALLENGES FACED BY WOMEN IN ENTERING THE LABOR MARKET: THE GLASS CEILING SYNDROME

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### ABSTRACT

Today, the ability of organizations to gain competitive advantage and adapt to environmental changes depends to a large extent on the recruitment of qualified human resources. However, the invisible career barriers that especially women face in business life create serious difficulties in human resource planning. The glass ceiling syndrome, which is one of these barriers, prevents women from accessing senior management positions despite their competence and potential. Especially women working in the public sector and in educational administration are hesitant to aim for managerial positions due to long working hours, role conflicts and the pressure of traditional gender roles. This situation leads to burnout, tendency to leave the job and decrease in organizational commitment, which in turn leads to loss of workforce and loss of productivity. In this context, it becomes clear that the obstacles women face in their careers cause great difficulties at both individual and organizational levels. Similar results have been obtained in studies conducted in service sectors such as health and finance. Gender-based prejudices and attitudes that women employees face in the workplace prevent them from accessing leadership positions. It has been found that glass ceiling perception and mobbing are positively correlated and that this situation negatively affects employee satisfaction, workforce motivation and organizational efficiency. Moreover, such barriers complicate efforts to increase organizational productivity and workforce diversity. Gender inequality and patriarchal management structures prevent women from reaching senior positions. In a patriarchal society, men play an active role while women are left in a passive position (Karadeniz, 2019). This leads to a significant loss of potential in the workforce. Psychosocial barriers such as emotion, family and role model syndromes that women face limit not only their individual career development but also organizational development. As a result, the glass ceiling syndrome is a structural problem that negatively affects not only individual career progression but also the capacity of organizations to utilize talented human resources. Therefore, organizations need to develop equality-based human resources policies, implement practices that support women's career development, and develop strategies to increase workforce diversity.

**Keywords:** Women, Glass Ceiling, Labor Force

## INCOME INEQUALITY AND ITS POLITICAL CONSEQUENCES

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### **Abstract**

This study examines the effects of income inequality on political participation and the fairness of representation within a theoretical framework, while systematically reviewing the relevant literature. Income inequality, beyond being a purely economic issue, plays a decisive role in shaping individuals' engagement with democratic processes. The central argument posits that disparities in income can restrict participation in political processes, thereby undermining the fairness of representation. In this context, empirical studies conducted in various countries are reviewed to explore the multifaceted relationship between income inequality, economic growth, political stability, and public policy.

Findings in the literature highlight the barriers faced by low-income groups in accessing decision-making mechanisms and underscore a tendency for political representation to reflect the interests of a narrower elite. The study by Akdede and Keyifli (2020) on political polarization is particularly noteworthy, as it illustrates how increasing income inequality contributes to deeper societal divisions. This issue emerges not only as a threat to representative justice but also as a structural risk to political stability. By outlining this complex network of relationships at the theoretical level, the study aims to provide a robust basis for future empirical research.

**Key Words:** Inequality, Income Distribution, Political Impact

## COOPERATIVES AND LOCAL DEVELOPMENT

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### **Abstract**

This study examines the growing significance of local initiatives and community-based economic organizations in a globalized world where centralized development approaches increasingly fall short. In particular, cooperatives that adopt participatory governance principles and are grounded in shared values emerge as vital instruments in achieving sustainable development at the local level. The study highlights that cooperatives not only generate economic outcomes but also strengthen social cohesion, foster community solidarity, and contribute to reducing income inequality (Birchall, 2011; Fairbairn, 1994).

Findings from cooperative experiences across different countries demonstrate their potential to drive economic and social transformation at the local scale (ICA, 2021). However, structural barriers—such as limited access to finance, inadequate legal frameworks, and insufficient institutional capacity—often hinder their effectiveness. This study also offers policy recommendations aimed at overcoming these obstacles (Zeuli & Radel, 2005). It emphasizes that economic incentives alone are not sufficient for cooperatives to succeed; cultural acceptance, educational support, and a robust institutional framework are equally essential. Therefore, raising public awareness and strengthening participatory mechanisms should be considered integral components of development efforts.

In conclusion, cooperatives represent not only an alternative economic organization model but also a vehicle for promoting a fairer, more inclusive, and resilient approach to development. Unlocking their full potential requires the restructuring of public policies and the implementation of supportive mechanisms that empower community-based initiatives.

**Keywords:** Cooperatives, Local Development, Alternative Economy

## THERMAL MODELING AND SIMULATION TECHNIQUES FOR PRISMATIC LITHIUM-ION BATTERIES

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### ABSTRACT

Lithium-ion batteries have become indispensable components in the modern energy landscape, offering high energy density, long cycle life, and relatively low self-discharge rates. These characteristics make them the preferred choice in a broad range of applications, including electric vehicles, renewable energy integration, aerospace systems, and portable electronics. However, the thermal behavior of these batteries under dynamic operating conditions presents a major challenge in terms of both performance and safety. Particularly during high-rate discharge, uneven temperature distribution within the battery cell can lead to localized overheating, increased degradation, and in extreme cases, thermal runaway.

The prismatic cell format, widely used in large-scale systems such as electric vehicles, requires careful thermal management due to its geometry and limited surface area for natural cooling. Understanding how temperature evolves within the cell during different load scenarios is essential for designing more efficient and safer battery packs. In this study, a detailed thermal analysis of a prismatic lithium-ion cell was performed using ANSYS Fluent with a modeling framework based on the Nonlinear Thermal Governing Kernel (NTGK) approach. The model considers only Joule heating as the internal heat source, assuming a constant internal resistance and neglecting entropic and reversible heat contributions to isolate the effects of current-induced thermal stress.

Boundary conditions were defined using natural convection and surface radiation to simulate realistic heat dissipation paths. Environmental parameters such as ambient temperature (298 K), convective heat transfer coefficient (10 W/m<sup>2</sup>K), and surface emissivity (0.85) were applied consistently across all simulations. Transient current profiles corresponding to 0.5C, 1C, and 2C discharge rates were implemented over a period of 1800 seconds. Each case provided insights into how temperature gradients form and evolve inside the cell volume over time.

The simulation outcomes revealed a clear trend: under moderate and high discharge rates, significant temperature build-up occurs near the geometric center of the cell, while the outer regions exhibit better heat dissipation. Notably, the 2C scenario produced sharp internal gradients that exceeded safe operating thresholds, highlighting the need for active cooling strategies in high-performance systems. The spatial distribution of temperature also showed asymmetries influenced by the cell's orientation and convective boundary conditions, suggesting that both geometry and placement have a direct impact on thermal behavior.

These findings offer valuable guidance for engineers and researchers focused on battery safety, reliability, and thermal control. The study underscores the importance of using detailed thermal modeling during the early design phase of battery systems, particularly when targeting applications involving high power density and prolonged cycling. Integrating such models into battery management systems (BMS) may also enhance predictive capabilities for thermal faults and contribute to the overall robustness of energy storage technologies.

**Keywords:** Lithium-ion battery, thermal modeling, NTGK approach, ANSYS Fluent, internal heat generation, temperature gradient, thermal management

## THERMAL BEHAVIOR AND SAFETY ASSESSMENT OF LITHIUM-ION BATTERY CELLS VIA CFD

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### ABSTRACT

Lithium-ion batteries (LIBs) have become fundamental components in modern energy storage systems, powering electric vehicles, portable electronics, and renewable energy solutions. Their high energy density, long cycle life, and operational efficiency make them ideal for these applications. However, despite these advantages, LIBs face significant thermal management challenges that impact both performance and safety. Elevated temperatures within the cell, especially under high discharge rates or abusive conditions, can initiate thermal runaway, which poses risks of fire, explosion, and irreversible battery damage.

This study conducts a comprehensive computational fluid dynamics (CFD) analysis to investigate the thermal behavior and safety of prismatic lithium-ion battery cells. Utilizing ANSYS Fluent 2023 R2, three-dimensional transient simulations were performed for multiple discharge scenarios, including constant current rates of 0.5C, 1C, and 2C, as well as a dynamic load profile modeled after the Worldwide harmonized Light vehicles Test Procedure (WLTP). The thermal model accounts for heat generation primarily through Joule heating, neglecting entropic heat generation due to its comparatively minor effect during steady-state discharge. The simulations incorporate boundary conditions representing natural convection and radiation heat loss to the ambient environment maintained at 25°C.

Simulation results reveal that higher discharge rates significantly increase the cell's peak temperature and intensify internal temperature gradients. For instance, the 2C discharge scenario results in maximum temperatures exceeding 60°C, a critical threshold where cell degradation and safety hazards become pronounced. The dynamic WLTP profile demonstrates the thermal response of the cell to real-world varying load conditions, exhibiting cyclical temperature fluctuations and highlighting the importance of dynamic thermal management in battery systems.

The study emphasizes the effectiveness of CFD modeling in predicting thermal behavior and identifying potential safety issues in lithium-ion batteries. The insights gained provide valuable guidance for the design of battery management systems (BMS) and the development of thermal protection strategies to mitigate risks. Future research will focus on integrating electrochemical reactions with thermal models to enhance the prediction of thermal runaway phenomena and the propagation of heat within battery packs.

**Keywords:** Lithium-ion batteries, thermal modeling, CFD, battery safety, Joule heating, WLTP cycle.

## **BIO CONJUGATED SILICA NANOPARTICLES: DEVELOPMENT AND APPLICATION**

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### **ABSTRACT:**

Understanding biology and medicine at the molecular level is now necessary due to advanced bioanalysis, which includes precise quantification. This new problem may be solved by bio conjugated silica nanoparticles. Silica nanoparticles have also shown promise in gene and drug delivery, as well as in the diagnosis and treatment of infectious diseases and cancer. In this study, we discuss the synthesis, bio conjugation, and uses of silica nanoparticles in several bioanalysis formats, including the separation, barcoding, and selective tagging of numerous biomedical significant targets. All things considered, we believe that additional advancements in these nanoparticles will yield a range of cutting-edge instruments for molecular biology, genomics, proteomics, and medicine.

## **SUSTAINABILITY AND ADVANCED EXERGY ANALYSIS OF A TURBOJET ENGINE**

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### **ABSTRACT**

In this paper, the thermodynamic performance and environmental impacts of a turbojet engine were investigated through energy, conventional exergy, advanced exergy and sustainability analyses conducted on the JetCat P80-SE turbojet engine. Two different scenarios involving JP-8 and hydrogen fuels were comparatively examined by using the GasTurb software to assess their effects on engine performance. Through energy and conventional exergy analyses, the overall efficiency and losses within the system were identified, while advanced exergy analysis provided detailed insights into the origins of these losses and revealed the improvement potentials. Additionally, sustainability analyses were conducted to calculate the environmental effect factor, waste and recoverable exergy ratios and to determine the exergetic sustainability index of the engine. According to results, hydrogen fuel presents a more favorable outcome in terms of environmental parameters compared to JP-8. For example, the environmental effect factor was calculated as 2.214 for JP-8 and 1.953 for hydrogen. However, in terms of system efficiency, JP-8 exhibits a slight advantage with an exergy efficiency of 30.1%, compared to 29.6% for hydrogen. In all scenarios, the highest exergy destruction occurs in the combustion chamber, calculated as 47.9 kW for JP-8 and 42.6 kW for hydrogen. The findings demonstrate that advanced exergy analysis is a powerful tool in developing performance improvement strategies for gas turbine engines and may serve as a guiding parameter for sustainability-oriented design approaches.

**Keywords:** Turbojet engine, energy, exergy, advanced exergy, sustainability

## COMPARATIVE MODELING AND SIMULATION OF I-V CHARACTERISTICS IN SOLAR PANELS WITH RESISTANCE-BASED PERFORMANCE ANALYSIS

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### ABSTRACT

**Introduction and Purpose:** The performance of photovoltaic (PV) systems is fundamentally governed by the current-voltage (I-V) characteristics of solar cells, which reflect how a panel responds to varying electrical loads. A deeper understanding of these characteristics is essential for the design, evaluation, and optimization of solar energy systems. Internal parameters—particularly series resistance ( $R_s$ ) and shunt resistance ( $R_{sh}$ )—significantly influence panel efficiency and output. The purpose of this research is to perform a comparative analysis of two commercial solar panels using MATLAB simulation, focusing on how differences in  $R_s$  and  $R_{sh}$  impact their I-V and power-voltage (P-V) characteristics. The study aims to identify how these resistances affect power performance and help inform better panel selection and modeling practices.

**Materials and Methods:** The analysis is carried out using a MATLAB-based simulation model that applies the single-diode equivalent circuit to simulate solar panel behavior. Two panels, referred to as Panel A and Panel B, are characterized using key electrical parameters: open-circuit voltage ( $V_{oc}$ ), short-circuit current ( $I_{sc}$ ), number of series-connected cells ( $N_s$ ), series resistance ( $R_s$ ), and shunt resistance ( $R_{sh}$ ). A voltage sweep is performed from 0 V to approximately 120% of  $V_{oc}$  to generate the I-V curves. From these, the current, voltage, and power outputs are computed at 100 discrete points. For clearer analysis and visualization, 15 representative operating points are selected across the curves. The simulation is used to calculate power output, fill factor (FF), and efficiency trends for each panel.

**Results:** Simulation results clearly demonstrate that Panel A, which has lower  $R_s$  and higher  $R_{sh}$ , outperforms Panel B across the entire voltage range. This panel consistently delivers higher output current and power, particularly around the maximum power point (MPP). The fill factor and curve smoothness of Panel A also indicate reduced internal losses and improved efficiency. The results validate the theoretical expectation that lower series resistance enhances current flow, while higher shunt resistance minimizes leakage. The methodology also confirms the viability of using MATLAB simulations for comparative PV panel evaluation, offering a reusable and adaptable tool for system designers and researchers. Future work may extend this framework to include environmental factors like temperature and irradiance, or advanced control strategies such as machine learning-based fault detection.

**Discussion and Conclusion:** The comparative simulation results reveal that internal resistance plays a pivotal role in the performance of solar panels. Specifically, the panel with lower series resistance ( $R_s$ ) and higher shunt resistance ( $R_{sh}$ ) demonstrates significantly better I–V and P–V characteristics, including higher maximum power output and fill factor. These findings align with theoretical expectations, where high  $R_s$  limits current flow due to resistive losses, while low  $R_{sh}$  allows leakage currents that reduce voltage and efficiency. The MATLAB-based model effectively visualizes these electrical behaviors and provides quantitative insight into how design parameters influence overall performance. Moreover, the study confirms that even minor variations in  $R_s$  and  $R_{sh}$  can lead to noticeable differences in energy yield, reinforcing the importance of precise parameter estimation in PV modeling and design. In conclusion, this research validates the utility of simulation tools in resistance-based solar panel evaluation and supports their application in system optimization, performance diagnostics, and informed technology selection for energy sustainability.

**Key Words:** Solar cell modeling, I-V characteristics, P-V curve, series resistance, shunt resistance, single-diode model, photovoltaic system, MATLAB simulation, panel comparison, power output analysis

## **UNDERSTANDING GLOBAL PERCEPTIONS OF E-AGRICULTURE: A TWITTER-BASED SENTIMENT ANALYSIS AND TOPIC MODELING STUDY**

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### **ABSTRACT**

The increasing adoption of digital technologies in agriculture, known as e-agriculture, is transforming traditional farming practices by improving productivity, efficiency, and sustainability. This study investigates global perceptions of e-Agriculture using sentiment analysis and topic modeling on Twitter data to understand prevailing sentiments, topics of discussion, temporal trends, and geographical differences. Tweets related to e-Agriculture were collected from Twitter using keywords such as "e-agriculture," "smart agriculture," "smart farming," and "digital agriculture." Sentiment analysis was performed using TextBlob, and topic modeling was conducted using Latent Dirichlet Allocation (LDA). Geographical analysis was performed using geolocation data from Twitter. Sentiment analysis revealed 73.09% positive, 21.45% neutral, and 5.46% negative tweets, indicating a predominantly positive global perception. Temporal analysis indicated consistent positivity with occasional negative spikes. Topic modeling identified five key themes: climate-smart agriculture, technological advancements, innovations in smart farming, economic growth and trade, and collaborative digital initiatives. Geographical analysis highlighted regional variations in sentiment and engagement. Findings indicate a generally positive global perception of e-agriculture, emphasizing its potential benefits for sustainability and productivity. However, concerns such as data privacy and economic barriers remain. Policymakers, researchers, and practitioners can leverage these insights to address existing barriers and promote widespread adoption of e-Agriculture technologies.

**Keywords:** E-Agriculture, Sentiment Analysis, Topic Modeling, Twitter Analysis, NLP.

## **RECENT DEVELOPMENTS IN THE DIAGNOSIS AND MANAGEMENT OF BLOOD CANCERS**

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600 073.

### **Abstract**

Blood cancer, also known as hematologic cancer, encompasses malignancies that affect the blood, bone marrow, and lymphatic system. The primary types include leukemia, lymphoma, and multiple myeloma. These cancers originate from abnormal growth and proliferation of blood cells, often disrupting normal hematopoiesis and immune function. The exact causes of blood cancer are multifactorial, involving genetic mutations, environmental exposures, and immune system dysfunctions. Advances in diagnostic techniques, such as flow cytometry, cytogenetics, and molecular profiling, have enhanced early detection and disease classification. Treatment approaches have evolved to include chemotherapy, targeted therapy, immunotherapy, and hematopoietic stem cell transplantation, offering improved survival rates and quality of life for many patients. Ongoing research is focused on personalized medicine and the development of less toxic, more effective treatments. Despite progress, challenges remain in early diagnosis, treatment resistance, and long-term disease management.

### **Keywords:**

Blood cancer, Hematologic malignancies, Leukemia, Lymphoma, Multiple myeloma

## CHRONIC ANAL FISSURE MANAGEMENT WITH BOTULINUM TOXIN INJECTIONS AND LATERAL INTERNAL SPHINCTEROTOMY

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### Abstract

**Chronic Anal Fissure** is a significant pathological condition that profoundly impacts patients' quality of life. The underlying pathophysiology primarily involves internal anal sphincter hypertonicity, leading to persistent sphincter spasm and mucosal ischemia, which exacerbate the mucosal defect [1,2]. Observational data indicate that approximately 85% of anal fissures are usually localized along the posterior midline. Fissures in atypical locations should prompt consideration of alternative etiologies, including inflammatory bowel diseases, tuberculosis, trauma, or malignancy [3]. Among the various treatment modalities for chronic anal fissures, lateral internal sphincterotomy, acknowledged as the gold standard, is associated with superior healing rates but entails a higher risk of complications due to its invasive nature. However, this surgical intervention is associated with complications such as anal incontinence, with transient rates reaching up to 45% and persistent cases occurring in up to 10% of patients [4,5]. Additional adverse effects include postoperative pain and bleeding [6,7]. The risk of sphincter-related morbidity has driven the exploration of alternative therapeutic strategies, including botulinum toxin (BT) injection. Therefore, botulinum toxin injection, a minimally invasive alternative, remains a viable therapeutic option for select patient populations despite its relatively higher recurrence rate, owing to its favorable safety profile. BT functions by inhibiting acetylcholine release at the neuromuscular junction, thereby inducing temporary chemical sphincterotomy and promoting fissure healing [9,10]. The study aims to compare the efficacy and safety of botulinum toxin injection vs lateral internal sphincterotomy in the chronic anal fissure treatment.

**Aim** of this study was to compare the botulinum toxin and sphincterotomy efficacy in the chronic anal fissure management. For this, two groups were compared in treatment outcomes after botulinum toxin injection and lateral internal sphincterotomy. The study cohort comprised women diagnosed with chronic anal fissure and treated between 2017 and 2022. 48 female patients, age ranged from 19 to 45, with a mean age of  $37.1 \pm 1.04$ . Patients underwent botulinum toxin injections and partial sphincterotomy (of part of sphincter removal).

Clinical outcomes and examination findings were assessed to determine the therapeutic efficacy of botulinum toxin infiltration in comparison to surgical intervention. An increased recurrence rate was noted in patients with a prolonged disease course and posteriorly located fissures, underscoring the critical role of patient selection in optimizing outcomes. **Conclusion.** Botulinum toxin may serve as a first-line therapeutic strategy in individuals with a low predisposition to recurrence, offering an effective and safer alternative in appropriately selected cases.

**Keywords:** chronic anal fissure, lateral internal sphincterotomy, botulinum toxin

## References

- Özdamar MY, Hirik E. Anal fissure epidemiology and related diseases in children. South Clin İstanbul Eurasiya. 2018;29: 295-300.[Google Scholar]
- 2.Qureshi W (2020) How I Approach It:Anal Fissures. The Am j of gastroenterol 115 (3):315-316; DOI: 10.14309|aig.0000000000000521
- Sinha R, Kaiser AM. Efficacy of management algorithm for reducing need for sphincterotomy in chronic anal fissure in chronic anal fissure/ Colorectal dis 2012,14,760-4
- Amirova MF, Azim S.A. Forougiasl P., Annamma L.M., Museyibova A.A., Almudarris B.A., Azim A.A., İrannezhad F.,Fareed W.M. The Efficacy of Sedation Depends on the Diet of Population. Health, 2022, 1(8): 883-894.<https://doi.org/10.4236/health.2022.148062>
- Siddiqui J, Fowler GE, Zahid A, Brown K, Young CJ (2019) Treatmebt of anal fissure: a survey of sursical practice in Australia and New Zealand. Colorectal Dis 21:226-233 [Google Schoolar]
- 5.Al-thoubaity F (2020) Safety and efficacy of the treatment of chronic anal fissure by lateral internal sphincterotomy: A retrospective cohort study. Annals of Med and Surg 57:291-294. <https://doi.org/10.1016/j.amsu.2020/08/010>
- 6.Chiarello MM, Cariati M, Brisinda G (2020) Botulinum toxin versus other therapies for treatment of chronic anal fissure. Coloproctology 42:457-463[Google Schoolar]
- Vitoopinyoparb K., Insin P., Thadanipon K., Comparison of dose and injection sites of botulinum toxin for chronic anal fissure: a systematic review and network meta-analysis of randomized controlled trials.2022. Internasional Journal of Surgery 104(12): 106798. DOI: 10.1016/j.isu.2022/106798
- Brisinda G., Chiarello M., Crocco A., Bentivoglio AR. Botulin toxin injection of the treatment chronic anal fissure: uni-and multivariate analysis of the factors that promote healing.2022. Internasional Journal of Colorectal Disease 37 (3). DOI: 10.1007/s00384-022-04110-0

## STRUCTURAL ANALYSIS OF THE BALIK LAKE FISHERY

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### ABSTRACT

This study was carried out between March and June 2024 by conducting 17 surveys in order to determine the fishing equipment used in the Balık Lake, the characteristics of the boats used, the amount of fish caught, the socio-economic structure of fishing in the lake and the problems of the fishermen. According to the survey results, two different nets were used in the Balık Lake was determined; multifilament trammel nets were used for carp and capoeta fishing, and monofilament gillnets were used for trout fishing. The technical plans of these nets are defined according to FAO standards. It was concluded the fishing boats used had an average engine power of  $7.31 \pm 0.49$  HP and a length of  $6.13 \pm 0.46$  m. By revealing the socio-economic structure of the fishery in the lake, it was determined that an annual of  $433 \pm 76.4$  kg of fish was caught. The survey results revealed that the most important problems of fishermen were the use of lake water as irrigation and drinking water, the negative effects of global warming, unconscious fishing and the introduction of crayfish into the lake, and solution suggestions were presented on this issue.

**Keywords:** Balık Lake, Socio-Economic Structure, Gillnet, Fishery

## PLUMERIA PUDICA USE AS BREST CANCER THERAPY

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### **Abstract**

*Plumeria pudica*\*, commonly known as “white frangipani” or “bridal bouquet,” is a tropical ornamental plant recognized for its rich phytochemical profile and potential medicinal properties. Recent research has explored its promising role in breast cancer therapy due to the presence of various bioactive compounds, including alkaloids, flavonoids, tannins, saponins, and triterpenoids. These phytochemicals exhibit significant anti-proliferative, antioxidant, and apoptosis-inducing effects on cancer cells. In vitro and in vivo studies have indicated that extracts from *Plumeria pudica*\* leaves and flowers can inhibit the growth of breast cancer cell lines such as MCF-7 and T47D by inducing cell cycle arrest, disrupting mitochondrial membrane potential, and activating caspase-mediated apoptotic pathways. The plant’s antioxidant activity helps reduce oxidative stress, which is closely associated with cancer development and progression. Moreover, the anti-inflammatory properties of *P. pudica*\* may further contribute to its anti-cancer effects by modulating key signaling pathways like NF- $\kappa$ B and MAPK. With minimal toxicity to normal cells, *Plumeria pudica*\* holds potential as a natural, safer adjunct or alternative to conventional chemotherapy. However, further clinical trials and mechanistic studies are necessary to fully validate its therapeutic efficacy and safety in humans. The integration of this plant in modern oncological treatment could pave the way for the development of novel, plant-based therapeutics for breast cancer.

**Keywords:** *Plumeria pudica*\*, breast cancer, MCF-7, phytochemicals, anticancer activity, apoptosis, oxidative stress, NF- $\kappa$ B, MAPK, natural therapy, cell cycle arrest, caspase activation, plant-based medicine.

## THE MEDIATING ROLE OF TIME MANAGEMENT IN THE RELATIONSHIP BETWEEN COGNITIVE FLEXIBILITY AND ACADEMIC PROCRASTINATION

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### ABSTRACT

**Introduction and Purpose:** In this study, the mediating role of time management in the relationship between cognitive flexibility and academic procrastination was investigated by examining different variables. The study used one of the quantitative research styles, relational scanning.

**Material and Method:** Participants consisted of 342 people, 220 (% 64.32) of whom were female and 122 (35.68) male. The study used the “Cognitive Control and Flexibility Scale”, “Academic Procrastination Scale” and “Time Management Scale”. A “Personal Information Form” was created to collect information from the participants that could improve the research along with the scales used. For the analysis of the applied scales; frequency and percentages, t test, one-way analysis of variance (ANOVA), Pearson correlation and multiple mediator analysis were used for the analysis of the mediating role.

**Results:** According to the study results, it is observed that the level of academic procrastination of women is higher than that of men, students over the age of 16 have a higher level of academic procrastination than students between the ages of 14-15, students with an academic grade point average of 85 and above are higher than students under 69, and students with an average daily sleep time of 6-8 hours have a higher level of academic procrastination than students with an average daily sleep time of 9 hours and above. The academic procrastination level of those with an average daily social media use of 4 hours and above is lower than those who use social media for 2-3 hours and those who use less than 1 hour. In the study, the rate of success in time management of students with an average daily sleep time of 9 hours and above is lower than those who sleep for 6-8 hours and those who sleep less than 5 hours. The cognitive control and flexibility level of those who use social media for 4 hours and above is higher than those who use social media for 2-3 hours and those who use less than 1 hour. There are negative significant relationships between cognitive flexibility and academic procrastination time planning, time organization and consciousness in time management subscale scores. There are also negative significant relationships between academic procrastination scale scores and time planning, time organization and time management consciousness subscale scores. The multiple mediating role of time management subscales was examined in the relationship between cognitive control and flexibility and academic procrastination, and as a result, it was seen that the mediating variables had a mediating role on academic procrastination behavior and explained 29% of the total variance on academic procrastination behavior.

**Keywords:** Cognitive Control and Flexibility; Academic Procrastination; Time Management

## COCCIDIOSIS IN JAPANESE QUAILS (COTURNIX JAPONICA) IN FARM BREEDING

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### ABSTRACT

**Introduction and Purpose:** Japanese quail (*Coturnix Japonica*) belongs to the family Phasianidae, genus *Coturnix*. As the Japanese quail is easily managed, fast growing, and small in size, and can produce eggs at a high rate, it has been farmed in large quantities across the globe. Japanese quails production can be considered a branch of the modern poultry industry. Breeding of Japanese quail in Serbia is on the rise. Among the avian diseases of these birds coccidiosis affects bird development as well as production.

**Materials and Methods:** The research was done in the period from 1997 to 2006 at minifarms of Japanese quail. Pools of feces were collected from young and mature Japanese quails. Coprological examinations were performed using standard parasitological methods, and oocysts were determined based on morphological characteristics. Autopsies were performed on dead birds and pathological changes caused by coccidia were monitored.

**Results:** During this examination we established presence of *Eimeria bateri*, *E. uzura* and *E. tsunodai*. Infections were found in 13.27% of the examined birds, and in all cases they were with two or three types of coccidia. During necropsy *E. bateri* and *E. uzura* were detected in the small intestine, while *E. tsunodai* in the ceca.

**Discussion and Conclusion:** At infected birds we observe clinical signs such as lack of appetite, ruffled feathers, and uncoordinated movements, inhibition of lying and loss of weight in naturally infected young and mature quails. Infection with *E. bateri* and observed mild loss of weight and, although anorexia and softening of feces were observed at the third day of infection, the disease was considered mild and easy to overcome. During infection with *E. uzura*, observing diarrhea and anemia from the 5<sup>th</sup> to 8<sup>th</sup> day of infection. During mixed infection of *E. uzura* and *E. tsunodai* we reported mortality, lower weight gain and poor reproductive performance. Concerning weight gain, *E. tsunodai* was considered more pathogenic than *E. bateri*.

**Key Words:** Japanese quail, coccidiosis, *Eimeria bateri*, *E. uzura*, *E. tsunodai*

## COMPARISON OF SCREW-RETAINED AND CEMENT-RETAINED CR-CO-CERAMIC IMPLANT-SUPPORTED SINGLE CROWNS: RADIOGRAPHIC, CLINICAL, AND BIOCHEMICAL OUTCOMES IN A COHORT STUDY

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**Background:** The analysis that was conducted in this study, comparing two different crown-retention solutions, considered periodontal indices and standardized radiographic measurements and the indices of possible damage which now represent a concrete help in diagnosis and prognosis.

### **Materials and Methods:**

The present study was designed to compare peri-implant soft and hard tissue response after 2 years of functional loading between direct screw-retained posterior single crowns in Cr-Co/Ceramic or cement-retained Cr-Co/Ceramic on titanium abutment. 24 non-smoking partially edentulous patients, requiring implant therapy for a prosthetic rehabilitation, were included in the study. The values of IL-1 $\beta$ , IL-6, IL-8 were evaluated, together with the periodontal indices PI, GI, PD, BOP, REC. The PICF was collected with standardized paper strips. Repeated measure ANOVA was used between groups months at 1, 3, and 12 months.

### **Results:**

During the time of clinical observation, at t0 (1 month), t1 (3 months) and t2 (12 months), both types of crowns performed satisfactorily from a clinical point of view. In light of the results obtained, it is possible to define that screwed Cr-Co/Cer has slightly higher values than the other.

### **Conclusions:**

It is possible to hypothesize, that this difference could lead to a clinically visible difference between these two prosthetic solutions in the longer term. The single screwed crown in Cr-Co shows a different interface with the titanium implant connection compared to the titanium-titanium contact of the connection between the implant and the titanium abutment for the cement-retained prosthetic solution.

**Keywords:** Cr-Co; Implants; Titanium; Cement-retained; Screw-retained; Ceramic.

## FROM SCALPEL TO SIMULATION: REVIEWING THE FUTURE OF CADAVERIC DISSECTION IN THE UPCOMING ERA OF VIRTUAL AND AUGMENTED REALITY AND ARTIFICIAL INTELLIGENCE

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### ABSTRACT

**Introduction and Purpose:** Cadaveric dissection (CD) has been a foundational practice in medical education for centuries, offering indispensable insights into human anatomy. However, the advent of artificial intelligence (AI) and related technologies is revolutionizing the way anatomy is taught and learned. CD has long been regarded as a cornerstone of medical education, playing a critical role in providing hands-on experience and a deep understanding of human anatomy. It has allowed medical students and professionals to explore the intricacies of the human body in a way that textbooks and other educational resources could not fully replicate. By physically examining and dissecting cadavers, students gain invaluable insights into the complexity of human tissues, organ systems, and anatomical relationships, laying the foundation for their clinical knowledge and practice.

**Materials and Methods:** This review explores the enduring significance of human cadaveric dissection in contemporary medical education and examines the impact of AI-driven tools and virtual simulations on traditional dissection practices. It also discusses the potential integration of these technologies to enhance medical training. Through an analysis of recent studies and emerging trends, this article provides a concise overview of how CD and AI can complement each other in the education of future healthcare professionals. As technology has advanced, traditional methods of teaching and learning anatomy are undergoing a transformation. .

**Results:** AI powered tools, virtual reality (VR), augmented reality (AR), and 3D simulations are increasingly being integrated into medical curricula, offering new ways to visualize and interact with anatomical structures.

**Discussion and Conclusion:** These technologies can simulate complex procedures, provide real-time feedback, and offer repeatable, risk free learning experiences. As a result, many educators and institutions are rethinking the role of CD in the modern medical classroom, questioning whether it remains indispensable or if AI-based alternatives can adequately replace or supplement it. We analyze how AI and virtual simulations are being utilized to complement cadaver-based learning, potentially enhancing the educational experience through innovative, interactive methods. It also will highlight the unique value that CD still provides, including the tactile and spatial understanding of the human body that digital tools may not fully replicate.

We also discuss the potential benefits of integrating these technologies into anatomy education, such as increased accessibility, personalized learning, and improved retention of knowledge. Ultimately, the review will consider how the combination of traditional dissection methods and cutting-edge AI technologies can create a more dynamic and effective approach to medical education, preparing students better for the complexities of clinical practice. A consensus has to be reached on how CD and AI can coexist and complement one another in the training of future healthcare professionals.

**Key Words:** 3D, Anatomy, AR, Artificial In, Cadaver, CD, Dissection, Simulation, Teaching, VR.

**IN VITRO SALINITY TOLERANCE OF LOCAL CACTUS *Opuntia ficus indica*  
AND *Opuntia robusta***

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**ABSTRACT**

**Introduction and purpose:** In Tunisia, the two local cactus species, *Opuntia robusta* and *Opuntia ficus indica*, exhibit extensive adaptability to extreme environmental conditions. Their multiple uses include essentially fruit consumption and livestock feed. However, these plants are widely threatened by water salinization due, mainly, to climate changes. Therefore, a study of *in vitro* tolerance of these two species to salinity stress was undertaken via organogenesis and somatic embryogenesis techniques.

**Materials and methods:** Basal medium used for the trials is Murashige and Skoog (MS) medium. To this medium, for organogenesis and callogenesis techniques were added various doses of NaCl (0, 2, 4, 6, 8 and 10 g/l).

**Results:** The obtained results have shown the low effects of salinity (NaCl) on the organogenic potentialities of the propagated crops. As results, a significant evolution in multiplication rates (MR) with 4 g/l of NaCl for the two cactus species was obtained with 3.85 for *Opuntia robusta* and 7.0 for *Opuntia ficus indica*. Also, the impact of stress salinity on calli cactus evolution in the callogenesis phase (callus size and fresh weight) is low to moderate. The highest NaCl doses (6, 8 and 10 g/l NaCl) have caused mainly explants abundant necrosis, but with no harmful effects on their callogenic potentialities. It is important to note that *Opuntia robusta*, resistant to the Mexican cochineal (*Dactylopius opuntiae*), seems to be more tolerant to salinity stress in the callogenesis step than *O. ficus indica* due to its rapid callus induction (20 days) and its superior capacity to induce larger quality calli.

**Key Words:** *Opuntia* cactus, *in vitro* culture, organogenesis, callogenesis, NaCl, salinity stress.

## **FUNGI : AN ALTERNATIVE SUSTAINABLE SOURCE OF CHITIN AND CHITOSAN FOR HIGH-VALUE AND INNOVATIVE APPLICATIONS**

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### **ABSTRACT**

Chitin and its derivative chitosan are natural biopolymers renowned for their biodegradability, biocompatibility, and versatile bioactivities, including antimicrobial and antioxidant properties. Traditionally sourced from crustacean shells, industrial chitin poses ecological and allergenic challenges. In contrast, fungal sources—such as *Agaricus bisporus* (a macrofungus) and *Aspergillus niger* (a microfungus)—emerge as promising, sustainable, and allergen-free alternatives.

Our study presents an integrated approach combining conventional and microwave-assisted extraction methods to enhance yield and functional quality of fungal-derived chitin and chitosan. The methodology involves deproteinization, demineralization, decolorization, and deacetylation—processes optimized to minimize solvent use, reduce environmental impact, and regulate the degree of deacetylation (DDA), a key factor governing the polymer's final properties. Comprehensive characterization (chemical yield, DDA, and thermo-structural properties) was conducted, alongside functional assessments such as antimicrobial activity and film-forming ability. Results highlight:

- (1) the efficiency of microwave-assisted extraction in boosting yield;
- (2) strong correlation between extraction conditions and DDA;
- (3) the influence of DDA on biological performance;
- (4) the potential of underused fungal strains for eco-innovative applications.

This work demonstrates the viability of fungal chitin as a standardized, high-performance biopolymer for biomedical, food packaging, environmental, and cosmetic applications. Our approach aligns with circular bioeconomy principles, paving the way for cleaner, safer, and value-added biomaterials.

**Key words :** Fungi, Biopolymer extraction, Chitin and chitosan, Characterization, Green valorization and applications.

## COOLING OF ELECTRIC VEHICLE BATTERIES

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### ABSTRACT

**Introduction and Objective:** This study presents a comprehensive literature review on the development, classifications, and comparative evaluation of battery cooling systems. A battery pack model was developed based on thermal management strategies applied in electric and hybrid vehicles, with a primary objective of assessing the influence of various cooling fluids and channel geometries on thermal performance.

**Methodology:** The vehicle and battery configurations were modeled using SolidWorks, while multiple battery pack configurations and channel designs were created in ANSYS. Thermal simulations were performed in ANSYS Fluent, employing both air and liquid cooling at flow velocities of 1, 2, and 3 m/s. Three channel geometries — U-type, Z-type, and an improved GZK-type (a modified Z-type with increased inlet height) — were investigated. Furthermore, the thermal performance of water and Novec 7200 as cooling fluids was analyzed under varying operational conditions.

**Results:** In the U-type channel, a uniform cooling profile with a temperature difference of 2 K was achieved, whereas the Z-type channel exhibited a 10 K temperature difference. The enhanced GZK-type channel demonstrated superior performance, reducing the temperature difference to 14 K. At a liquid velocity of 0.01 m/s, the cooling performance was found to be comparable to that of air cooling at 6 m/s. Experiments using Novec 7200 at flow rates of 1–3 m/s resulted in temperature reductions of 13% for cells in direct contact with the liquid, and 10% for cells exposed solely to air. At heat generation rates between 1 and 3 W, liquid cooling consistently outperformed air cooling. Additionally, an inlet fan pressure of 50 Pa provided more effective cooling than 150 Pa applied at the outlet. The simulations also indicated that fluids with greater volumetric flow had a more pronounced impact on the system's thermal efficiency.

**Conclusion:** Liquid cooling systems proved to be particularly effective in narrow regions where direct contact with battery cells is possible. The highest cooling efficiency can be achieved by implementing hybrid cooling strategies that are tailored to the specific thermal demands of different battery regions.

**Keywords:** Electric vehicle batteries, Battery cooling system, Lithium-ion cells, Battery thermal management system

## **PROSTHETIC REHABILITATION FOR AESTHETIC PURPOSES IN ANTERIOR TEETH LOST DUE TO CHILDHOOD TRAUMA: A CASE REPORT**

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### **ABSTRACT**

#### **Introduction and Aim**

The aim of this case report is to present the restoration of a missing mandibular central incisor in a young adult patient using a conservative prosthetic treatment option—resin-bonded fixed partial denture (Maryland bridge) and to evaluate the esthetic, functional, and biological advantages of this approach.

#### **Case Report**

A 26-year-old systemically healthy male patient presented to our clinic with a complaint of a missing mandibular central incisor (tooth #41). Medical history revealed that the tooth had been lost approximately one month earlier due to trauma. The patient reported concerns related to esthetics and impaired speech function caused by the tooth loss.

Clinical and radiographic examinations showed adequate alveolar bone support at the edentulous site and no pathology or restorative needs in the adjacent teeth. Various treatment options, including dental implants and conventional fixed partial dentures, were discussed. However, the patient expressed a preference for a minimally invasive approach that would preserve adjacent tooth structure. Additionally, the alveolar bone volume was deemed insufficient for implant placement. Based on these factors, a resin-bonded fixed dental prosthesis was selected.

Minimal invasive preparation was performed on the abutment teeth, impressions were taken, and the case was sent to the dental laboratory. Upon completion of laboratory procedures, the Maryland bridge was properly cemented, and the patient was given postoperative instructions regarding hygiene and functional use.

#### **Conclusion**

This treatment approach successfully provided an esthetically and functionally satisfactory restoration in a short period of time. The minimal loss of tooth structure in the adjacent teeth, the non-invasive nature of the procedure, and the avoidance of surgical intervention make Maryland bridges a suitable treatment option, particularly for young individuals or patients who wish to avoid surgery. Follow-up evaluations revealed optimal adaptation of the restoration and a high level of patient satisfaction.

#### **Keywords:**

Maryland bridge, anterior tooth loss, conservative treatment, fixed prosthodontic restoration

## LSTM-BASED CHANNEL KNOWLEDGE MAPPING FOR ULTRA-RELIABLE 6G SATELLITE NETWORKS

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### ABSTRACT

**Introduction and Purpose:** The sixth generation (6G) of wireless communication promises to deliver ultra-reliable low-latency communication (URLLC), massive connectivity, and global coverage, particularly in remote and underserved regions. Satellite networks, especially those involving low Earth orbit (LEO) and medium Earth orbit (MEO) constellations, are expected to play a central role in enabling these capabilities. However, one of the primary challenges in satellite-based 6G networks is the dynamic and time-varying nature of the communication channels, influenced by factors such as satellite mobility, atmospheric disturbances, Doppler effects, and user movement. To ensure reliability and optimal performance, it is essential to have accurate and timely Channel Knowledge Mapping (CKM), which involves predicting the channel state information (CSI) based on historical data.

**Materials and Methods:** This research proposes a Long Short-Term Memory (LSTM) based artificial intelligence (AI) model for CKM to address the need for accurate channel prediction in 6G satellite networks. LSTM, a type of recurrent neural network (RNN), is well-suited for modeling time-series data and capturing long-term dependencies, making it ideal for forecasting temporal variations in wireless channels. Using synthetic satellite channel data generated in MATLAB, this study trains an LSTM network to learn patterns in channel state variations such as signal-to-noise ratio (SNR) and fading coefficients. The performance of the model is evaluated based on prediction accuracy and reliability metrics such as mean squared error (MSE) and root mean square error (RMSE).

**Results:** The results indicate that LSTM networks can effectively predict future channel states in highly dynamic satellite environments, enabling proactive decision-making in transmission strategies and improving the overall reliability of communication links. This research contributes to the growing field of AI-driven communication technologies and supports the development of robust, intelligent 6G satellite systems capable of meeting stringent URLLC requirements.

**Key Words:** 6G, Satellite Communication, Channel Knowledge Mapping, LSTM, Channel Prediction, Artificial Intelligence, URLL

## THE IMPORTANCE OF DENTAL PHOTOGRAPHY IN AESTHETIC DENTISTRY: CLINICAL AND TECHNICAL APPROACHES

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### **Abstract**

Nowadays, dental photography has become an indispensable component of aesthetic dentistry. Although photography contributes in many ways to dental practice, its primary purpose is to accurately document clinical findings in the intraoral region with high resolution, thereby aiding diagnosis and treatment planning. These high-quality images strengthen patient-dentist communication, increase patient motivation, facilitate multidisciplinary treatment approaches, optimize communication with the laboratory, and systematize case documentation.

To achieve successful results in dental photography, it is essential to understand fundamental photography concepts, be familiar with the technical capabilities of the equipment used (camera, lens, flash), and correctly set manual settings such as f-stop, ISO, and magnification ratio. Particularly, correct exposure, sharp focus, adequate depth of field, and accurate color rendition are crucial for the effective scientific and visual presentation of aesthetic cases.

This presentation discusses the equipment used in dental photography, recommended technical settings, clinical positioning strategies, common challenges encountered during practice, and practical solutions to these challenges. Additionally, the usability of images obtained by adhering to standard protocols in scientific publications and clinical presentations is emphasized.

### **Conclusion:**

Dental photography is a fundamental tool for both the evaluation and documentation of aesthetic and functional dental treatments. It is now a clinical necessity for every dentist who wishes to objectively demonstrate clinical success and strengthen patient communication to have basic knowledge and practical skills in dental photography.

### **Keywords:**

Dental photography, aesthetic dentistry, intraoral imaging, treatment planning, clinical documentation, patient communication

## REASONS FOR ERAS IN ELDERLY CANCER PATIENTS UNDERGOING COLORECTAL SURGERY?

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### ABSTRACT

**INTRODUCTION AND OBJECTIVE:** The Enhanced Recovery After Surgery (ERAS) protocol is used to promote better postoperative recovery and to define the concept of multimodal, preoperative interventions. Thanks to this program currently in use, postoperative recovery accelerates, and the length of hospital stay and morbidity decrease. Colorectal cancer, one of the common types of cancer worldwide, ranks third in prevalence. With advances in technology, the elderly population is also increasing day by day. As age advances, the likelihood of unwanted outcomes, complications, and mortality after surgery may increase. Elderly patients require different care and monitoring compared to younger patients during the preoperative period. Considering this, the importance of practices developed for elderly patients with colon cancer who must undergo surgery is increasing. However, there is a lack of studies on the outcomes of applying ERAS to the elderly population. The aim of this study is to evaluate the feasibility and safety of implementing the ERAS protocol in elderly patients with colorectal cancer.

**METHODS:** We reviewed the literature over the last decade covering ERAS applications in colorectal surgery in elderly patients. The literature search was performed in 2023 and international scientific databases such as PubMed, Web of Science and Google Scholar were used. The keywords “elderly patients”, “colorectal surgery”, “ERAS protocol”, “geriatric surgery” and their Turkish equivalents were used. The effects of the ERAS protocol and compliance rates in different age groups were evaluated.

**RESULTS:** Although elderly patients are considered at risk for adherence to ERAS due to comorbidities, the studies conducted have shown high compliance with the protocol.

**RESULTS AND RECOMMENDATIONS:** In elderly patients undergoing ERAS, postoperative complication rates have decreased, hospital stay duration has shortened, and functional recovery has accelerated. Especially in patients over 70 years old, ERAS has been reported to be safe and effective. However, a personalized approach is recommended for very

advanced age (>80) and frail patients. The literature shows strong evidence that ERAS does not increase mortality in the elderly; on the contrary, it reduces complications. Based on these results, we can say that ERAS is feasible and reliable in elderly cancer patients who have undergone colorectal surgery. However, there are deficiencies in research on this topic in Turkey. We recommend conducting further studies to reach a more definitive conclusion.

**KEYWORDS:** Elderly patient; ERAS protocol; Colorectal surgery

## DESIGNING WITH NUMBERS: ENHANCING PROBLEM-SOLVING THROUGH MATHEMATICAL PEDAGOGY

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### **Abstract**

The area of this research is devoted to exploring the effectiveness of progressive mathematical teaching in its relation to the development of problem solving abilities among the students and to the issue of insufficient didactical approach, which is not used in order to implement methods of numerical cognition in the educational program. The research employs various mixed-methods strategies such as quantitative data with the performance assessments of the students and qualitative data collected following the observations and interviews held with the educators. The results indicate a significant increase in the level of problem-solving among the students implying that such pedagogic approach exploiting the concept of numerical reasoning contributes to a better performance in math problems and development of skills critical thinking. Furthermore, this improvement of problem-solving skills has crucial significance to the sphere of healthcare, as in this professional sector mathematical skills are crucial to be able to interpret the data received and make a qualified decision and perform evidence-based practice. The research further highlights the necessity to conduct urgent reforms to school education and include modern forms of teaching mathematics in them to educate people so that they could become future healthcare professionals. The study eventually adds to the general discussion of education reform, in that it demonstrates the value of learning curricula being developed that not only inculcates knowledge of mathematics but also equips students with the problem-solving skills they require in resolving the depth, complexity of situations that present themselves daily in the healthcare field and generally in life.

**Keywords:** Mathematical Pedagogy; Architecture and Mathematics; Mathematics in Design Education; Analytical Thinking; Problem-Solving Skills.

## **DEVELOPING MULTILINGUAL NATURAL LANGUAGE PROCESSING FRAMEWORKS FOR ENHANCED ACCESS TO NIGERIA'S INDIGENOUS KNOWLEDGE ARCHIVES**

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### **ABSTRACT**

Nigeria's cultural heritage institutions house vast archives of indigenous knowledge—historical manuscripts, oral records, and artifacts—critical to national identity and scholarly research. Yet, linguistic fragmentation (500+ languages), colonial-era documentation biases, and analog formats restrict access, risking irreversible cultural erosion. This study pioneers context-aware Natural Language Processing (NLP) frameworks to unlock Nigeria's archival wealth. We address gaps in low-resource language processing, focusing on Hausa, Yoruba, and Igbo, while integrating community-centric design for equitable access. A mixed-methods approach was employed: Data Curation: Digitized and annotated 5,000+ documents from Nigerian National Archives and university collections, spanning colonial records to indigenous scripts. NLP Pipeline: Developed hybrid models for: Optical Character Recognition (OCR) of handwritten/historical texts. User Evaluation: Co-designed interfaces with rural/urban communities (n=120) via focus groups, assessing usability, linguistic accuracy, and cultural resonance. Key Findings: Hybrid NLP models achieved 89% F1-score in named entity recognition for Yoruba manuscripts. Semantic search recall improved by 47% for Hausa-English code-switched queries versus keyword-only systems. Community feedback highlighted voice-enabled access and visual metadata as critical for low-literacy users. This work delivers: OKP-Nigeria (Open Knowledge Platform): An open-source toolkit for archiving institutions, enabling multilingual search/retrieval via web/IVR. Proposes national standards for digitizing endangered linguistic heritage. Conclusion: NLP—when linguistically adapted and ethically deployed—can democratize Nigeria's archival treasures. Future work will expand to other languages, advocating for AI as a tool of cultural reclamation.

**Keywords:** Natural Language Processing, Indigenous Knowledge, Digital Archives, Low-Resource Languages, Decolonial AI.

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**Abstract:**

Diabetes mellitus is a chronic metabolic disorder characterized by persistent hyperglycemia resulting from defects in insulin secretion, insulin action, or both. It is a growing global health concern, affecting millions of people across all age groups and contributing significantly to morbidity and mortality worldwide. The two most prevalent types of diabetes are type 1 diabetes mellitus (T1DM), an autoimmune condition leading to the destruction of insulin-producing  $\beta$ -cells in the pancreas, and type 2 diabetes mellitus (T2DM), which is associated with insulin resistance and relative insulin deficiency. Gestational diabetes mellitus (GDM) also affects pregnant women, typically resolving after childbirth but increasing the risk of developing T2DM later in life. The pathophysiology of diabetes involves complex interactions between genetic, environmental, and lifestyle factors. In T1DM, autoimmune mechanisms play a dominant role, whereas T2DM is closely linked to obesity, physical inactivity, poor diet, and genetic predisposition. Chronic hyperglycemia in diabetes leads to long-term damage, dysfunction, and failure of various organs, particularly the eyes, kidneys, nerves, heart, and blood vessels. As such, diabetes is a leading cause of blindness, end-stage renal disease, neuropathy, and cardiovascular complications. Diagnosis of diabetes is typically based on blood glucose measurements, including fasting plasma glucose (FPG), oral glucose tolerance test (OGTT), and glycated hemoglobin (HbA1c) levels. Management of diabetes focuses on maintaining blood glucose levels within a normal range to prevent complications. Treatment strategies involve a combination of lifestyle modifications, including diet, physical activity, and weight control, along with pharmacologic interventions such as insulin therapy and oral hypoglycemic agents. Metformin remains the first-line therapy for T2DM, while other classes like sulfonylureas, DPP-4 inhibitors, SGLT2 inhibitors, and GLP-1 receptor agonists offer additional glycemic control and cardiovascular benefits. Recent advancements in diabetes management include the development of continuous glucose monitoring (CGM), insulin pumps, and artificial pancreas systems, significantly improving patient outcomes and quality of life. Furthermore, personalized medicine and genetic research are paving the way for individualized treatment approaches based on a patient's unique metabolic and genetic profile. Despite the availability of effective treatments, diabetes management remains a challenge due to poor patient adherence, limited healthcare access in low-resource settings, and the asymptomatic nature of early disease stages. Public health strategies aimed at promoting awareness, early diagnosis, and preventive measures are crucial in reducing the global burden of diabetes. In conclusion, diabetes mellitus is a multifaceted disease requiring comprehensive management strategies to prevent complications and improve life expectancy. Ongoing research, patient education, and healthcare innovations hold promise for better outcomes and possibly curative approaches in the future.

**Keywords:**

Diabetes mellitus, hyperglycemia, insulin resistance, type 1 diabetes, type 2 diabetes, gestational diabetes,  $\beta$ -cells, metabolic disorder, insulin therapy, metformin, glucose monitoring, complications, neuropathy, nephropathy, cardiovascular disease, lifestyle modification, personalized medicine, public health.

## GLOBAL CITIZENS, NATIONAL TIES: THE INDIAN DIASPORA AND ITS EVOLVING INFLUENCE

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### ABSTRACT

This study explores the historical evolution and current dynamics of the Indian diaspora, with a focus on the Gulf Cooperation Council (GCC) countries—Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. The concept of diaspora, once limited to specific communities like Jews and Africans, has broadened significantly since the 1970s to include diverse migration patterns including trade and labor diasporas. India, now the most populous nation with over 1.441 billion people, also has the world's largest diaspora, with an estimated 35 million Indians living abroad as of 2024. The spread of English, a legacy of British colonialism, has facilitated global integration and professional mobility for Indians since the mid-20th century.

The Indian diaspora plays a vital role in global remittances, contributing significantly to India's economy, with remittance inflows rising in tandem with global migration. Early scholarly works examined the origins and challenges of Indian migration, from indentured laborers in colonial plantations to discrimination in urban life. Since the 2000s, India's government and academia have increasingly recognized the diaspora's developmental potential, spurring research and policy engagement.

Modern studies cover various dimensions—economic, cultural, gender, and identity—as well as country-specific dynamics. The diaspora's role during crises like COVID-19 and its influence on foreign direct investment and diplomacy reflect its growing strategic importance. This descriptive analysis synthesizes the latest data and literature, offering an updated perspective on the Indian diaspora's multifaceted contributions, with special emphasis on the Indian community in the GCC region.

**Key Words:** India, Diaspora, Diaspora History, Gulf Countries, Remittance.

## **ADVERSE DRUG REACTIONS ASSOCIATED WITH FIRST-LINE ANTI-TUBERCULOSIS THERAPY: A PROSPECTIVE PHARMACOVIGILANCE STUDY**

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### **Abstract**

**Background:** Tuberculosis (TB) remains a significant global health challenge, with first-line anti-TB drugs forming the cornerstone of treatment. However, these medications are often associated with adverse drug reactions (ADRs) that can affect patient adherence and treatment success.

**Objective:** To identify and evaluate the nature, frequency, severity, and outcomes of ADRs associated with first-line anti-TB therapy in a clinical setting.

**Methods:** This prospective observational study was conducted over 12 months at a tertiary care hospital. Adult patients diagnosed with pulmonary TB and initiated on first-line therapy (isoniazid, rifampicin, pyrazinamide, and ethambutol) were included. ADRs were identified through patient interviews, clinical examinations, and laboratory investigations, then assessed using the WHO-UMC causality scale and Hartwig's severity scale.

**Results:** Of the 200 patients enrolled, 136 (68%) experienced at least one ADR. The most common ADRs were hepatotoxicity (27%), gastrointestinal disturbances (21%), skin reactions (14%), and peripheral neuropathy (12%). According to the WHO-UMC scale, 62% of ADRs were classified as 'probable', 32% as 'possible', and 6% as 'certain'. Most reactions were moderate in severity; 18% required discontinuation or modification of therapy. Female patients and those over 50 years were more likely to experience ADRs ( $p < 0.05$ ).

**Conclusion:** ADRs are common during first-line anti-TB therapy and require proactive pharmacovigilance. Timely detection and management by pharmacists can significantly reduce treatment interruptions and improve outcomes.

**Keywords:** Tuberculosis, adverse drug reactions, first-line therapy, pharmacovigilance, hepatotoxicity, pharmacist intervention.

## **THE ROLE OF GRAM SABHAS IN THE DEVELOPMENT OF KERALA: A STUDY ON DECENTRALIZATION AND LOCALIZATION OF POWER**

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### **ABSTRACT**

The paper critically examines the role of Gram Sabhas in Kerala's development framework, with a concentrated focus on the mechanisms of decentralization and the localization of governance. Anchored in the theoretical context of participatory democracy and democratic deepening, the study investigates the extent to which the institutionalization of Gram Sabhas particularly in the aftermath of the People's Plan Campaign as contributed to enhanced local governance, participatory planning, and equitable resource distribution. Employing a mixed-methods approach, the research Integrates qualitative data from field interviews and participatory observations with quantitative analysis of development performance indicators at the local level. The study evaluates the functional efficacy of Gram Sabhas in fostering inclusive development, institutional accountability, and procedural transparency. Despite Kerala's recognition as a model for decentralized governance, the research identifies persistent constraints, including political patronage, administrative limitations, and asymmetrical participation. The findings underscore the need for targeted policy interventions to strengthen institutional capacities and deepen democratic practices at the grassroots level, thereby reinforcing the developmental impact of Gram Sabhas within Kerala's governance paradigm.

**Key words :** localisation, decentralization, Sustainable development, People participation, old aged, Children

## ADULT TRANSLATORS FOR CHILD READERS: A CASE STUDY OF *THE GIVING TREE* IN PERSIAN TRANSLATION

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### **Abstract**

The present study conducts a comparative analysis of *The Giving Tree* and its Persian translations, alongside translations generated by the GPT-4-turbo model. It focuses on the linguistic dimension to explore how each version preserves or transforms the original's simplicity. Using a qualitative approach, the research examines various translations strategies, highlighting the balance between fidelity to the source and adaptation for the target audience. The aim of the study is the textual analysis of three recent Persian translations, which reveals diverse approaches in language and presentation. It investigates how the portrayal and communication of childhood—shaped by translators and publishers—affect linguistic choices and the dynamic between adult translators and young readers. Additionally, the study compares the differences of translated themes in human translations with AI-generated versions, acknowledging current limitations and proposing future research directions, such as exploring children's responses and the interaction between illustrations and text. The findings enrich ongoing discussions on translation practices, cultural mediation, and the evolving role of artificial intelligence in literary translation. According to the findings of this study the quality of translation were improved linguistically through the last four decades.

**Key words:** Children's Literature; Adult Translators; AI-generated translations

## **OXIDATIVE STRESS, ANTIOXIDANTS AND DIABETES: BRIDGING THE PATHOPHYSIOLOGY WITH TREATMENT**

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### **ABSTRACT**

Oxidative stress plays a crucial role in the pathophysiology of diabetes mellitus (DM), contributing to both the onset and progression of the disease. It results from an imbalance between reactive oxygen species (ROS) production and the body's ability to neutralize these harmful molecules through antioxidants. Elevated ROS levels lead to cellular damage, inflammation, insulin resistance, and pancreatic  $\beta$ -cell dysfunction, all key factors in the development of diabetes-related complications. It is crucial to explore the molecular mechanisms underlying oxidative stress in diabetes and examine the therapeutic potential of antioxidants. Several studies have highlighted the promising role of natural and synthetic antioxidants in mitigating oxidative damage, improving insulin sensitivity, and protecting pancreatic function. Despite these advancements, challenges persist in translating antioxidant therapies from bench to bedside due to issues such as bioavailability, optimal dosage, and potential side effects. The emerging treatments, including pharmacological agents and lifestyle interventions, aim at reducing oxidative stress in diabetic patients. Bridging the gap between oxidative stress mechanisms and clinical treatments offers hope for more effective management of diabetes and its complications, paving the way for future research on integrative therapies. Understanding the interplay between oxidative stress and antioxidants in diabetes is essential for developing targeted, personalized interventions for long-term disease control.

**Key Points:** Oxidative stress, Reactive oxygen species Antioxidants, Clinical translation, Diabetes.

## BIOTECHNOLOGICAL POTENTIAL OF LOCAL LACTOBACILLUS STRAINS FOR PROBIOTIC PRODUCTION

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### ABSTRACT

In recent years, the positive effects of probiotic microorganisms on health have attracted the attention of both the food industry and the scientific world. In this context, the biotechnological evaluation of *Lactobacillus* strains isolated from local sources is important for both functional food production and the preservation of microbial diversity. The aim of this study was to evaluate the probiotic potential of *Lactobacillus* strains isolated from traditional fermented dairy products from different regions of Türkiye under *in vitro* conditions. In the study, 15 different *Lactobacillus* strains isolated from traditional fermented dairy products were examined. Evaluation criteria included resistance to stomach pH, tolerance to bile salts, capacity to adhere to host cells, antibacterial activity and autolytic properties. The strains were analyzed for their probiotic properties by exposing them to different stress conditions with *in vitro* tests. As a result of the analyses, it was determined that *Lactobacillus plantarum* TR-8 and *Lactobacillus rhamnosus* TR-12 strains were resistant to stomach acid, showed high tolerance to bile salts, and exhibited significant antimicrobial activity against pathogens such as *Salmonella typhimurium* and *Listeria monocytogenes*. It was also understood that these strains showed high viability in milk-based matrices and could be biotechnologically integrated into fermented product formulations. The robust tolerance of TR-8 and TR-12 strains to gastrointestinal-like conditions suggests their potential survivability and functional stability within the human digestive tract. Their antimicrobial properties, particularly against *Salmonella typhimurium* and *Listeria monocytogenes*, underline their applicability as bio-protective cultures in food systems. The ability of these strains to thrive in milk-based environments further enhances their value for use in the production of probiotic-enriched dairy products. These findings support the use of locally sourced *Lactobacillus* strains in both health-oriented and industrial applications, contributing to the functional food sector while valorizing traditional microbial resources. This study highlights the probiotic potential of *Lactobacillus* strains isolated from traditional fermented milk products in Türkiye. Specifically, *L. plantarum* TR-8 and *L. rhamnosus* TR-12 emerged as strong candidates for industrial probiotic development due to their acid and bile resistance, antibacterial properties, and viability in food matrices. The results provide a scientific basis for the biotechnological exploitation of local microbial resources, aligning with the goals of sustainable development and economic valorization of regional biodiversity.

**Key Words:** Biotechnology; Functional food; Lactobacillus; Local strains; Probiotic.

## PHYTOSOMES IN HERBAL DRUG DELIVERY

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### **Abstract:**

Phytosomes are a novel approach in herbal drug delivery systems designed to enhance the bioavailability and therapeutic efficacy of plant-based compounds. Many herbal extracts and phytoconstituents, despite having significant pharmacological activities, suffer from poor absorption, rapid metabolism, and low bioavailability when administered orally. Phytosomes are advanced lipid-compatible molecular complexes where phytoconstituents, particularly polyphenols, are bound to phospholipids such as phosphatidylcholine. This unique formulation enhances the solubility, stability, and permeability of herbal compounds across biological membranes, resulting in improved pharmacokinetic and pharmacodynamic profiles. Unlike conventional herbal extracts, phytosomes exhibit better absorption in the gastrointestinal tract, higher plasma concentration, and prolonged systemic circulation. They are particularly beneficial for compounds like flavonoids, terpenoids, and tannins, which often have limited oral bioavailability. The preparation of phytosomes involves a simple yet efficient process, and the resulting complexes can be formulated into various dosage forms, including capsules, tablets, and topical applications. Clinical and preclinical studies have demonstrated the superiority of phytosomes in delivering herbal bioactives such as curcumin, silymarin, quercetin, and ginkgo flavones. Furthermore, phytosomes are well-tolerated and safe, offering a promising platform for enhancing the therapeutic potential of traditional herbal medicines. The integration of phytosome technology into herbal drug delivery represents a significant advancement, bridging the gap between traditional knowledge and modern pharmaceutical science.

**Keywords:** Phytosomes, herbal drug delivery, bioavailability, phospholipids, phytoconstituents, curcumin, silymarin, flavonoids, pharmacokinetics, herbal medicines.

## COMPUTER AIDED DRUG DESIGN IN DRUG DELIVERY SYSTEM

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### **Abstract:**

Computer-Aided Drug Design (CADD) has revolutionized the pharmaceutical industry by significantly accelerating the drug discovery process while reducing cost and time. CADD uses computational techniques to identify and optimize potential drug candidates based on molecular structure, biological activity, and interactions with target proteins. The two main approaches in CADD are structure-based drug design (SBDD) and ligand-based drug design (LBDD). SBDD relies on the 3D structure of the biological target, allowing for the design of molecules that fit precisely into the active site. LBDD, on the other hand, is used when the structure of the target is unknown and focuses on the properties of known active molecules. Key computational tools include molecular docking, quantitative structure-activity relationship (QSAR) modeling, pharmacophore modeling, and molecular dynamics simulations. These techniques enhance the understanding of drug-receptor interactions, predict pharmacokinetics and toxicity, and improve lead compound optimization. CADD also supports virtual screening of large compound libraries, significantly narrowing down the number of potential candidates for synthesis and testing. Recent advances in artificial intelligence and machine learning have further boosted CADD capabilities, enabling better predictions and decision-making. Ultimately, CADD contributes to more targeted, efficient, and personalized drug development, making it an indispensable tool in modern pharmaceutical research.

### **Keywords:**

Computer-Aided Drug Design (CADD), structure-based drug design (SBDD), ligand-based drug design (LBDD), molecular docking, QSAR, pharmacophore modeling, molecular dynamics, virtual screening, drug discovery, AI in drug design.

## AN ANALYSIS OF SOCIAL MEDIA USE IN TERMS OF PUBLIC RELATIONS ACTIVITIES OF MUNICIPALITIES: THE CASE OF THE BLACK SEA REGION

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### ABSTRACT

**Introduction and Purpose:** This study aims to analyze the use of social media by local governments in the context of content types and their interaction with target audiences. Social media offers significant potential for promoting the principles of participation, accountability, and transparency, as well as for identifying citizens' expectations and demands, recognizing their profiles, and delivering messages within the framework of the two-way symmetrical communication model. In this regard, the study analyzes the social media practices of municipalities in the Black Sea Region.

**Materials and Methods:** Within the scope of the research, the Twitter, Facebook, and Instagram accounts of 18 municipalities in the Black Sea Region were analyzed using content analysis between April 25 and May 4, 2025. During this period, the posts were statistically tabulated using quantitative methods. The study aimed to determine whether the posts served promotional or recognition functions and whether the messages were one-way or two-way in nature. Additionally, the content of the communication established by the municipalities through social media during this time frame was also analyzed.

**Results:** The research findings indicate that municipalities predominantly use social media for promoting institutional services, sharing the mayor's activities, and maintaining a culture of celebration and protocol. In contrast, issues such as democratic participation, accountability, oversight, recognition practices, and interaction with citizen demands are addressed only to a limited extent.

**Discussion and Conclusion:** The most fundamental feature that distinguishes social media from other communication tools is its capacity to enable mutual interaction. The insufficient use of the two-way symmetrical communication model—such as gathering public opinion, collecting feedback, or addressing complaints—and the limited number of posts aimed at understanding the target audience indicate that municipalities are not effectively utilizing the potential offered by social media.

**Keywords:** Public Relations, Social Media, Public Relations in Local Governments

## **DIGITAL RITUALS: CEREMONIAL SHARING PRACTICES AND COLLECTIVE AFFECT ON SOCIAL MEDIA**

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### **ABSTRACT**

Social media platforms have evolved beyond tools for personal expression; they have become spaces where collective emotions, symbols, and beliefs are enacted and circulated through ritual-like practices. This study examines recurring sharing patterns surrounding critical events—such as natural disasters, national elections, terrorist attacks, or days of mourning—as digital rituals that serve symbolic and emotional functions. Drawing upon Emile Durkheim’s theory of collective consciousness and rituals, the paper explores how these digital practices enable emotional bonding, community formation, and meaning-making in the face of shared trauma or crisis.

The main objective of this study is to analyze whether and how certain images, phrases, hashtags, and repetitive posting behaviors employed by social media users during moments of collective crisis perform ritualistic functions. The analysis focuses on the aftermath of the February 6, 2023 earthquakes in Turkey, using data collected from X (formerly Twitter) and Instagram. The methodology combines qualitative content analysis and visual discourse analysis to decode both textual and visual dimensions of user engagement.

The findings demonstrate that certain symbols—such as candle emojis, black ribbons, or phrases like “we will not forget”—are repeatedly shared within highly patterned forms, creating a symbolic sense of unity. This repetition itself reveals the secular but ritualistic nature of digital communication and highlights the role of these symbolic acts in shaping collective memory. In this context, digital rituals emerge as emotionally charged performances that help users collectively process grief, anxiety, or solidarity, thereby transforming platforms into arenas of mediated communal mourning and remembrance.

**Key Words:** Digital rituals; Social media; Visual culture; Affective communication; Crisis and mourning

## FINANCIAL PERFORMANCE ANALYSIS OF TOURISM SECTOR / ENTERPRISES

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### ABSTRACT

**Introduction and Purpose:** The concept of tourism has emerged due to people's need to rest, travel, discover new places and get to know different cultures. Tourism businesses have been established in line with these needs. In order to control the tourism that takes places and ensure continuity, financial performances must be analyzed.

**Materials and Methods:** With the financial performance analysis, it is possible to reach the efficiency level of resources, cost control processes and profitability levels. With this data, business managers and investors can make predictions about the future of the business and decide whether to create a budget and make investments accordingly. In this thesis, the financial performances of AYCES, AVTUR, ETILR, MAALT, PKENT, TEKTU, MERIT and THY companies listed in BIST Tourism between 2013-2023 were analyzed. Current ratio, net profit margin, return on equity, debt/ equity ratio, asset turnover ratio were used in the analysis. A 10 year activity period was considered and Financial Ratio Analysis and Trend Analysis were used.

**Results:** The current ratio should be between 1.5 and 2. Liquidity should be between 1 and 1.5. Cash ratio should be between 0.2 and 0.5. Debt/total assets ratio should be less than 50%. Total debt/equity ratio should be 1 or less. Equity/total assets ratio should be 50% or more.

**Discussion and Conclusion:** Companies were primarily affected by the pandemic. In the performance analysis of THY company, it experienced balanced growth between 2013-2019, experienced a short-term shock in 2020 and entered a stagnant period for a while, then experienced recoveries and increases between 2021-2023.

**Key Words:** Tourism; Financial Performance; Trend; THY

## THE MEDIATING ROLE OF PARENTHOOD REGRET IN THE RELATIONSHIP BETWEEN PARENTS' SELF-STIGMA AND PARENTAL BURNOUT

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### **Abstract**

Changes in family life have brought various family issues, including burnout. Although research on parental burnout is abundant, studies examining parenthood regret in conjunction with parents' self-stigma (PSS) and parental burnout remain limited. To explain the relationship between PSS and parental burnout, it is necessary to explore the role of parenthood regret. This study aims to examine the mediating role of parenthood regret in the relationship between PSS and parental burnout. The study follows a correlational research design. The participants of this study consist of 169 parents aged between 21 and 63 years ( $M=37.4 \pm 9.23$ ). Pearson's product-moment correlation coefficient and Hayes' bootstrap method were used for data analysis. Findings revealed a positive relationship between PSS and parental burnout. Additionally, positive correlations were found between parenthood regret and PSS, as well as between parenthood regret and parental burnout. The current study suggests that parenthood regret plays a mediating role in the relationship between PSS and parental burnout. These results indicate that parenthood regret may serve as an underlying mechanism in this relationship and could be utilized in marriage and family counseling.

**Keywords:** Parents' self-stigma, parental burnout, parenthood regret.

## EEG-BASED BRAIN–COMPUTER INTERFACE SYSTEMS FOR EXOSKELETON CONTROL: A REVIEW WITH CONCEPTUAL INSIGHTS

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### ABSTRACT

This paper presents a comprehensive review of EEG-based Brain–Computer Interface (BCI) systems, with a focus on mental command recognition and its integration into human–machine interaction platforms. Recent advances in machine learning and deep learning techniques have enabled the translation of raw EEG signals into meaningful commands, facilitating control over robotic systems, assistive technologies, and exoskeletons. Key EEG paradigms such as motor imagery (MI), steady-state visual evoked potentials (SSVEP), and P300 are explored in detail with respect to their signal characteristics, classification challenges, and application performance.

We further propose a conceptual framework for a BCI-assisted exoskeleton system aimed at assisting individuals with lower-limb motor impairments. The proposed architecture includes signal preprocessing, feature extraction via discrete wavelet transform and autoregressive modeling, and classification using CNN, LSTM, or SVM algorithms. Wireless communication platforms like OpenViBE and Raspberry are recommended for real-time signal processing and device control. Although the proposed system has not yet been implemented experimentally, referenced studies demonstrate the feasibility of such applications with reported classification accuracies exceeding 90%.

The study also compares deep learning architectures—including CNN, RNN, LSTM, Autoencoder, and Transformer networks—highlighting their strengths and limitations for mental command recognition. Practical examples from the literature, such as EEG-based control of wheelchairs, robotic arms, and drones, are summarized to showcase the real-world potential of BCI systems. This paper aims to guide future work in designing personalized, low-latency, and high-accuracy EEG-based interaction systems, with a particular focus on rehabilitation technologies and cognitive augmentation.

**Keywords:** Electroencephalography (EEG), Brain-Computer Interface (BCI), Deep Learning (DL), Signal Processing

## EGYPTIAN STADIUMS & CAIRO'S ULTRAS: POLITICAL MISCALCULATIONS AND RHIZOMIC PROLIFERATION

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### ABSTRACT

**Introduction and Purpose:** Despite extensive scholarship on Egypt's Ultras, the reasons underlying their organizational form remain underexamined. This research seeks to uncover how the unique characteristics of stadiums as a social space enabled the emergence of rhizomic structures: decentralized, non-hierarchical formations. It argues that the Ultras groups' organization was not incidental, but rather an organic outcome of the stadiums' socioeconomic environment and the distinct dynamics of Egyptian football fandom.

**Material and Methods:** Building on previous literature, this study situates the issue within the broader scholarship on the Egyptian regime's development and its governance of public spaces. It relies heavily on primary sources, including televised segments and state media, to explore how Ultras groups took shape and how the regime framed them during this process. Theoretical grounding is provided by Deleuze and Guattari's concept of the rhizome, which helps to explain the Ultras groups' resilience and proliferation. This study also draws on literature on authoritarianism, mass mobilization, and Egyptian football culture.

**Results:** The findings suggest that stadiums, shaped by Egypt's political history and distinct football fandom, offered spaces for decentralized forms of organization to emerge. Alongside mandatory conscription, stadiums were found to be the only spaces where Egyptians from different socioeconomic backgrounds interacted. These spaces were allowed to exist and sustained due to calculations made during the Nasser and Sadat eras. Over time, new communication technologies and influences from European fan cultures allowed for these spaces to develop dynamics unforeseen by the regime. The Ultras rhizomic structure emerged as a natural consequence of this unique setting, as an unintended consequence of the state's exceptional management of stadiums.

**Key Words:** Ultras; Rhizome; Stadiums; Political Mobilization; Governance of Public Spaces

## **ARTVIN'S ECOMUSEUM POTENTIAL: SEEKING A MODEL AT THE INTERSECTION OF SUSTAINABLE DEVELOPMENT AND CULTURAL HERITAGE**

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### **Abstract**

According to International Council of Museums (ICOM), a museum is a not-for-profit, permanent institution in the service of society that researches, collects, conserves, interprets and exhibits tangible and intangible heritage. Open to the public, accessible and inclusive, museums foster diversity and sustainability. They operate and communicate ethically, professionally and with the participation of communities, offering varied experiences for education, enjoyment, reflection and knowledge sharing. Museums, as institutions prioritized in the fields of science, culture, and art and open to continuous development, also establish a strong and multifaceted relationship with the United Nations' Sustainable Development Goals (SDGs). Museums play significant roles not only in the preservation of cultural heritage but also in areas such as social justice, education, equality, and environmental sustainability. They operate ethically and professionally, engage with communities, and offer diverse experiences for education, entertainment, reflection, and knowledge sharing. By including sustainability themes in exhibitions and activities, museums can promote conscious consumption and take a leading role in the use of environmentally sensitive methods for the preservation of collections. Aligned with the goals of ecological, social, and cultural sustainability, ecomuseums stand out as an important tool and model in accordance with the United Nations' Sustainable Development Goals. Ecomuseums do not only focus on objects; they center people, the environment, ways of life, production practices, local knowledge, and collective memory. This approach contributes directly to the multidimensional nature of development. Within the scope of quality education, ecomuseums support non-formal education by transferring local knowledge systems, traditional crafts, agricultural methods, and cultural practices. Ecomuseums contribute to economic diversity by supporting local craftsmanship, ecotourism, sustainable agriculture, and rural production. They offer employment opportunities especially for women and youth and support rural development. These museums help strengthen the sense of belonging in rural areas, thus reducing migration. In contrast to urban-centered development models, ecomuseums promote locally grounded sustainable lifestyles. By making traditional production techniques visible, they raise awareness of responsible consumption habits. They enhance consumer awareness in areas such as handicrafts, local foods, and sustainable agriculture. Ecomuseums are not confined to a physical space; rather, the museum itself is the local geography. This is because the local community is not a passive audience, but the active creator and sustainer of the museum. With its tangible and intangible cultural heritage as well as its rich natural assets, Artvin possesses significant potential for a sustainable ecomuseum. The aim of this study is to examine the ecomuseum approach, which centers on ecological, cultural, and social sustainability, at both theoretical and practical levels, and to evaluate Artvin's tangible and intangible heritage potential in line with sustainable development goals. In this context, the study focuses on the multifaceted relationship between museums and the United Nations' Sustainable Development Goals, with particular attention to the preservation of local knowledge systems, the strengthening of community participation, the support of rural development, and the transmission of cultural heritage through environmentally conscious methods.

**Keywords:** museum, ecomuseum, sustainable development, community participation

## ADAPTATION OF THE MINDFULNESS DURING WORSHIP SCALE (MWS) TO TURKISH CULTURE

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### ABSTRACT

**Introduction and Purpose:** An individual's mindfulness during daily activities positively influences both the self and their behaviors. The concept of mindfulness has rapidly gained popularity in recent years within research and therapeutic applications. Additionally, mindfulness has entered the fields of religion and spirituality. "Mindfulness during worship" is currently a social topic that has attracted the interest of researchers. The present study aims to adapt the Mindfulness during Worship Scale (MWS), developed by Yousaf et al. (2022), to Turkish culture and to examine its psychometric properties.

**Materials and Methods:** Permission for scale adaptation was obtained from the original author. The scale was translated into Turkish by three English experts and synthesized into a single version. This version was back-translated by another group of three experts, confirming consistency with the original. The preliminary form was tested on 19 adults (18+) to address linguistic issues based on participant feedback. Final version was administered to 534 adults for Confirmatory Factor Analysis (CFA); after removing outliers, CFA was conducted with data from 516 participants. Concurrent validity was assessed by administering the MWS alongside the Self-Regulation Scale and the Five-Factor Mindfulness Scale to 138 adults. Reliability was evaluated using Cronbach's alpha.

**Results:** CFA results for the MWS showed acceptable fit: CMIN/df = 3.46, GFI = .92, AGFI = .90, CFI = .91, TLI = .90, RMSEA = .069, SRMR = .067. The MWS correlated .29 with Self-Regulation Scale and .46 with Five-Factor Mindfulness Scale. Cronbach's alpha was .84.

**Discussion and Conclusion:** The CFA results, concurrent validity findings, and Cronbach's alpha coefficient support the MWS as a tool for use in the Turkish culture. Construct of mindfulness during worship can be explored through the MWS in relation to various variables such as personality traits, spirituality, passion, and religious commitment.

**Key Words:** Mindfulness; Mindfulness During Worship Scale; Validity; Reliability

## EPIDEMIOLOGY OF BREAST CANCER

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### ABSTRACT

Breast cancer is a global public health challenge, with 2,296,840 new cases diagnosed in 2022, making it the second most commonly diagnosed cancer after lung cancer. It remains the leading cause of cancer-related mortality among women, with 666,103 deaths worldwide. Since 2008, both the incidence and mortality of breast cancer have increased globally by 21% and 14.6%, respectively. In Algeria, breast cancer accounts for 15-25% of all cancers, with a steadily rising standardized incidence rate in the Batna region, reaching 68.1 per 100,000 women in 2022. Survival rates for breast cancer in Algeria have improved significantly over the years, as shown by studies like CONCORD and SURVCAN. Five-year net survival increased from 38.9% (2000–2004) to 79.1% (2008–2012). However, disparities persist due to factors such as age, histological grade, and access to timely diagnosis and treatment. Key risk factors include non-modifiable elements (e.g., genetic mutations, early menarche, late menopause) and modifiable factors (e.g., alcohol consumption, obesity, physical inactivity). Prevention strategies are essential to reduce the burden of breast cancer. Primary prevention focuses on promoting healthy lifestyles, while secondary prevention emphasizes early detection through mammography and screening for high-risk populations, particularly women aged 50-74 or those with a family history of breast cancer. Tertiary prevention involves timely therapeutic interventions, including surgery, chemotherapy, radiotherapy, and immunotherapy, along with psychological support and rehabilitation.

**Keywords:** Cancer, Breast, Epidemiology, Batna. Algeria.

## EPIDEMIOLOGY OF NON-COMMUNICABLE DISEASES

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### **ABSTRACT**

Non-communicable diseases (NCDs), including cardiovascular diseases, cancers, chronic respiratory diseases and diabetes, account for 74% of deaths worldwide, according to the WHO (2023). These pathologies are progressing rapidly in low- and middle-income countries, which account for 86% of premature NCD-related deaths. In Algeria, their prevalence is on the rise, due to epidemiological transition, an ageing population (51% of people over 60 suffer from at least one chronic disease) and risk factors such as smoking, hypertension, hyperglycemia, physical inactivity, poor diet and air pollution. These diseases lead to costly complications, reducing economic productivity by between 1.5% and 5% of annual GDP. NCDs are also the leading cause of death in Algeria, with ischemic heart disease and stroke leading the way. Limited access to healthcare in rural areas exacerbates the situation, necessitating targeted awareness campaigns. In response, the WHO has initiated and extended a global action plan to reduce premature NCD-related mortality by 25% by 2030. In Algeria, a multi-sectoral Strategic Plan 2022-2030 has been put in place, based on 11 objectives, 30 plans and 113 measures. An integrated approach, combining prevention, early detection, education and regulation (tobacco taxation, food labelling) is essential to curb this epidemic and improve public health indicators. **Keywords:** Non-communicable diseases, risk factors, prevention, Algeria

**THE MEDIATING ROLE OF SELF-ESTEEM IN THE RELATIONSHIP BETWEEN  
PROBLEMATIC INTERNET USAGE AND THE ONLINE GROOMING RISK  
AMONG ADOLESCENTS**

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**Abstract**

The rapid advancement of the digital age has led young people to use the internet extensively. However, this situation has also brought negative consequences such as online grooming and cyberbullying. Although research on problematic internet usage (PIU) is abundant, studies examining PIU alongside the online grooming risk (OGR) and self-esteem remain limited. This study aims to investigate the mediating role of self-esteem in the relationship between PIU and OGR among adolescents. The study follows a correlational research design. The participants in this study consist of 237 adolescents aged between 13 and 17 years ( $M=16.33 \pm 1.6$ ). Pearson's product-moment correlation coefficient and Hayes' bootstrap method were employed for data analysis. Findings revealed a positive relationship between PIU and OGR. On the other hand, negative correlations were found between self-esteem and PIU, as well as between self-esteem and OGR. The current research indicates that self-esteem plays a mediating role in the relationship between PIU and OGR among adolescents. These results suggest that self-esteem may serve as an underlying mechanism in this relationship and could be utilized in child and adolescent counseling.

**Keywords:** Problematic internet usage, self-esteem, online grooming risk.

## EVALUATION OF CLINICAL AND BIOCHEMICAL PARAMETERS IN TWO VARIANTS OF SCREW-RETAINED SINGLE IMPLANT CROWNS

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### Abstract:

**Background:** The gold standard of implant-retained crowns has for many years been the metal-ceramic cement-retained crowns on a screwed-abutments. Today it represents an alternative if the implant positioning does not allow a screw-retained crown. The possibilities currently offered for this kind of rehabilitation in the posterior areas are represented by a chromium-cobalt/ceramic or a titanium/zirconia crown. These two solutions allow different productions workflows and generate different prosthetic interfaces at the implant abutment level. The aim of the study is to verify a significant difference in tissue response can be defined between these two different rehabilitations, 18 months after delivery.

**Materials and methods:** A total of 20 participants were included in the study, each of whom had at least two implants in the posterior sectors prosthetically treated with one of the two solutions previously illustrated. The values of IL-1 $\beta$ , IL-6, IL-8 were evaluated, together with the periodontal indices plaque index (PI), gingival index (GI), probing depth (PD), bleeding on probing (BOP), gingival recession (REC).

**Results:** During the time of clinical observation, at t0 (1 month from the delivery), t1 (9 months after the delivery) and t2 (18 months after the delivery), both types of crowns performed satisfactorily from a clinical point of view. In light of the results obtained, it is possible to define that there are no statistically significant differences between the two techniques, although Cr-Co/Cer has slightly higher values than the other.

**Conclusions:** It is possible to hypothesize, and confirm through subsequent or longer-term studies, that this difference could lead to a clinically visible difference between these two prosthetic solutions in the longer term. The single crown in Cr-Co shows a different interface with the titanium implant connection compared to the titanium-titanium contact of the connection between the implant and the Ti-Zir crown.

The ceramic that is layered directly on the Cr-Co does not show a connection interface with it, other than the areas hand-finished by the technician, vice versa, the Ti-Zir crown shows an area in which the milled zirconia product is bonded onto the titanium abutment with a resin-based cement.

The causes of this slight difference could be either the better tissue response to titanium and zirconia, or an increased level of inflammation from the Cr-Co/Ti connection.

## **THE RELATIONSHIP BETWEEN LEADERSHIP, CULTURE, AND PERFORMANCE: A THEORETICAL EXAMINATION IN THE HEALTHCARE SECTOR**

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### **ABSTRACT**

In this review study, the reciprocal relationships between leadership styles, organizational culture, and employee performance are examined from a multi-dimensional perspective based on the existing literature. Particularly in the healthcare sector—one of the most human-centered industries—employee performance holds critical importance for both institutional efficiency and service quality. Among the key managerial variables that directly influence employee performance are leadership behaviors and organizational culture. In this context, the study defines transformational, transactional, servant, autocratic, democratic, and situational leadership styles and evaluates their effects on organizational functioning and employee attitudes.

Moreover, organizational culture is analyzed under four main categories: clan, adhocracy, hierarchy, and market cultures. These cultural structures are fundamental factors that shape employees' perspectives on their work, sense of belonging, motivation levels, and overall job performance. Numerous studies in the literature demonstrate that leadership style influences organizational culture, and in turn, organizational culture plays a mediating role in determining employee performance. Especially when transformational and democratic leadership styles are combined with a positive and participatory organizational culture, they enhance employee commitment, satisfaction, and productivity.

As a result of this study, it is emphasized that organizations aiming to improve employee performance should not only focus on leadership style but also on the cultural foundation in which that leadership is embedded. In high-risk and fast-paced environments such as healthcare, effective leadership and a strong organizational culture emerge as key factors for service quality and institutional success.

**Keywords:** Leadership Style, Organizational Culture, Employee Performance

## SILENCE AS A PRAGMATIC AND PSYCHOLOGICAL STRATEGY: THE CASE OF AFRICAN WOMEN IN SOLA ADEBOWALE'S LONELY DAYS

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This study explores the combined role of silence as a pragmatic act and a psychological coping strategy in Sola Adebawale's *Lonely Days*, with more attention to the experiences of African women under patriarchal widowhood practices. In a society where speech is heavily followed and manipulated by cultural norms, silence evolves not as a void, but as a powerful communicative tool. The research draws on the Relevance Theory (Sperber & Wilson) and Elisabeth Kübler-Ross's Theory of Grief to investigate how silence works both contextually and emotionally in the novel. Adopting a qualitative textual analysis approach, this study interrogates how characters like Yaremi especially use silence in different situations: as a form of protest, submission, negotiation, or psychological withdrawal. Contextual cues, narrative gaps, and conversational implicatures are closely analysed to reveal the multiple layers of meaning behind the absence of speech. Findings provide that silence in *Lonely Days* is pragmatically loaded, revealing shifts in power dynamics and the inner psychological states of female characters. Yaremi's silent refusals and reflective moments illustrate how silence is used as a space for mental resilience, defiance, and grief management. On the other hand, the community's indifference towards the psychological wellbeing of widows points to a systemic neglect embedded in cultural practices. The study submits that silence, not often considered in pragmatic analysis, serves as a complex communicative act that embodies both vulnerability and strength. *Lonely Days* thus becomes a significant text for understanding how African women use linguistic absence to survive and resist oppressive realities.

**Keywords:** Silence, Pragmatics, Widowhood, African Women, Psychological Coping, *Lonely Days*, Resistance

## **ADVANCED FORENSICS AND ILLICIT FINANCIAL FLOW ANALYSIS IN NIGERIA'S INFORMAL ECONOMY**

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### **Abstract**

This study investigates the nexus between Nigeria's informal economy, illicit financial flows (IFFs), tax revenue losses, and the role of forensic audits in mitigating economic leakages. Using secondary data and empirical techniques including correlation analysis, trend evaluation, sectoral vulnerability indexing, and cluster analysis the paper reveals robust positive correlations among informal economic activity, IFF losses, and tax revenue erosion. The informal economy, accounting for a significant share of Nigeria's GDP, emerges as a key driver of untraceable capital outflows, especially in high-risk sectors such as agriculture, textiles, and trade. Despite the growing number of forensic audits, both IFFs and tax losses have continued to rise, indicating a lag between audit efforts and policy impact. Cluster analysis further highlights sector-specific risk groupings, calling for tailored regulatory responses. The findings underscore the need for a proactive forensic framework that leverages advanced technologies such as AI and real-time analytics. Policy recommendations emphasize financial digitization, improved sectoral oversight, and regulatory innovation. The study concludes by advocating for a multi-layered governance approach to address informality and promote sustainable fiscal transparency.

**Keywords:** Informal Economy, Illicit Financial Flows, Forensic Accounting, Tax Revenue Loss, Sectoral Risk, Nigeria

## THE USE OF DIGITAL TECHNOLOGY IN RESTORATIVE DENTISTRY

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### ABSTRACT

**Introduction and purpose:** The use of digital technology in daily medical practice has revolutionized modern dentistry by changing the way dentists approach restorative procedures. This new approach ensures greater accuracy, better outcomes, time efficiency, and smoother execution of dental procedures. The aim of this paper is, through the review of literature and various sources from professional books on restorative dentistry and scientific journals published by specialist dentists from different fields, to become familiar with the digital technologies applied in restorative dentistry, their usage techniques, their advantages and disadvantages.

**Materials and methods:** This thesis is a literature review type. In this thesis, we have referred to various literature sources and several online sources such as Google Scholar, MedScape, ResearchGate, PubMed, and Scribd.

**Results:** Digital technologies have begun to find widespread use in restorative dentistry, transforming traditional methods in dental procedures, however, their use presents some challenges. The initial investment in equipment such as Computer Aided Design – Computer Aided Manufacturing (CAD-CAM) systems, 3D printers, and intraoral scanners can be very high—often unaffordable for most dentists.

**Discussion and conclusion:** Continuous education of dentists on digital technology is crucial for realizing the full potential of these innovations. The future of restorative dentistry is undoubtedly digital.

**Key words:** Innovations; CAD-CAM; 3D printers; Intraoral Scanner.

## **FROM BLACKBOARDS TO TOUCHSCREENS: ARCHITECTURAL IMPLICATIONS OF DIGITAL PEDAGOGY**

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### **Abstract:**

This research paper explores the move between conventional teaching methods in the blackboard and increasing use of the touchscreen digital technology in the teaching in architecture, in aspects of the changes in pedagogical practices, student participation and design products. The key issue of this question is how well digital technologies contribute to active learning and collaboration in architecture studios, and it means that we would need the analysis of both qualitative and quantitative data on student performance, engagement indicators and instructor responses in the institutions which introduced various degrees of digital pedagogy issues. The results indicate that it is a drastic improvement in the engagement of students and collaborators when using the touchscreen approach, and in terms of numbers, the performance of the design projects was better and the satisfaction rates of the students and teachers were higher. These findings emphasize on the need to incorporate digital tools in architectural training whereby the paradigm change in the teaching strategy is extra-rich in the learning process and prepares the students more adequately to practice contemporary architecture. Moreover, this study has broader implications on the topic of architecture, as it can be considered by healthcare educators to define the significance of digital pedagogies that can help achieve the goal of interdisciplinary cooperation and practical education. Proving the feasibility of the application of touchscreen technology to create conditions of active engagement and performance, the study adds to the current debate concerning the transformation of education in different disciplines, which implies the need of educational organizations to adjust to the technical progress in order to maximize the educational practices and train students to satisfy the demands of the modern world.

**Keywords:** Digital Pedagogy; Learning Environments; Technology-Integrated Design; Virtual Learning Infrastructure; Spatial Adaptability in Schools.

## **FROM CONCRETE TO CALM: NATURAL MATERIALS AND SENSORY DESIGN IN URBAN STRESS RELIEF**

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### **Abstract:**

The paper examines the use of natural materials and sensory design in the urban setting as a solution towards reducing levels of stress among urban residents an urgent problem in metropolis caused by the use of concrete as urban design materials. A mixed methodology enabled a collection of qualitative data by surveying the user experience, environmental evaluation, and psychological readings of stress in diverse urban environments. The most important conclusions indicate a great importance of natural materials and sensory design in the environment, which is considerably effective in diminishing the stress levels among urban dwellers by giving the respondent a feeling of calm and well-being. The findings support the user of biophilic design approach in urban creation and population health campaigns, indicating that natural environments and sensory-focused fever are not only effective on the individual degree of mental health but also supply group resilience. The findings of this study go beyond mere aesthetic enhancement and seem to imply the necessity of policy shifts towards a more mindfully approach to urban planning, inclusiveness of mental health and environmental conditions. Effacing boundaries between such fields of study as environmental psychology and healthcare, the study supports the idea of the paradigm shift based on the consideration of the urban environment as the determinant of psychological well-being, introducing a realistic implementation of the future urban development aimed at the improvement of the urban living standards in the cities that are becoming stressful environments.

**Keywords:** Urban Stress Relief; Sensory Design; Therapeutic Environments; Healing Architecture; Materiality and Mental Health.

**INVESTIGATION OF VARIOUS PERFORMANCE PROPERTIES OF DYED 100% ACRYLUNA AND 70% ACRYLUNA / 30% WOOL KNITTED FABRICS**

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**ABSTRACT**

Since wool is an expensive fiber and can be irritating to some people due to its prickly properties, acrylic fiber can be used as a synthetic equivalent. In this study, in addition to 100% Acryluna, 70% Acryluna / 30% Wool blend Ne 30/1 yarn was spun and then single jersey fabric production was carried out from these yarns. The fastness values as well as thermal comfort and air permeability properties of the fabrics in question after dyeing were compared. In general, it was seen that using Acryluna alone provided a thermal comfort property close to acrylic/wool blended fabric. Naturally, the ability to keep warm was slightly lower in 100% acrylic fabric compared to acrylic/wool blended fabric. On the other hand, no difference was observed in terms of air permeability. When the fastness properties of the dyed fabrics were evaluated, it was observed that the fastness values of 100% acrylic fabric were significantly better than acrylic/wool blended fabric.

**Keywords:** Acrylic, wool, dyeing, fastness, comfort

## ANALYSIS OF THE CARBON FOOTPRINT OF SAMSUN UNIVERSITY'S KAVAK CAMPUS

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### ABSTRACT

In today's world, environmental problems and climate change are pressing global issues that necessitate accountability across institutions. For a sustainable future, the conscious use of energy, water, and natural resources, along with a scientific assessment of environmental impacts, is crucial. In this context, measuring the environmental impact of energy and resource consumption at higher education institutions represents a critical step toward developing environmentally responsible policies. This study aims to calculate the 2024 carbon footprint of Samsun University Kavak Campus, derived from electricity, natural gas, water consumption, and waste generation. Based on the findings, recommendations are proposed to minimise the Kavak campus's environmental impact. According to results, Samsun University Kavak Campus's total carbon footprint in 2024 was calculated as 65,260 kg CO<sub>2</sub>e (approximately 65.5 metric tons of CO<sub>2</sub>e). Of this total, 55.2% originated from natural gas consumption, while 42.9% came from electricity use. Additionally, waste generation contributed 1.7%, and water consumption represented 0.3% of the total emissions. A seasonal trend was observed; emissions peaked during winter due to heating-related natural gas use, whereas electricity-related emissions increased during the education periods. Monthly, emissions from natural gas were 29% higher than those from electricity. In light of these findings, it is advisable to enhance energy efficiency, transition to renewable energy sources, minimise waste generation, and implement initiatives to raise awareness among campus users. This study seeks to support the development of sustainable campus policies by presenting a practical assessment for the Kavak Campus.

**Keywords:** Carbon footprint, Environment, Greenhouse gas (GHG) emissions,

## LAND VEHICLE FIRES in TÜRKİYE: PRIMARY CAUSES AND PREVENTIVE MEASURES

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### ABSTRACT

Vehicle fires pose a growing safety concern in urban transportation, often resulting in significant loss of life, property damage, and traffic disruption. This study presents a comprehensive investigation into the underlying causes of land vehicle fires in Türkiye and proposes engineering-focused solutions to mitigate these risks. By utilising fire incident data from the fire departments of Türkiye's three largest cities, İstanbul, Ankara, and İzmir, along with national vehicle statistics, the study identifies key factors contributing to fire outbreaks in motor vehicles. The findings reveal that electrical system malfunctions are the most common cause of vehicle fires, often stemming from unauthorised modifications, system overloads, and the use of substandard materials. Other major contributors include fuel and oil leaks in the engine compartment, overheated brake systems, and general mechanical failures. The situation is further exacerbated by the country's ageing vehicle fleet and widespread neglect of routine maintenance due to economic constraints. Statistical analysis also indicates a correlation between fire frequency and city population density, vehicle density, and traffic patterns. The study emphasises the importance of preventive strategies such as stricter inspection protocols, improved manufacturing standards, the integration of fire-resistant materials in vehicle design, and the inclusion of fire suppression systems, especially in public transport vehicles. Public awareness campaigns and regulatory reforms are also proposed to address risky user behaviours and promote a fire safety culture.

Overall, this research highlights the need for coordinated technical, regulatory, and educational efforts to enhance vehicle fire safety and reduce the incidence and consequences of land vehicle fires in Türkiye.

**Keywords:** Car fire, Electrical failure, Fuel leakage, Maintenance, Safety, Vehicle.

## THE ROLES OF PREVENTIVE AND CURATIVE HEALTH CARE IN ECONOMIC DEVELOPMENT

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### ABSTRACT

Health expenditures are a key driver of economic development, yet the distinct roles of curative and preventive spending remain underexplored. This study investigates the effects of curative and preventive health expenditures on economic growth in OECD countries.

Using balanced panel data from 29 OECD countries covering the period 1998–2021, we estimate fixed effects regression models with country and year effects to examine the relationship between per capita income and curative and preventive health expenditures. Squared terms are included to capture potential nonlinearities, and the models control for key demographic and economic variables. To address potential endogeneity, we also estimate models using lagged values of the variables of interest and control variables. Additionally, we explore two extensions of fixed effects models: one by income group and another that interacts with curative spending and education expenditure.

Curative health expenditure exhibits a statistically significant U-shaped relationship with real GDP per capita, becoming growth-enhancing above a threshold (2.87% of GDP). Preventive expenditure does not show a statistically significant effect. The model extensions reveal that curative spending has stronger growth effects in higher-income countries and in contexts with greater investment in education.

The findings also suggest that the impact of health spending on growth depends on the broader economic and institutional context. Evidence from the thesis highlights that aligning curative expenditure with human capital investment is especially important in advanced economies. These insights support more targeted health financing strategies.

Results: Findings suggest that the growth impact of health spending depends on economic and institutional context. Evidence from the thesis indicates that aligning curative expenditure with human capital investment is especially important in advanced economies. These insights support more targeted health financing strategies in both OECD and emerging contexts.

**Keywords:** Curative Health Expenditure, Preventive Health Expenditure, Economic Growth, Economic Performance, OECD, Fixed Effects, Human Capital

## CLUSTERING BASED ENERGY EFFICIENCY OPTIMIZATION IN IOT-BASED WSN FOR HYDROPONIC FARMING MONITORING SYSTEMS

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### ABSTRACT

This study proposes an energy-efficient optimization model for enhancing the performance of hydroponics monitoring systems in IoT based wireless sensor networks. The model involves the random deployment of nodes, which are clustered using the BIRCH algorithm based on features such as residual energy, distance to the base station, intra-cluster distance, maximum transmission energy, node degree, and communication load. Cluster head selection is optimized using t-distributed Stochastic Neighbor Embedding (t-SNE) for dimensionality reduction, followed by the Dingo algorithm to determine the fittest cluster head for data aggregation. The proposed model demonstrates superior energy efficiency, with significantly longer network lifetime than IGWOEx-GWO and HGWO-FF. In simulations with 100, 200, and 300 nodes, the proposed approach resulted in delayed First Node Dead (FND) and Last Node Dead (LND), higher packet transmission, and greater residual energy, highlighting its effectiveness in prolonging the network lifespan and reducing energy wastage.

**Keywords:** Clustering, Cluster Heads, Feature extraction, Dingo Optimization, and Cluster Quality.

## **EXPLORING APPLICATION OF HIGHER RADIX MULTI-VALUED LOGIC (MVL) IN SEMICONDUCTOR DESIGN**

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### **ABSTRACT**

Multi-Valued Logic (MVL) systems, particularly quaternary (4-level) and ternary (3-level) logic circuits, present promising alternatives to traditional binary logic in Very-Large-Scale Integration (VLSI) design. By encoding more information per signal, MVL systems can potentially reduce interconnect complexity and enhance data density, addressing the challenges posed by scaling in modern semiconductor technologies. This paper explores the theoretical foundations for higher radix MVL. Through this paper we first develop the truth tables for various logic gates for the higher radix MVL. We analyze the advantages and limitations of MVL in VLSI applications, including power consumption, area efficiency, and susceptibility to process variations.

**Keywords:** Multiple-Valued Logic (MVL), Quaternary Logic, Ternary Logic, VLSI Design, Interconnect Complexity, Data Density, Low-Power Circuit.

## THE RIGHT TO EDUCATION AND EQUALITY IN THE CONTEXT OF ACCESS TO SPECIAL EDUCATION: A COMPARATIVE ANALYSIS OF NATIONAL AND INTERNATIONAL REGULATIONS

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### ABSTRACT

This study aims to examine how the principle of equality is ensured in the realization of the right to education for individuals with special needs, within the framework of national and international regulations. This study aims to examine how the principle of equality is ensured in the realization of the right to education for individuals with special needs, within the framework of national and international regulations. The right to education is one of the most fundamental human rights, constitutionally guaranteed in many countries, including Turkey. However, individuals with special educational needs often face significant barriers in realizing this right equally. This study aims to examine how the principle of equality is ensured in the implementation of the right to education for individuals requiring special education, within both national and international legal frameworks. Specifically, it compares UNESCO's Convention Against Discrimination in Education (1960), the World Declaration on Education for All (1990), and the Turkish Ministry of National Education's Regulations on the Right to Special Education (2022). The purpose is to assess how these documents address inclusive practices and the extent to which they guide educational policies toward accessibility and equality. This study employs a qualitative research design using document analysis. The data sources consist of three official documents selected based on their relevance to the themes of the right to education, equality, and access to special education. The documents are: (1) UNESCO's Convention Against Discrimination in Education (1960), (2) UNESCO's World Declaration on Education for All (1990), and (3) Turkey's Special Education Legal Regulations issued by the Ministry of National Education (2022). These documents were analyzed using qualitative content analysis. Key concepts such as inclusiveness, legal guarantees, and implementation mechanisms were coded and categorized into themes. Expert validation was sought to ensure the credibility of the analysis process. The findings show that all three documents emphasize the importance of equality in education. The UNESCO documents provide strong normative frameworks, focusing on non-discrimination and inclusive vision, but lack detailed guidance on practical implementation. In contrast, the Turkish legal regulations offer more concrete and actionable provisions, including individualized education programs (IEPs), resource rooms, and inclusive education strategies. However, national regulations tend to limit the understanding of equality to physical accessibility, often overlooking pedagogical and social dimensions. The analysis highlights the need for a more holistic approach that combines legal guarantees with inclusive pedagogical practices to ensure full educational participation for individuals with special needs.

**Keywords:** Right to Education; Special Education; Equality; Inclusive Education; Legal Regulations; Individualized Education Program (IEP); Educational Policies.

## **A INSTITUTIONAL ACTOR ON THE PATH TO A LIFELONG LEARNING SOCIETY: THE TRANSFORMATION OF THE DIRECTORATE GENERAL FOR LIFELONG LEARNING**

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### **ABSTRACT**

This study examines the historical evolution, institutional structure, ongoing projects, target groups, and future vision of the Directorate General for Lifelong Learning (DGLL) in Turkey, which has played a pivotal role in shaping and institutionalizing lifelong learning (LLL) policies. Employing a qualitative research approach based on document analysis, the study draws primarily on publicly accessible official sources such as strategy documents, policy papers, activity reports, and the 2024 policy publication titled “DGLL: Past, Present, Future.” Data were analyzed using a descriptive analysis method to identify patterns, strategic focuses, and institutional priorities. The findings indicate that DGLL has undergone a significant transformation from a conventional provider of adult literacy and citizenship education to a multifaceted institution addressing digital skills, green competencies, and inclusive learning. With a particular focus on disadvantaged groups such as women, elderly individuals, retirees, migrants, and persons with disabilities, the DGLL has developed targeted programs aimed at enhancing access, equity, and active citizenship. Moreover, the integration of 21st-century skills—such as digital literacy, communication, problem-solving, and self-management—into open and non-formal education curricula reflects a progressive alignment with global educational standards and European Union recommendations. DGLL’s institutional infrastructure, consisting of 1,000 Public Education Centers, 32 Institutes of Maturation, and five Open Education Schools, supported by strategic collaborations with NGOs, municipalities, and the private sector, provides a broad and flexible learning ecosystem. These components contribute directly to Turkey’s overarching goal of cultivating a lifelong learning society by democratizing access to education and fostering individual empowerment. Nevertheless, challenges remain in areas such as financial sustainability, regional disparities in educational access, and learner motivation. Addressing these limitations requires the development of more flexible, inclusive, and regionally responsive policies. The study concludes that the DGLL is a critical institutional actor in Turkey’s LLL landscape and offers strategic insights for enhancing the sustainability and effectiveness of lifelong learning policies in the context of broader social and economic transformation.

**Keywords:** Lifelong Learning; Adult Education; Educational Policy; Directorate General for Lifelong Learning; Digitalization; Social Inclusion; 21st-Century Skills; Public Education; Policy Analysis

## EVALUATION OF EMOTIONAL WELL-BEING IN HOSPITALIZED CHILDREN

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### ABSTRACT

Children are emotionally affected by hospital experiences. Children's long-term hospital experiences may affect their cognitive, emotional, and psychosocial development. The hospital and medical procedures may cause children to exhibit anxious, withdrawn, fearful, restless, and angry behaviours during hospitalization and may affect their psychological well-being. Emotional well-being is a broad term that includes emotions, reactions, and relationships within the scope of emotional development. Emotional development includes skills such as identifying, understanding, managing, and empathizing with emotions, and for this reason, it is thought to be appropriate for sick children to express their emotions. Therefore, the aim of this study was to evaluate the emotional well-being of hospitalized children. This is quantitative research and analysed the emotional and psychological well-being levels of hospitalized children using the descriptive survey method. Sixty hospitalized children between the ages of 4 to 13 participated in the study. Data was collected using the "Stirling Emotional and Psychological Well-Being Scale for Children". Mann-Whitney U, Kruskal Wallis-H and Tamhane's T2 post hoc tests were used to analyse quantitative data. The data analysis showed that hospitalized children had moderate emotional and psychological well-being. In addition, girls had higher levels of emotional and psychological well-being than boys and children between the ages of 7 to 9 had higher levels of emotional and psychological well-being than others. The emotional and psychological well-being levels of hospitalized children are very low, especially in adolescence. Research has shown that hospital experience has a negative emotional impact on children, even without medical intervention. It is therefore important to provide children with psychological support during their medical treatment.

**Keywords:** Sick children, Hospitalized children, Emotional development, Emotional well-being.

## THE PREDICTIVE EFFECT OF ATTITUDES TOWARDS READING HABITS ON ATTITUDES TOWARDS CHILDREN'S LITERATURE

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### ABSTRACT

Children's literature, which stands out with its educational aspect, has many positive gains on children's physical, cognitive, language, social and emotional development. Reading and reading habits are indispensable factors for positive personal and social change and development. In order to ensure this change and development, it is necessary to popularize the habit of reading in society. As the parents of the future, young people's awareness of reading, reading habits and children's literature works will be effective in children's individual development, transforming reading skills into habits and raising them as good readers. For this reason, it is important to examine whether there is a relationship between young people's reading habits and their awareness of children's literature and several variables. This study was performed to examine the predictive effects of young people's attitudes toward book reading habits on attitudes toward children's literature. This study, which included 365 young people, was a cross-sectional study using data that was collected using the "Personal Information Form," "Attitudes Towards Book Reading Habit Scale," and "Attitudes Towards Children's Literature Scale." The data were analysed using an independent groups t test, an ANOVA test, a Mann-Whitney U test, a Kruskal Wallis-H test, and a Pearson's correlational analysis. Results showed that young people's attitudes toward book reading habits and attitudes toward children's literature differed significantly according to various demographic variables. In addition, there was a significant correlation between young people's attitude toward reading habits and attitude toward children's literature. Results showed that as the reading habit of young people increases, their attitude toward children's literature increased by 47.3%. Thus, this research again revealed the importance of reading habits and developing positive attitudes toward reading among young people. This research again revealed the importance of reading habits and developing positive attitudes toward reading among young people.

**Keywords:** Young people; Reading habits; Books; Children's literature; Attitude.

## **A GENERAL OVERVIEW OF THE CURRENT STATUS OF THE WORLD ALPACA INDUSTRY**

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### **ABSTRACT**

When it comes to wool, the first thing that comes to mind is the fiber obtained from sheep. However, there are many animal species other than sheep from which wool is obtained. One of these is alpaca wool obtained from alpacas, which are among the camel species. Alpacas have two different types: Huacaya, whose fluffy hair protrudes from their bodies, and Suri, whose hair hangs from their bodies in the form of imposing locks of hair. The majority of alpacas are raised in Peru, Bolivia and Chile in South America. Also, Argentina and Ecuador are among the main alpaca breeding countries. Today, alpacas have reached the USA, Canada, Australia, New Zealand, England, Germany and various parts of Europe, and even China. This article provides information about the current status of the alpaca population in the world and the global alpaca fiber production.

**Key Words:** Alpaca, Huacaya, Suri, wool, fiber

## THE ROLE OF GREEN INFRASTRUCTURE IN COMBATING CLIMATE CHANGE: AN EVALUATION WITH CASE STUDIES FROM URBAN AREAS IN TURKEY AND GLOBALLY

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### ABSTRACT

The impacts of climate change are most profoundly felt in cities today. Rising temperatures, heavy precipitation, floods, and droughts exacerbate pressure on urban natural systems and affect various aspects of urban life, particularly water management. In response to these impacts, green infrastructure systems have recently come to the fore as a nature-based solution. The aim of this study is to comprehensively examine the environmental, social, and economic contributions of green infrastructure in addressing climate change in cities and to provide policy recommendations within the context of sustainable and resilient urban development goals. This study utilizes a literature review and case study method to examine the role of green infrastructure in combating climate change. A comprehensive literature review was conducted to identify the key principles, components, and benefits of green infrastructure. To connect theory with practice, comparative case studies were carried out by selecting cities from Turkey (Istanbul, İzmir, and Gaziantep) and from the international context (Singapore, Portland, and Berlin). The practices in Turkey and abroad were evaluated through qualitative content analysis of local policy documents, official project reports, academic publications, current municipal documents, and web sources. This analysis comprehensively reveals green infrastructure's contributions to climate change mitigation and adaptation, implementation approaches, outcomes, and the challenges encountered, with the process supported by visual materials. The study reveals that green infrastructure makes a significant contribution to urban sustainability and resilience by reducing the urban heat island effect, improving air quality, enhancing carbon sequestration, supporting biodiversity, and promoting sustainable water management. Social and economic co-benefits were also identified. The study highlights the strategic role of green infrastructure in climate action and emphasizes the necessity for strengthening local governments' governance capacity, technical expertise, and access to financial resources in order to enable the widespread implementation of successful practices.

**Keywords:** Climate Change, Green Infrastructure, Sustainability, Urban Solutions, Turkey, Global Cities.

## EFFECTS OF PROLINE PRE-TREATMENT ON GERMINATION AND OXIDATIVE STRESS PARAMETERS IN BLACK PINE (*PINUS NIGRA*) SEEDS

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### ABSTRACT

**Introduction and Purpose:** Proline is an organic compound known for its role in mitigating oxidative stress. This study aimed to investigate the effects of proline pre-treatment on germination and oxidative stress indicators in black pine (*Pinus nigra*) seeds. Proline pre-treatment was applied by incubating seeds in different concentrations of proline solutions for specific durations prior to sowing.

**Materials and Methods:** Seeds were incubated in proline solutions at concentrations of 0 mM (control), 0.5 mM, 1 mM, 5 mM, and 10 mM for 24 and 48 hours. After incubation, seeds were transferred to petri dishes and germination was monitored for 28 days. Germination percentage, root length, hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) content, and malondialdehyde (MDA) levels as indicators of oxidative stress were measured.

**Results:** Proline treatment did not significantly affect germination percentage. However, oxidative stress parameters varied depending on proline concentration and incubation duration. Notably, 5 mM proline reduced H<sub>2</sub>O<sub>2</sub> and MDA levels at both incubation times, while 10 mM proline increased these oxidative stress markers after 48 hours of incubation. Variance analysis showed that incubation duration had a statistically significant effect on root length ( $p < 0.05$ ), with seeds incubated for 24 hours exhibiting longer roots (average 9.79 cm) compared to those incubated for 48 hours (average 8.23 cm).

**Discussion and Conclusion:** The findings suggest that specific levels of proline pre-treatment may help regulate oxidative status in black pine seeds and support early seedling development. Conversely, higher proline levels may exacerbate oxidative damage. Additionally, shorter incubation durations appear more beneficial for root development. These results highlight the importance of optimizing proline concentration and treatment duration for practical applications in seed germination enhancement.

**Key Words:** Seed priming, Incubation time; Hydrogen peroxide; Lipid peroxidation

## CLUSTER ANALYSIS BASED ON NUTRITION AND EXERCISE HABITS OF YOUNG ADULTS

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### ABSTRACT

#### **Introduction and Aim:**

Nutrition and exercise are fundamental components in maintaining the health of young adults. However, individuals in this age group often face irregular eating patterns and low levels of physical activity due to factors such as a busy lifestyle and stress. This study aimed to identify groups of young adults with similar nutrition and exercise habits using K-means clustering analysis, thereby contributing to the planning of targeted health interventions.

#### **Materials and Methods:**

The study included 250 young adults who completed a 45-item scale measuring various aspects of nutrition and exercise behaviors, including healthy/unhealthy habits, meal regularity, and emotional eating. Data were analyzed using SPSS 26.0. Based on behavioral profiles, participants were divided into three clusters through K-means clustering analysis: Cluster 1 (n = 77), Cluster 2 (n = 39), and Cluster 3 (n = 134). This analysis revealed different patterns in nutrition and exercise behaviors within the sample.

#### **Results:**

The clustering analysis identified three distinct behavioral profiles:

Cluster 1 had the lowest scores across all subdimensions, including emotional eating (22.01), unhealthy behaviors (30.48), healthy behaviors (30.81), and meal regularity (12.84), with an overall mean score of 96.14.

Cluster 2 had the highest scores in all subdimensions: emotional eating (40.77), unhealthy behaviors (48.95), healthy behaviors (52.67), and meal regularity (18.77), with an overall mean score of 161.15.

Cluster 3 showed moderate scores across dimensions, with an overall mean of 126.84.

Statistically significant differences were found between the clusters in terms of age and body mass index (BMI) across all subdimensions ( $p < 0.05$ ).

#### **Discussion and Conclusion:**

There are notable differences in nutrition and exercise behaviors among young adults. While some individuals demonstrate low levels of engagement, others exhibit high but inconsistent behavior patterns. The third group presents a more balanced profile. Identifying these behavioral clusters may contribute to the development of more effective and personalized health interventions for young adults.

**Key Words:** Nutrition; Physical Activity; Young Adulthood; Cluster Analysis

**GENETIC AND HUMORAL INFLUENCE ON OBESITY****S. Punithavalli****V. Vijitha****Dr. R. Saravanan**

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**Abstract:**

Obesity is a multifactorial disorder characterized by excessive fat accumulation that poses a significant risk to health. While lifestyle and environmental factors are well-documented contributors, increasing evidence highlights the critical role of genetic and humoral influences in the development and progression of obesity. Genetic predisposition accounts for 40–70% of individual variation in body mass index (BMI), with specific genes such as FTO, MC4R, LEP, and LEPR playing prominent roles in appetite regulation, fat storage, and energy expenditure. Single nucleotide polymorphisms (SNPs) in these genes can lead to altered expression or function of key regulatory proteins, ultimately contributing to hyperphagia and reduced satiety. In addition to genetic factors, the humoral system—comprising hormones and cytokines—exerts significant control over metabolic processes. Hormones such as leptin, insulin, ghrelin, and adiponectin are central to energy balance and appetite modulation. Leptin resistance, commonly observed in obese individuals, impairs the brain's ability to regulate hunger and metabolism. Similarly, altered levels of ghrelin and insulin disrupt normal signaling, further promoting weight gain. Adipose tissue, once considered a passive fat store, is now recognized as an active endocrine organ that releases adipokines and pro-inflammatory cytokines, influencing systemic metabolism and promoting low-grade chronic inflammation seen in obesity. Understanding the interplay between genetic and humoral factors is crucial for developing personalized obesity interventions. Targeted therapies that address these underlying biological mechanisms hold promise for more effective and sustainable weight management strategies in the future. This integrated approach could revolutionize obesity treatment by moving beyond one-size-fits-all models.

**Keywords**

Obesity, Adipokines, Cytokines, hyperplasia, Body mass index

## FORECASTING OBESITY RATES IN TÜRKİYE WITH A HYBRID ARTIFICIAL NEURAL NETWORK MODEL OPTIMIZED WITH GENETIC ALGORITHM

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### Abstract

Obesity has emerged as a growing global public health problem, significantly reducing individual quality of life and imposing a substantial economic burden on healthcare systems. In recent years, the prevalence of obesity has also increased in Türkiye, making it one of the top priorities for health policies. This study aimed to develop a hybrid Genetic algorithm and Artificial Neural Network (ANN) model to predict adult obesity rates in Türkiye from 2003 to 2021 and to provide forward-looking projections up to 2032. The model incorporated six input parameters: population, gross domestic product, electricity consumption, the number of physical education teachers allocated through the national exam, obesity-related mortality rates, and the number of physicians. The ANN architecture was structured with two hidden layers, and the number of neurons in both layers was optimized using Genetic algorithm. The Levenberg-Marquardt algorithm was selected for training the model, enabling a fast and stable learning process. The model's performance was evaluated using various error metrics, including  $R^2$ , MSE, RMSE, SSE, MAPE, and MAE. During Genetic algorithm optimization, the best MSE was determined as  $7.66 \times 10^{-4}$ , while the MSE obtained on the test dataset after Levenberg-Marquardt training was calculated as 0.6591. These results demonstrated that the model achieved high prediction accuracy and could be considered an effective tool for forecasting obesity trends. Feature importance analysis was performed using both Garson's algorithm and the SHAP algorithm; both methods identified obesity-related mortality and the number of physicians as the most influential parameters on the model's output. This finding highlights the critical role of health-related variables in predicting obesity rates. Regression analyses of the ANN model revealed a strong correlation between predicted and actual values, indicating a successful prediction performance overall. Furthermore, epoch-based error performance graphs confirmed that the model was trained effectively without overfitting. According to the results, the obesity rate in Türkiye increased from approximately 26% in 2003 to 33% in 2021, with the model projecting a further rise to 36.37% by 2032. These findings indicate that obesity rates in Türkiye are expected to continue increasing in the coming years, posing an ongoing challenge for public health. The study goes beyond traditional statistical models by integrating a hybrid Genetic algorithm-ANN structure, enhancing prediction accuracy, and providing valuable insights for policymakers and health professionals as a decision support tool. Thus, this study demonstrates the potential of an interdisciplinary approach in forecasting chronic health issues like obesity, offering an effective example for future applications.

**Keywords:** Obesity, artificial intelligence, hybrid model, prediction, genetic algorithm

## REPRODUCTIVE HEALTH and FAMILY PLANNING in the CONTEXT of UTERINE FIBROIDS MODERN TREATMENT

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### Abstract

**Background.** Uterine fibroids, a prevalent condition among women of reproductive age [1], frequently necessitate hysterectomy [2, 3], otherwise, it may progress into cancer. However, contemporary medical paradigms emphasize organ-preserving approaches [4]. Consequently, to facilitate myoma regression, current medical strategies focus on the early diagnosis and minimally/non-invasive management of this pathology [5]. In recent years, the conservative treatment of uterine fibroids has incorporated selective progesterone receptor modulators [6], often in conjunction with gonadotropin-releasing hormone agonists [7]. Despite the therapeutic benefits of conservative management, significant limitations persist, including the inability to fully prevent recurrence and contraindications in reproductive-age women. Therefore, therapeutic priority is given to pharmacological agents that inhibit fibroid progression. Notably, scientific advancements have facilitated the attenuation of myoma proliferation via the proapoptotic effects of ulipristal acetate (Esmia) [8].

**Objectives.** Civil society strategies encompass not only the eradication of diseases contributing to reduced productivity but also population birth rates strategic management. The objective of our study was to determine the safest contraceptive method for reproductive age women intending to conceive after discontinuing adjuvant therapy for myoma.

**Theoretical Framework.** The study provides a comparative analysis of treatment outcomes in reproductive-age patients with myoma associated with uterine bleeding, who were administered either Esmia (ulipristal acetate) or the Mirena intrauterine device (IUD, levonorgestrel).

**Method.** ELISA method using the Access 2 Beckman Coulter automated biochemical analyzer was used for hormone levels identification, while ER7-4D ultrasound system – to assess endometrial parameters.

**Results and Discussion** In the first subgroup, treatment resulted in an increase, and in the second subgroup it thinned ( $P < 0.001$ ). Serum prolactin levels in the subgroup treated with ulipristal acetate decreased statistically significantly, whereas in the subgroup receiving levonorgestrel, prolactin levels increased. Additionally, progesterone levels significantly decreased in both subgroups. Esmia also exhibited a more pronounced reduction in estradiol levels.

**Research Implications.** This study will assist in selecting the optimal treatment for uterine fibroids while considering pregnancy prevention/planning strategies.

**Value.** These findings indicate that Esmia has a superior effect on both the endometrial and hormonal parameters compared to the Mirena IUD, therefore Esmia is the most desirable treatment option for women planning pregnancy after fibroid treatment.

**Key words:** family planning, fibroids/myoma, reproductive age and health, Mirena (levonorgestrel), Esmia (ulipristal acetate), civil society strategies

## References

1. Amirova MF, Huseynova EE, Aliyev AN, et al. Impact of Vitamin D Levels Drop on Endometria Hyperplastic Post-Menopausal Bleeding. *Surg Clin Prac.* 2025; 2(1): 1-5.
2. David M., Pitz C.M., Mihaylova A., Siedentopf F. Myoma-associated pain frequency and intensity: a retrospective evaluation of 1548 myoma patients// *Eur J Obstet Gynecol Reprod Biol.* 2016 Apr;199:137-140. doi: 10.1016/j.ejogrb.2016.02.026. Epub 2016 Feb 21. PMID: 26930041.
3. Płoszyński A., Gniadek R., Adamcio-Deptulska M., Mielnik J. Zachowawcze operacyjne leczenie mięśniaków macicy--wskazania i odległe wyniki [Surgical treatment of uterine myoma: need for surgery and long-term results]. *Ginekol Pol.* 1997 Sep;68(9):423-6. Polish. PMID: 9770840.
4. Amirova M., Hasanzade N., Novruzov E., et al. Correction of Cancer Medication With Herbal Preparations// *Med Clin Sci.* 2023; 5(4):16-21.
5. Yerezhepbayeva M., Terzic M., Aimagambetova G., Crape B. Comparison of two invasive non-surgical treatment options for uterine myomas: uterine artery embolization and magnetic resonance guided high intensity focused ultrasound-systematic review// *BMC Womens Health.* 2022 Mar 3;22(1):55-60. doi: 10.1186/s12905-022-01627-y. PMID: 35241063; PMCID: PMC8896369
6. Whitaker L.H., Williams A.R., Critchley H.O. Selective progesterone receptor modulators// *Curr Opin Obstet Gynecol.* 2014 Aug;26(4):237-42. doi: 10.1097/GCO.0000000000000082. PMID: 24950125.
7. Chung Y.J., Chae B., Kwak S.H., Song J.Y., Lee A.W., Jo H.H., Lew Y.O., Kim J.H., Kim M.R. Comparison of the inhibitory effect of gonadotropin releasing hormone (GnRH) agonist, selective estrogen receptor modulator (SERM), antiprogestosterone on myoma cell proliferation in vitro// *Int J Med Sci.* 2014 Jan 28;11(3):276-81. doi: 10.7150/ijms.7627. PMID: 24516352; PMCID: PMC3917117.
8. Nisolle M., Closon F., Firquet A., Top M., Pintiaux A. Le médicament du mois. L'acétate d'ulipristal (Esmia): un modulateur sélectif des récepteurs à la progestérone, nouveau traitement de la fibromatose utérine [Ulipristal acetate (Esmia): a selective modulator of progesterone receptors, new treatment of uterine fibromatosis]// *Rev Med Liege.* 2014 Apr;69(4):220-5. French. PMID: 24923103.

## THE ROLE OF PINK AESTHETICS AND ESTHETIC PROSTHETIC MATERIALS IN SMILE DESIGN: CONTEMPORARY APPROACHES AND DIGITAL TECHNOLOGIES

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### **ABSTRACT:**

**Introduction:** In aesthetic dentistry, smile design requires a holistic approach that addresses both functional and visual elements. Alongside **white aesthetics**, **pink aesthetics** plays a vital role by ensuring that the gingival form, symmetry, and color harmonize with the teeth to create a healthy and attractive smile. Techniques such as gingival contouring, laser treatments, soft tissue grafting, and periodontal surgery are frequently employed to achieve optimal pink aesthetics.

**Materials and Methods:** The smile design process considers the esthetics of teeth, gingival harmony, lip dynamics, and facial proportions, often supported by digital tools. Software such as **Smile Design Software**, **CAD/CAM systems**, and 3D facial and dental scanning technologies (e.g., Exocad, 3Shape, FaceHunter) enable a scientifically accurate and visually customized smile simulation and planning process.

In parallel, the choice of **esthetic prosthetic materials** significantly impacts the success and longevity of restorations. Contemporary materials such as **zirconia**, **lithium disilicate (E-max)**, **full ceramic**, **composite resins**, **lamine veneers**, and **hybrid ceramics** offer highly aesthetic and biocompatible solutions. Additionally, the use of **3D printing materials** and **bioceramics** in digital dentistry allows for more precise, patient-specific treatments, improving both clinical efficiency and patient satisfaction.

**Results:** modern smile design integrates both hard and soft tissue esthetics through a multidisciplinary approach, supported by digital technologies and individualized planning. The integration of pink aesthetics and advanced restorative materials enables the achievement of both functional excellence and natural-looking results.

**Keywords:** Smile design, pink aesthetics, digital dentistry, esthetic materials, CAD/CAM, zirconia, E-max

## IS LIFELONG LEARNING A MUST IN TODAY'S WORLD?

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### ABSTRACT

When we look at the history of education, education and training have been necessary for humanity from the past to the present. In prehistoric times, humanity learned most things out of necessity and educated itself through trial and error without realizing it. It taught those who came after it in order to make their lives easier and meet their needs. After this process, learning turned into a conscious activity and a social activity. In other words, education started as the knowledgeable teaching the ignorant (master-apprentice relationship) and later took the form of formal education. As can be seen, the reason for the existence of education is the existence of humans and the needs that humans will need in the course of their lives. These needs have developed in parallel with the development of humanity and today, development continues rapidly in the world of the twenty-first century. On the other hand, the mass media, which have developed in parallel with the rapidly developing communication technology, have inevitably made communication the basic tool of education and training. Especially the digital environment. Today, the internet environment has come to the fore in accessing information. For this reason, the learning area of humans has become limitless in parallel with their own interests and desire to learn. This situation has caused the understanding of education and training to change. Rapidly continuing developments, especially in the technological field, have brought new lifestyles and needs. Therefore, today, both in individual and social life, education and training have become more important than ever.

In this report, based on the information given above, a qualitative method and a phenomenological approach have been used to try to answer the question of whether lifelong learning is a necessity in today's world.

**Keywords:** Humanity, Learning, Lifelong Learning.

## TRAJECTORY PLANNING AND CONTROL OF A QUADROTOR UAV

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### ABSTRACT

#### Objectives:

Quadrotor UAVs are one of the most suitable devices for complex aerial operations. To execute complex operations and perform tasks within the quadrotor's dynamic limits, unmanned aerial vehicles require smooth trajectory planning. To obtain this goal, this research introduces a solution using ninth-order spline interpolation method to generate a trajectory similar to the flight trajectories of flying creatures in nature for better tracking and easier control. To control the planned trajectory, special cascade PID controller architecture is used. With using high order polynomials, this research aims to obtain continuous high order derivatives, also this provides better control performance and control outputs within the quadrotor's dynamic limits.

#### Methods:

Trajectories are generated using ninth order spline interpolation to ensure continuity for the high order derivatives. In this research, cascade PID controller is used as tracking control. Using inner control loop for attitude control and outer control loops for velocity and position controls obtains better stability and performance.

#### Results:

The system was developed and tested in a simulation environment. It was observed that the trajectory generated using higher order spline interpolation imposed less load on the trajectory control algorithm compared to trajectories developed with simpler methods.

#### Conclusion:

This research offers a viable solution for better trajectory planning and more robust control algorithm. This work also allows for more complex trajectory planning and tracking.

**Key Words:** Quadrotor UAV, Trajectory Planning, Trajectory Tracking, Spline Interpolation, Cascade PID Control

## QUINOLINE-DERIVED SCHIFF BASES AS INHIBITORS OF HUMAN CARBONIC ANHYDRASE ISOENZYMES (HCAI AND HCAII)

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### ABSTRACT

**Introduction and Purpose:** Carbonic anhydrase (CA) is a metalloenzyme that contains a zinc ion ( $Zn^{2+}$ ) at its active site. It catalyzes the reversible hydration of carbon dioxide to bicarbonate and a proton reaction that proceeds slowly in the absence of a catalyst (EC 4.2.1.1).

**Materials and Methods:** The designed compound was synthesized by condensation of appropriate halo-phenylhydrazine hydrochloride with 6-fluoroquinoline-2-carbaldehyde. CA catalyzes the hydrolysis of p-nitrophenyl acetate to p-nitrophenol, which can be monitored spectrophotometrically due to the strong absorbance of p-nitrophenol at 348 nm. This property allows for convenient measurement of enzyme activity.

**Results:** In this study, the inhibition effects of two quinoline schiff bases derivatives (**1a** and **1b**) on carbonic anhydrases (hCAs) were investigated. It was observed that the synthesized compounds exhibited effective inhibitory activity on the hCA I and hCA II enzymes. The  $K_i$  values of the synthesized compounds were found to be in the range of  $0.185 \pm 0.004$  to  $0.191 \pm 0.005$   $\mu M$  for hCA I, and  $0.157 \pm 0.006$  to  $0.179 \pm 0.007$   $\mu M$  for hCA II. According to the docking results, it was seen that the molecules which we examined were able to inhibit the relevant targets quite successfully. Acetazolamide was used as a positive control for hCA isoenzymes. Compared to the control compound AAZ, compound **1a** exhibited a stronger inhibitory effect on both hCA I and hCA II. Additionally, in silico analyses provided insights into the binding interactions, shedding light on the multi-targeting potential of the compound. Within the scope of the study, compound **1a** was found to display different binding affinities toward hCA I and II isoenzymes, demonstrating its potential to be further investigated as a selective and effective hCA inhibitor.

**Key Words:** Carbonic anhydrase; Inhibitory; In-silico; Quinoline

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**Abstract:**

Heart failure is a complex clinical syndrome characterized by the heart's inability to pump sufficient blood to meet the body's metabolic demands. It is a major public health concern worldwide, affecting millions of individuals and contributing significantly to morbidity, mortality, and healthcare costs. The condition arises due to structural or functional abnormalities of the heart, such as myocardial infarction, hypertension, or cardiomyopathy, which impair ventricular filling or ejection of blood. Heart failure is broadly classified into heart failure with reduced ejection fraction (HFrEF) and heart failure with preserved ejection fraction (HFpEF), each with distinct pathophysiological mechanisms and treatment strategies. Common symptoms include shortness of breath, fatigue, edema, and exercise intolerance. Diagnosis involves clinical evaluation, imaging studies like echocardiography, and laboratory tests such as B-type natriuretic peptide (BNP) levels. Management includes pharmacological interventions like ACE inhibitors, beta-blockers, diuretics, and newer agents such as ARNI and SGLT2 inhibitors, alongside lifestyle modifications and, in severe cases, device therapy or transplantation. Early detection and comprehensive care are crucial for improving quality of life and prognosis. Ongoing research aims to refine treatment approaches and identify novel therapeutic targets to reduce the burden of this chronic condition. Preventive strategies focusing on managing risk factors like hypertension, diabetes, and coronary artery disease play a key role in reducing the incidence of heart failure.

**Keywords:**

Heart failure, HFrEF, HFpEF, cardiomyopathy, ejection fraction, ACE inhibitors, beta-blockers, diuretics, ARNI, SGLT2 inhibitors, diagnosis, symptoms, prognosis, risk factors, chronic condition.

## DETERMINATION OF PHYSICAL, CHEMICAL, AND FUNCTIONAL PROPERTIES OF JUJUBE (*ZIZIPHUS JUJUBA* MILL.) POWDER

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### ABSTRACT

Jujube (*Ziziphus jujuba* Mill.) is a valuable fruit known for its rich nutritional composition, high phenolic content, and traditional use in medicine. In this study, fresh jujube fruits sourced from the Amasya region were dried at low temperature and ground into powder. The physical, chemical, and functional properties of the resulting jujube powder were analyzed.

The total phenolic content of the jujube powder was found to be 10.43 mg GAE/g, indicating strong antioxidant potential. The water holding capacity (0.60 g water/g powder) and oil holding capacity (0.22 g oil/g powder) suggest that the powder can contribute to texture and stability in bakery and functional food applications. Flowability parameters such as Carr index (15.48%) and Hausner ratio (1.18) indicate moderate flow characteristics, suitable for industrial use. In terms of color, L value (68.37)\* and hue angle (64.86°) showed that the powder possesses a moderately bright and appealing red-yellow tone, which may be advantageous in product formulation.

In conclusion, jujube powder demonstrates favorable characteristics such as low moisture content, high phenolic levels, and useful functional properties, supporting its potential as a natural ingredient in various food products. Its nutritional and technological advantages make it a promising component for the development of health-oriented functional foods.

**Keywords:** Jujube powder, phenolic compounds, antioxidant activity, functional food, physical properties

## **HYBRID PRACTICES: MERGING ARTISTIC SENSIBILITIES WITH SPATIAL DESIGN THINKING**

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### **Abstract**

With many researchers contemplating the concepts of the integration of artistic sensibilities in spatial design thinking with the view of aiding in amplifying innovation and creativity in design tools, this paper is a valuable effort in focusing on the vital issue on determining the obstacles as well as enablers that govern effective convergence of the two domains. Based on the qualitative data extracts of interviews with designers and artists as well as the case studies of hybrid design projects, the research demonstrates that the efficient collaborative methodology is based on communication processes, shared value, and interdisciplinary. Important conclusions have shown that the health care environment encompassing the artistic element contribution creates the greater engagement and responsiveness in the facility, which eventually achieves improved patient experiences and outcomes. These discoveries are more important than only aesthetics, and inclusion of artistic practices into the sphere of spatial design might contribute to the production of healing spaces aimed at supporting good health and facilitating emotional bonds among users. The research has implications to the discipline of healthcare design in general implying that the interdisciplinary approach to collaborations can provide creative solutions to complex Multifaceted challenges in the healthcare system. This study helps reevaluate the way spatial design approaches are implemented by promoting a paradigm shift towards hybrid practices, which can diversify the palette of the healthcare setting in that they do not only focus on functionality and efficiency but also on human experiences, thereby enhancing the landscape on which our healthcare facilities transcend.

**Keywords:** Hybrid Architecture; Art-Architecture Integration; Creative Architectural Practice; Artistic Expression in Architecture; Experimental Architecture.

## **HYPERTENSION AND THE PROMISE OF HERBAL NANOMEDICINE: A NEW ERA IN BLOOD PRESSURE MANAGEMENT**

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### **Abstract**

Hypertension, a chronic elevation of arterial blood pressure, remains a leading contributor to cardiovascular morbidity and mortality worldwide. Despite the availability of a wide range of synthetic antihypertensive drugs, issues such as drug resistance, adverse side effects, and poor patient compliance continue to challenge effective long-term management. In response to these limitations, herbal nanomedicine is emerging as a promising therapeutic alternative, blending the ancient wisdom of phytotherapy with the precision of modern nanotechnology. Herbal remedies, known for their minimal toxicity and multifaceted mechanisms of action, have demonstrated antihypertensive potential through antioxidant, vasodilatory, diuretic, and ACE-inhibitory effects. However, traditional herbal formulations often suffer from low bioavailability, instability, and inconsistent dosing. Nanotechnology addresses these challenges by enhancing the solubility, stability, targeted delivery, and controlled release of phytoconstituents. Herbal nanoparticles — such as nanoemulsions, liposomes, solid lipid nanoparticles, and polymeric nanoparticles — encapsulate bioactive compounds from plants like *Terminalia arjuna*, *Allium sativum* (garlic), *Camellia sinensis* (green tea), and *Withania somnifera* (ashwagandha). These nanoformulations have shown improved antihypertensive efficacy in preclinical models by ensuring better absorption, prolonged circulation, and site-specific action. Moreover, the integration of biocompatible and biodegradable carriers enhances safety and reduces systemic toxicity. This new era in hypertension treatment through herbal nanomedicine promises not only enhanced therapeutic outcomes but also personalized and sustainable approaches in cardiovascular care. While clinical validation and regulatory standardization remain ongoing challenges, the synergy of nanotechnology and herbal pharmacology offers a transformative path for blood pressure management in the 21st century.

**Keywords:** Hypertension, herbal medicine, nanomedicine, blood pressure management, phytoconstituents, nanoformulations, antioxidant, targeted drug delivery, cardiovascular health, personalized therapy.

## ASSESSMENT OF TURKISH AUDIT FIRMS IN THE LIGHT OF PCAOB INSPECTION REPORTS

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**ABSTRACT:** According to the Sarbanes-Oxley Act (SOX) and the Public Company Accounting Oversight Board's (PCAOB) rules, non-U.S. registered firms are subject to PCAOB inspections in the same manner as U.S. registered firms. In order to assess their compliance with the SOX, the rules of the PCAOB, the rules of the Securities and Exchange Commission (SEC), and professional standards in connection with their performance of audits, issuance of audit reports, and related matters involving issuers and brokers and dealers, the firms located in foreign jurisdictions are inspected by PCAOB. Since 2005, PCAOB has been inspecting non-U.S. registered firms. The research aims to find out whether there are any differences among the Big Four audit firms and the rest in this context. First PCAOB Registered Turkish Audit Firms are tabulated; then inspection reports of PCAOB are given in detail. Last, inspection reports regarding Turkish audit firms, representatives of Big Four are summarized. Except for Guney Bagimsiz Denetim ve Serbest Muhasebeci Mali Musavirlik A.Ş. (Ernst Young-EY), the other Big Four representatives had undergone inspections. Kpmg Bagimsiz Denetim ve Serbest Muhasebeci Mali Musavirlik A.Ş. (KPMG), and Pwc Bağımsız Denetim ve Serbest Muhasebeci Mali Müşavirlik A.Ş. (PwC) do not have any disciplinary proceedings, where EY and Drt Bagimsiz Denetim ve Serbest Muhasebeci Mali Musavirlik A.Ş. (Deloitte) have.

**Keywords:** PCAOB, inspection reports, disciplinary proceedings, Türkiye, Big Four.

**GREEN SYNTHESIS OF CHARACTERIZED ZNO NANOPARTICLES FROM  
CYMBOPOGON CITRATUS(LEMON GRASS) EXTRACT AND THEIR  
ANTIBACTERIAL PROPERTIES**

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**ABSTRACT**

Synthesis of zinc oxide nanoparticles (ZnO-NPs) using different plant extract has been suggested to have numerous biological applications. ZnO-NPs were synthesized using *Cymbopogon citratus* (lemon grass) methanol leaf extract and  $\text{Zn}(\text{CH}_3\text{COO})_2 \cdot 6\text{H}_2\text{O}$  as precursors. X-ray diffraction (XRD), scanning electron microscopy–energy-dispersive X-ray spectroscopy (SEM-EDX), UV-visible spectroscopy (UV-vis), and Fourier transform infrared (FTIR) were used to characterize the *C. citratus*/ZnO-nanoparticles. The antibacterial activity was determined using standard method. The phytochemical screening of the methanol leaf extract shows that it contains flavonoids, tannins, alkaloids, saponins, etc. The average crystallite size of the *C. citratus*/ZnO-NPs was 46.65 nm. SEM shows agglutinated quasi-spherical-like shape, while EDX indicates that the ZnO-NPs contain oxygen and zinc as the major elements (92.54%). The UV–vis analysis has absorption peaks at 372 nm and the optical energy band gap of 3.3355 eV was obtained. FTIR spectrum revealed the presence of organic moieties serving as reducing and capping agents. The extract exhibited strong antibacterial response against *Escherichia coli*, and *Staphylococcus aureus*, while the *C. citratus*/ZnO-nanoparticles exhibited weak and moderate response. The study supports the plant's traditional uses for treating infections and other diseases.

**Keywords:** *Cymbopogon citratus*, phytochemical analysis; *C. citratus*/ZnO-nanoparticles, and antibacterial activity.

## UNDERSTANDING DEPRESSION IN CHRONIC LOW BACK PAIN: THE THERAPEUTIC POTENTIAL OF PHYSICAL THERAPY

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### ABSTRACT

**Background:** Chronic low back pain (CLBP) is a widespread and disabling condition that affects millions globally. An often-overlooked aspect of CLBP is the frequent coexistence of depression, which can severely diminish quality of life and hinder recovery. This review synthesizes current insights into how depression affects individuals with CLBP and examines the role that physical therapy might play in alleviating both physical and psychological symptoms.

**Introduction:** Depression is notably prevalent among those suffering from CLBP, with reported rates ranging from 30% to 60%. The presence of depression tends to amplify pain perception, lower physical functioning, and reduce the overall effectiveness of treatment plans. It is believed that depression alters brain chemistry and pain thresholds, leading to increased pain sensitivity. Additionally, feelings of hopelessness and reduced motivation may further discourage physical activity, exacerbating CLBP symptoms.

**Methodology:** Physical therapy has long been recognized for its benefits in managing CLBP, but its impact on concurrent depression is gaining attention. Exercise-based physical therapy, for instance, has demonstrated positive outcomes not only in reducing pain but also in improving mood and mental health. Participation in structured physical activity often boosts confidence and promotes a sense of achievement, which can significantly improve depressive symptoms.

Cognitive-behavioral therapy (CBT), often integrated into physical therapy programs, addresses the mental and emotional challenges faced by CLBP patients. By targeting maladaptive thought patterns and behaviors, CBT empowers patients to manage their pain more effectively and enhances emotional resilience. Physical therapists trained in CBT techniques can help bridge the gap between physical and mental health care.

Current evidence suggests that patients with CLBP and comorbid depression tend to experience more intense pain, greater disability, and higher health care usage. Physical therapy may offer relief through a combination of improved mobility, enhanced psychological coping, and increased social support—key elements in managing chronic conditions with psychological components.

**Conclusion:** In conclusion, addressing depression in patients with CLBP is essential for achieving holistic and long-lasting outcomes. While physical therapy continues to play a pivotal role in pain management, its potential to positively influence mental health cannot be understated. Interventions such as exercise therapy and CBT should be considered essential components of a comprehensive treatment strategy. Future research should aim to refine these approaches and evaluate their long-term effectiveness.

**Keywords:** Chronic Low Back Pain (CLBP), Depression in Musculoskeletal Disorders, Physical Therapy Interventions, CBT in Pain Management

**References:**

- Hong, Steve, et al. "Under-Treatment of Depression at an Academic Chronic Pain Management Clinic." *Journal of Pain Management*, vol. 11, no. 4, Nova Science Publishers, Inc., Oct. 2018, p. 411.
- Just, Johannes, et al. "Rate of Opioid Use Disorder in Adults Who Received Prescription Opioid Pain Therapy—A Secondary Data Analysis." *PLoS One*, vol. 15, no. 7, Public Library of Science, July 2020, p. e0236268.
- Bair MJ, Robinson RL, Katon W, Kroenke K. Depression and pain comorbidity: a literature review. *Arch Intern Med*. 2003 Nov 10;163(20):2433-45. doi: 10.1001/archinte.163.20.2433. PMID: 14609780.
- Kroenke K. Patients presenting with somatic complaints: epidemiology, psychiatric comorbidity and management. *Int J Methods Psychiatr Res*. 2003;12(1):34-43. doi: 10.1002/mpr.139. PMID: 12830302.
- McWilliams LA, Goodwin RD, Cox BJ. Depression and anxiety associated with three pain conditions: results from a nationally representative sample. *Pain*. 2004 Jan;111(1-2):77-83. doi: 10.1016/j.pain.2004.06.002. PMID: 15363894.
- Bair MJ, Wu J, Damush TM, Sutherland JM, Kroenke K. Association of depression and anxiety alone and in combination with chronic musculoskeletal pain in primary care patients. *Psychosom Med*. 2008 Oct;70(8):890-7. doi: 10.1097/PSY.0b013e318185c510. Epub 2008 Oct 1. PMID: 18842749.
- Smith BW, Zautra AJ. The effects of anxiety and depression on weekly pain in women with arthritis. *Pain*. 2008 May;137(1):202-8. doi: 10.1016/j.pain.2007.08.032. Epub 2007 Oct 19. PMID: 17949870.
- Lin CW, Haas M, Maher CG, Machado LA, van Tulder MW. Cost-effectiveness of guideline-endorsed treatments for low back pain: a systematic review. *Eur Spine J*. 2011 Jan;20(1):102-15. doi: 10.1007/s00586-010-1540-0. Epub 2010 Jul 7. PMID: 20607657.
- Hayden JA, van Tulder MW, Malmivaara AV, Koes BW. Exercise therapy for treatment of non-specific low back pain. *Cochrane Database Syst Rev*. 2005 Jul 20;(3):CD000335. doi: 10.1002/14651858.CD000335.pub2. PMID: 16034851.
- Geisser ME, Clauw DJ, Strand V, Gendreau RM, Palmer R, Williams DA. Contributions of change in clinical status parameters to patient global impression of change (PGIC) scores among persons with fibromyalgia treated with milnacipran. *Pain*. 2010 Oct;151(1):161-6. doi: 10.1016/j.pain.2010.06.016. Epub 2010 Jul 29. PMID: 20667755.
- Roth RS, Geisser ME, Bates R. The relation of social support to depression in chronic pain patients. *Pain*. 1994 Sep;58(3):351-6. doi: 10.1016/0304-3959(94)90144-9. PMID: 7838584.
- Turner JA, Holtzman S, Mancl L. Mediators, moderators, and predictors of therapeutic change in cognitive-behavioral therapy for chronic pain. *Pain*. 2007 May.

## NURSES' ROLE AND PRACTICE IN WOMEN'S AWARENESS REGARDING CERVICAL SCREENING IN ERBIL CITY

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### ABSTRACT

**Background and objectives:** Cervical screening is a preventive health test that examines the cervix to identify any unusual changes in cells that might develop into cancer if not treated early. Nowadays nurses have crucial role in enlightening the community about the need and availability of screening tests. This study aimed to assess the level of role and practice of nurses towards cervical screening in Erbil city .

**Methods:** A quantitative, descriptive cross-sectional study was conducted in Teaching Hospitals in Erbil City, Kurdistan Region, Iraq, from September 1<sup>st</sup>, 2021, to September 1<sup>st</sup>, 2022. Also, non-probability (convenience) sampling techniques were used for a sample, which included 284 nurses. Data was collected through face-to-face interviews using a questionnaire designed by the investigator. Descriptive statistics SPSS version 27 was used, and statistics of frequencies, percentages and inferential statistical analysis of Chi-square test and fishers exact test were used.

**Results:** almost half 49.6% of the nurses achieved a good overall role score toward cervical screening and quarter of participants 31% achieved a high overall role regarding cervical screening. Pap smear procedure was the only method was used among the participants 16.1%. The main reasons for not attending the cervical screening test because 36.1% they were unmarried, 24.8% felt unnecessary to perform the procedure. In addition the main source for gaining the knowledge regarding the cervical screening was healthcare workers 14.8%. Therefore a significant association found between the role of the nurses and level of education, marital status and family history of cervical cancer p-value = 0.016, 0.01 and 0.02 .

**Conclusion:** To sum up, the nurses had a fair role about cervical screening. Despite the had a fair role in guiding women but they had not have it for themselves. Addressing personal and institutional barriers and providing regular training could strengthen their dual roles and enhance screening practices, as caregivers and role models.

**Keywords:** Nurses , Role , practice ,Cervical screening , Practice ,awareness,women

## **CULTIVATING SOFT SKILLS FOR THE INTERNATIONALIZATION OF THE CURRICULUM IN HIGER EDUCATION IN THE ERA OF AI**

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### **Abstract**

The aim of this paper is to explore the critical role soft skills play in fostering inclusive, adaptive, and globally relevant academic environments in the age of intelligent technologies. As Artificial Intelligence continues to reshape educational landscapes globally, the internationalization of the curriculum in higher education requires a parallel emphasis on developing human-centric competencies—commonly referred to as soft skills. The integration of AI tools into higher education brings efficiency and personalization but also demands a renewed focus on empathy, intercultural communication, ethical reasoning, adaptability, and collaboration—skills essential for students and educators operating in multicultural, digitally-mediated learning spaces. Internationalization is no longer confined to mobility or language acquisition; it now encompasses the development of global competencies that enable students to navigate complex, AI-augmented societies. In this context, soft skills become foundational for intercultural engagement, ethical decision-making in data-rich environments, and the ability to collaborate across disciplines and borders. Educators, therefore, must be equipped not only with digital literacy but also with pedagogical strategies that cultivate these competencies in their students through experiential learning, critical reflection, and interdisciplinary approaches. The approach used for this study was qualitative with the techniques of documentary review, literature review, and participant observation. This study argues that institutional frameworks for internationalizing the curriculum must intentionally integrate soft skill development as both content and pedagogy. It further highlights the need for faculty development programs and policy support that align AI integration with human-centered educational goals. As higher education enters a transformative era marked by AI, soft skills are not ancillary but central to ensuring that internationalization efforts are equitable, relevant, and future-ready. A curriculum that balances technological proficiency with socio-emotional intelligence can empower learners to thrive in diverse global contexts while maintaining ethical integrity and cultural awareness.

**Keywords:** Internationalization, Internationalization of the Curriculum, Soft Skills, Professors

## ISCHEMIC STROKE

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### **Abstract:**

Ischemic stroke is a critical medical emergency characterized by the sudden loss of blood circulation to an area of the brain, leading to tissue infarction and neurological deficits. It accounts for approximately 85% of all stroke cases and is most commonly caused by thrombotic or embolic occlusion of cerebral arteries. Early recognition and intervention are essential to minimize brain damage and improve patient outcomes. Timely use of thrombolytic agents and/or mechanical thrombectomy within the appropriate therapeutic window has been shown to significantly reduce morbidity. This document emphasizes the importance of multidisciplinary care, including acute management, rehabilitation, and secondary prevention strategies, in enhancing recovery and reducing the risk of recurrence. Understanding the pathophysiology, risk factors, and evidence-based management practices is vital for healthcare professionals to provide high-quality, patient-centered care in stroke management.

**Key Words :** Ischemic stroke ,Cerebral infarction, Thrombotic Stroke Embolic stroke ,Cerebral ischemia ,Neurological deficit

## LEARNING TO MOVE, MOVING TO LEARN: MACHINE LEARNING IN ROBOTICS

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### **Abstract**

Integration of Machine Learning (ML) into robotics has transformed static programmed machines that can be learned from the environment and experience into adaptive, intelligent systems. In this paper, the title, titled "Learning to Move, Moving to Learn: Machine Learning in Robotics," examines the dynamic relationship between ML algorithms and robot mobility, perception, and autonomy. The global robot market is expected to exceed \$95.9 billion, with nearly 30% of this growth coming from AI-enabled applications, so the synergy between robotics and ML is becoming increasingly important for innovation in areas such as the healthcare, production, logistics and services industries. Learning emphasizes how all robots move, manipulate and adapt to their surroundings. For example, enhancing learning follows recent knowledge from the IEEE Robotics and Automation Society, indicating improved task efficiency for mobile robots in unpredictable terrain. The focus is also on ethical and arithmetic challenges related to the provision of ML in robotics, such as data, energy consumption, and model interpretability. Ultimately, it highlights how robots learn not only to move, but also to learn both physical behavior and intelligent adaptation.

**Keywords:** Machine Learning , Robotics, Artificial Intelligence, Intelligent Adaptation, Intelligent System

## IN SILICO PREDICTION OF HEPATOTOXICITY AND SYSTEMIC ADVERSE EFFECTS OF NOVEL HYDRAZONE ESTER DERIVATIVES USING ADVER-PRED

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### Abstract

In this study, four novel hydrazone-based ester derivatives were subjected to in silico toxicity profiling using the ADVER-Pred platform of Way2Drug. The primary goal was to assess the risk of systemic adverse effects, particularly hepatotoxicity, nephrotoxicity, and cardiovascular complications.

For all compounds, hepatotoxicity was consistently predicted with Pa values ranging from 0.336 to 0.613, indicating a moderate-to-high probability of liver-associated adverse outcomes. Notably, the ethyl ester derivative showed the highest Pa (0.613), making it the most hepatotoxic candidate among the tested molecules.

Additionally, the same compound was predicted to induce myocardial infarction (Pa = 0.330) and nephrotoxicity (Pa = 0.246), suggesting multi-organ toxicity potential. In contrast, the methyl and substituted methyl esters showed relatively lower probabilities and were not associated with nephro- or cardiotoxicity.

These predictions highlight the importance of early in silico toxicity screening in the lead optimization process. The findings can inform further experimental design by prioritizing less toxic derivatives and modifying structural motifs that contribute to hepatic and cardiovascular liabilities.

**Keywords:** ADVER-Pred, hydrazone esters, hepatotoxicity, nephrotoxicity, drug safety, in silico toxicity prediction

## IN SILICO PREDICTION OF ANTIBACTERIAL TARGETS OF HYDRAZONE ESTER DERIVATIVES USING ANTIBAC-PRED

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### Abstract

The increasing resistance of pathogenic bacteria necessitates the identification of novel antibacterial agents through cost-effective and rapid in silico methods. In this study, four structurally related hydrazone ester derivatives were evaluated for their potential antibacterial targets using the AntiBac-Pred platform of Way2Drug. Each compound's SMILES was analyzed to predict bacterial susceptibility based on the platform's comprehensive QSAR database and model set.

The compound with the highest antibacterial prediction confidence targeted *Yersinia pestis* with values ranging from  $P_a = 0.2509$  to  $0.3139$ , indicating a moderate likelihood of bioactivity. Additional sensitive species included *Staphylococcus warneri*, *Enterococcus faecium* (resistant), *Bacillus subtilis*, *Mycobacterium tuberculosis*, and *Bacteroides stercoris*, all of which are associated with high clinical relevance.

ChEMBL database cross-referencing confirmed target ID matches, such as ChEMBL614597 (*Y. pestis*) and ChEMBL614981 (*Mycobacterium*), validating prediction relevance. Despite modest probability scores ( $P_a$  values between  $0.01$ – $0.31$ ), the diversity and reproducibility of predicted bacterial targets across compounds suggest a broad spectrum of interaction and encourage further biological validation.

**Keywords:** Antibacterial prediction, hydrazone derivatives, AntiBac-Pred, Way2Drug, in silico screening, bacterial resistance

## NEUROBIOLOGICAL CHANGES INDUCED BY MINDFULNESS AND MEDITATION

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### **Abstract:**

Mindfulness and meditation practices have been increasingly studied for their impact on brain structure and function. A growing body of neuroimaging and neurophysiological research reveals that these practices lead to measurable neurobiological changes in brain structure and function. Regular mindfulness meditation has been associated with increased cortical thickness in regions implicated in attention regulation, such as the anterior cingulate cortex and prefrontal cortex, and with enhanced connectivity in networks related to self-awareness and emotion regulation, including the default mode network and insula. Additionally, reductions in amygdala volume and reactivity suggest a neurobiological basis for the stress-reducing effects of mindfulness. Neurochemical alterations, including changes in GABA, serotonin, and cortisol levels, further support the role of mindfulness in promoting emotional resilience and psychological well-being. This review highlights how mindfulness-based interventions can bring about adaptive brain plasticity and supports their integration into therapeutic and preventive health strategies.

**Keywords;** Mindfulness, Meditation, Neuroplasticity, Brain structure, Functional connectivity, Stress reduction, Emotion regulation, Cortical thickness , Amygdala, Neuroimaging.

## **A THEORETICAL PERSPECTIVE ON THE FACTORS AFFECTING WOMEN'S PARTICIPATION IN THE LABOR MARKET**

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### **ABSTRACT**

Women, who make up half of the world's population, have been involved in production processes from past to present. With the beginning of the Industrial Revolution, women's participation in the paid labor force gained momentum, and the weaving sector became the field that employed women intensively. With the conscription of most of the male population during World Wars I and II, women's participation in the labor force in different sectors was ensured. In Turkey, after the Republican era, important steps were taken to ensure women's education and access to social rights. The granting of the right to vote and be elected has strengthened the position of women in social and economic life. The development and progress of societies can only be achieved through the correct and efficient use of the means of production they possess. Labor force is the most important among these factors. The inclusion of women in the labor force has an important place in terms of sustainable growth. However, throughout history, women's position in the labor market has remained more limited than that of men. The number of married women is the most important determinant of female employment. Economic conditions and social roles affect women's labor force participation in Turkey. The reasons why women's participation in the labor force is lower than men's can be listed as the combination of women's work life and their responsibilities at home, inequality of opportunity in education, low wages, high number of children, and the effect of migration. The importance of women's place in home life is reflected in their work life. It is common in our society to think that their primary duty is home and children and that the responsibility of being a mother will be reflected in their work life. The prejudice that this will lead to low productivity in business life causes employers to see women's employment as secondary. The jobs deemed suitable for women are the needs of domestic life such as childcare, cleaning and cooking. Women are thought to be suitable for professions such as nurses, teachers, etc. if they are educated, and child care, cleaning, agricultural workers, tailors, etc. if they are not educated. These ideas shape working life and lead to the classification of occupations according to gender. The fact that occupations are classified according to gender limits women's right to education and affects their access to the labor market.

**Keywords:** Labor Force, Gender, Occupation

## **CALCULATION OF HORIZONTAL AND DEPTH AXIS DISPLACEMENT OF AN OBJECT USING MONOCULAR VISION**

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### **ABSTRACT**

This study presents a low-cost and practical methodology developed to measure the metric displacement of an object with a known size in three-dimensional (3D) space using a monocular camera and YOLOv8, an object detection model. The proposed approach employs a dynamic camera calibration technique based on a single reference image and a known object size, without requiring traditional calibration targets or complex hardware setups. The method combines the fundamental geometric principles of the pinhole camera model with the power of deep learning in object detection. The methodology includes the following steps: detecting the 2D pixel coordinates of the target object with YOLOv8, calculating the camera's effective focal length using the known object size and a single reference distance measurement, and then metrically determining the 3D coordinates of the object at two different positions and the Euclidean displacement between them using this focal length. Experimental analyses demonstrate the method's applicability and potential, while also revealing systematic error sources and limitations, particularly those arising from lens distortion and object detection accuracy. This work offers an accessible alternative for 3D motion analysis in situations where high precision is not critical.

**Keywords:** Monocular Camera, 3D Pose Estimation, Metric Displacement, Low-Cost Methodology

## TEMPORAL VARIATION OF CHEMICAL AGEING ON THE AVAILABLE BORON CONTENT OF SOILS

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### ABSTRACT

**Introduction and Purpose:** Boron (B) is an essential micronutrient for plant development, but its narrow range between deficiency and toxicity makes its management challenging. In Turkey, the Aralık Plain located in the Iğdır province is known for its soils with excessive boron content, which poses a significant risk for sustainable crop production. The main objective of this study is to evaluate the temporal impact of various chemical soil amendments on the bioavailable boron levels in boron-rich soils.

**Materials and Methods:** Five soil samples with varying boron contents were collected from the Aralık Plain. Three chemical amendments—iron sulfate ( $\text{FeSO}_4$ ), manganese sulfate ( $\text{MnSO}_4$ ), and aluminum sulfate ( $\text{Al}_2(\text{SO}_4)_3$ )—were applied at five different concentrations (ranging from 0.0125 M to 0.1 M). The incubation experiment was carried out under laboratory conditions over six months. Soil samples were analyzed at eight intervals (day 1, 3, 7, 15 and months 1, 2, 4, 6) to determine bioavailable boron, pH, and electrical conductivity (EC).

**Results and Discussion:** The findings indicate that all three amendments significantly reduced bioavailable boron in the soils, particularly at higher doses. Reductions became statistically significant after the second month of incubation. Furthermore, the soil pH decreased as a result of the treatments, enhancing boron adsorption to soil particles. Although EC values initially increased due to salt input, they stabilized over time. Among the tested treatments, aluminum sulfate showed the most consistent effect in reducing boron levels. **Conclusion:** Chemical amendments, especially aluminum sulfate, offer an effective approach to reducing boron toxicity in affected soils. These results provide a scientific basis for rehabilitating boron-contaminated lands and improving crop productivity in arid and semi-arid regions. This study contributes to the development of sustainable soil management strategies for boron-contaminated agricultural areas.

**Key Words:** Boron Toxicity, Chemical Aging, Soil Amendment

## THE SUBJECT OF ALLUSION IN ZEMAKHSHARI'S AL-KASHSHAF

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### ABSTRACT

Dealing with Islamic sciences and the Arabic language is one of the greatest blessings, as it contributes to knowing and understanding Islam and explaining its rulings and purposes. Perhaps the most prominent science among Islamic sciences is the science of rhetoric. Because eloquence has become a science that reveals the meanings of the word and the verses of revelation, and has always and everywhere been the object of the efforts of scholars. Allusion is also one of the arts of rhetoric. Accordingly, the allusions in the Quran are also expressions of a mental, sensory and indirect meaning. Because appealing to the senses and conscience is the closest and most influential way to the soul. In this study, the style of allegory, which is widely used in the Qur'an, is discussed based on Zamakhshari's al-Kashshaf commentary. His interpretation, how the metaphor is interpreted and handled according to the opinion of a scholar who is widely accepted among the Ahl as-Sunnah but is accepted as a Mutazila, is not only a matter of curiosity but also important in terms of understanding the verses correctly. The research is different from previous studies in that it reveals the methods of using metaphors in the Qur'an in terms of purpose and meaning in line with Zamakhshari's al-Kashshaf and sheds light on the functional and behavioral aspects of metaphor. The main source of the study is Zamakhshari's work called al-Kashshaf. In addition, basic and classical commentaries such as Muqatil b. Suleyman, Tabari al-Qur'an and works related to rhetoric and exegesis are also used in the study. After briefly discussing Zamakhshari's life and Kashshaf, the subject of metaphor in rhetoric is discussed. In addition, verses containing metaphor are evaluated in the context of Kashshaf and accordingly, the effect of metaphor on the meaning of the verses is revealed. The research has reached many important conclusions, but the most important ones are that allegorical expressions point to various aspects, including social, moral and psychological aspects, that they show the miraculous power of expression and absolute knowledge of Allah Almighty, and that in most verses they express threats, intimidation, friendship, forgiveness and mercy. Among the conclusions reached in the study is that Zamakhshari used the metaphor in a way that served the Mutazila school of thought.

**Keywords:** Arabic Language and Rhetoric, Qur'an, Allusion, Zamakhshari, al-Kashshaf.

## DEEP LEARNING-BASED CHANNEL KNOWLEDGE MAPPING FOR MMWAVE 6G SYSTEMS USING PILOT SIGNAL ESTIMATION

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### Abstract :

**Introduction and Purpose:** The evolution toward **6G wireless networks** emphasizes ultra-reliable, low-latency communication with extreme data throughput, leveraging **millimeter-wave (mmWave)** frequencies to meet these demands. However, accurate **channel state information (CSI)** acquisition in mmWave systems remains a significant challenge due to the highly dynamic and sparse nature of the propagation environment. Traditional estimation methods, such as Least Squares (LS) and Minimum Mean Square Error (MMSE), are limited in efficiency and scalability. Inspired by recent advances in **deep learning (DL)** for wireless systems (Ye et al., 2018; Wen et al., 2018), this study proposes a **DL-based channel knowledge mapping framework** using **pilot signal estimation** for mmWave MIMO systems in 6G.

**Materials and Methods:** The proposed approach uses **Convolutional Neural Networks (CNNs)** to learn spatial patterns in pilot signal responses and map them to the corresponding channel matrix. Simulated datasets are generated using the NYU mmWave channel model to reflect realistic 28 GHz and 60 GHz propagation characteristics (Rappaport et al., 2015). A comparative evaluation is conducted against classical LS/MMSE estimators and a compressed sensing baseline, following methodologies presented by Alkhateeb and Ahmed (2018). The models are trained and tested under varying signal-to-noise ratios (SNRs) and pilot overhead conditions. Performance is measured using **Normalized Mean Square Error (NMSE)** and **Bit Error Rate (BER)**.

**Results:** Simulation results indicate that the DL-based estimator outperforms traditional approaches, achieving over **20% improvement in NMSE** at low SNRs and significantly reducing pilot overhead. The model demonstrates robust generalization across different channel scenarios and shows promise for real-time application through reduced computational complexity compared to iterative estimators. These findings align with prior work by Jiang and Hanzo (2020) on the potential of neural networks in high-dimensional CSI estimation.

**Conclusion:** Deep learning provides a scalable and data-efficient solution for channel estimation in mmWave 6G systems. By integrating pilot signal learning and DL-based mapping, the proposed method enhances CSI acquisition under realistic propagation conditions, addressing a key bottleneck for next-generation wireless communication.

**Keywords:** 6G, millimeter-wave (mmWave), channel state information, deep learning, pilot signal estimation, MIMO, CNN, NMSE, bit error rate, CSI mapping

## EXAMINING THE RELATIONSHIP BETWEEN FAMILY COHESION AND LIFE SATISFACTION

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### ABSTRACT

**Introduction and Purpose:** Family cohesion is a holistic perception that encompasses an individual's feelings of belonging, trust, love, and mutual support toward their family. This feeling contributes to an individual's sense of self-worth and understanding. Life satisfaction is a subjective indicator of well-being related to an individual's overall positive assessment of their life. Warm, consistent, and supportive family relationships are an important factor in increasing an individual's life satisfaction. In this context, a strong sense of family cohesion is expected to increase an individual's satisfaction with life and support their psychological well-being. For this purpose, this study aims to determine the relationship between the sense of family cohesion and life satisfaction in adults and to test the predictive effect of the sense of family cohesion on life satisfaction.

**Materials and Methods:** This study, which uses the correlational survey model from quantitative research methods, was conducted on 396 individuals. Of the participants, 289 (72.9%) were women and 107 (27.1%) were men. Thirty-nine (9.8%) of the participants had a primary school education, 79 (19.9%) had a high school education, and 278 (70.3%) had a bachelor's degree or higher. The Family Cohesion Scale Short Form, the Adult Life Satisfaction Scale, and an information form developed by the researcher were used to collect the data. The data were sent to the participants via Google Forms. Parametric tests were used because the scores obtained in the study showed a normal distribution. Accordingly, the significance of the difference between the mean scores obtained from two variables was tested using the t-test, the significance of the difference between the mean scores of more than two variables was tested using one-way analysis of variance (ANOVA), and the Pearson product-moment correlation test was used to assess the relationship between two variables. Additionally, a Simple Regression Analysis was conducted to evaluate the predictive effect of Family Cohesion Scale scores on Life Satisfaction, and it was determined that there was a 23% effect.

**Results:** According to the research results, there are significant differences between groups in terms of life satisfaction based on gender, family cohesion, and life satisfaction based on receiving psychological support, having a happy childhood, and being hopeful about the future. Life satisfaction and family cohesion show significant differences between groups based on participants' involvement in family decision-making. Family cohesion does not show significant differences according to gender. The study found a positive correlation between family cohesion and life satisfaction. The findings of the study were discussed in detail, and recommendations were made.

**Keywords:** Family; Adulthood; Family Cohesion; Life Satisfaction

## THE PERFORMANCE ANALYSIS OF KNN AND XGBOOST MODELS IN WIND ENERGY FORECASTING: A BAYESIAN OPTIMIZATION BASED APPROACH

## PERFORMANCE ANALYSIS OF KNN AND XGBOOST MODELS IN WIND ENERGY FORECASTING: A BAYESIAN OPTIMIZATION-BASED APPROACH

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### ABSTRACT

**Introduction and Purpose:** Wind energy is gaining increasing importance worldwide as a renewable and sustainable energy source. However, the inherent variability of wind speed leads to uncertainties in wind power generation, which poses significant challenges for grid integration and energy planning. This situation necessitates the development of modeling approaches that provide high accuracy and reliability in wind energy forecasting. This study aims to comparatively analyze the performance of **K-Nearest Neighbors (KNN)** and **Gradient Boosting (XGBoost)** models in forecasting wind energy using meteorological data.

**Materials and Methods:** Historical wind speed and energy production data from a wind power plant were utilized in this study. The models used input variables like wind speed, blade angle, temperature, rotor speed, and nacelle orientation to predict wind energy production. Prediction algorithms were chosen for this study, with K-Nearest Neighbour (KNN) and Gradient Boosting (XGBoost) being the preferred ones. Both classification and regression problems are widely used with KNN, a simple but effective machine learning algorithm. The high prediction accuracy of XGBoost, a gradient-boosting tree-based ensemble learning method, is well-known. To improve the prediction performance of both models, hyperparameter optimization was performed using the Optuna library, which uses a Bayesian optimisation approach, and the 5-Fold Cross Validation method was applied in this process. Statistical metrics such as Root Mean Square Error (RMSE), Mean Absolute Error (MAE) and Coefficient of Determination ( $R^2$ ) were used for measuring the predictability of the models.

**Results:** The results show that both KNN and XGBoost models give successful results in wind energy forecasting, but the ensemble-based model XGBoost shows high performance with low RMSE and MAE values and high  $R^2$  score of 0.9981, demonstrating its success in energy production forecasting and shows that it predicts with error distribution and high precision. Conversely, the KNN model displayed a lower performance with an  $R^2$  score of 0.9764, which indicates that it is not suitable for large data sets. The results show that meteorological variables have decisive effects on energy production. Particularly, the XGBoost algorithm provides superior performance in such regression problems, and Bayesian optimization is an effective tool to maximize model performance.

**Keywords:** Wind energy, XGBoost, KNN, Bayesian optimization, energy forecasting.

## THE FORMATION OF LIFE SKILLS IN STUDENTS DURING THE EDUCATIONAL PROCESS: THE ROLE OF THE BIOLOGY SUBJECT

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### ABSTRACT

**Introduction and Purpose:** The main goal of the modern education system is not only to equip students with knowledge but also to instill essential life skills. Biology, as one of the core subjects in general education schools, plays a key role in achieving this goal. In addition to delivering scientific knowledge, the teaching of biology fosters research abilities, health awareness, logical thinking, and problem-solving skills. The purpose of this study is to evaluate the role of biology in shaping life skills during the educational process and to assess the effectiveness of the applied teaching methods.

**Materials and Methods:** As part of the study, surveys were conducted among teachers, students, and parents. Classroom observations were made, and assessment tools were analyzed. The study explored teachers' approaches to instructional methods and which life skills biology education contributes to developing.

**Results:** According to the findings, the most frequently used teaching method in biology lessons is the lecture method (50%), followed by model-based instruction (25%), question-and-answer (15%), and discussion (10%). Teachers base their choice of methods on classroom conditions, available teaching resources, and students' age characteristics.

**Discussion and Conclusion:** The research indicates that, through professional instruction, biology lessons contribute to the development of various life skills in students—such as research ability, critical thinking, health habits, and collaboration. However, the dominance of traditional teaching methods hinders the full development of these skills. The implementation of modern teaching approaches and the enhancement of teachers' methodological training will improve the overall effectiveness of the educational process.

**Key Words:** Biology education, logical thinking, life skills, teacher professionalism, educational reform

## THE EDUCATION SYSTEM IN CROATIA AND THE GOALS OF EDUCATION

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### **ABSTRACT**

The paper analyzes the main characteristics of the curriculum in the Republic of Croatia at all levels of education. Special attention is given to its purposefulness, goals, and educational cycles, as well as to the teaching plans applied in primary, secondary (gymnasium), and vocational education. The paper also partially analyzes the structure of geography study programs at the undergraduate, master's, and doctoral levels at the Faculty of Sciences in Novi Sad and the Faculty of Science in Zagreb. In the development of the Croatian national curriculum, it is important to take into account European experiences as well as Croatia's educational tradition. First and foremost, it is necessary to clearly define the general outcomes and ultimate goals of education, followed by the goals of subject areas and individual subjects. By selecting cross-curricular themes, it is necessary to achieve horizontal correlation and integration of teaching content so that students can acquire a comprehensive education and skills useful for life and lifelong learning. Without clearly defined educational goals as a whole, without proper correlation between subjects, and without quality evaluation of teaching and student achievement, the direction in which Croatian education is heading remains unclear. The geography curriculum is an important component of both the school and national curriculum. In the Croatian national curriculum, geography must remain a mandatory and independent subject for at least four years of education, with a minimum of two hours per week.

**Keywords:** education, curriculum , Faculty of science, Croatia, Zagreb, Novi Sad

## **LANGUAGE POLICY IN GEORGIA (HISTORICAL AND CONTEMPORARY CONTEXT)**

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Language policy determines both the functioning of the state language(s) and the preservation and protection of the languages of ethnic minorities living in the country. Although the term "language policy" did not historically exist, aspects of language policy have received attention in Georgia for centuries, including during the period of the First Democratic Republic of Georgia. However, a law on the state language was only adopted in 2015, and a strategy for the development of language policy was approved in 2021.

Our research discusses the current challenges and opportunities of language policy, and addresses problematic issues that, in today's environment, pose a threat to language ecology and preservation.

## LIPOSOME<sub>W</sub>S IN DRUG DELIVERY

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### **Abstract:**

Liposomes are spherical vesicles composed of one or more phospholipid bilayers, widely recognized as efficient carriers in drug delivery systems. Their unique structural properties allow them to encapsulate both hydrophilic and lipophilic drugs, offering protection from enzymatic degradation and enhancing the therapeutic efficacy of active pharmaceutical ingredients. Liposomes can improve drug solubility, stability, and bioavailability while enabling targeted and controlled drug release. This targeted delivery reduces toxicity and side effects, especially in cancer therapy, by directing the drug specifically to diseased tissues or cells. Furthermore, liposomes can bypass biological barriers, such as the blood-brain barrier, thus expanding the potential for treating central nervous system disorders. They are biocompatible, biodegradable, and versatile, allowing for surface modifications to further enhance targeting and circulation time. Liposomal formulations of drugs like doxorubicin, amphotericin B, and paclitaxel have already been approved for clinical use, demonstrating significant improvements in safety and therapeutic outcomes. Advances in liposome technology, including PEGylation and ligand attachment, have further improved their pharmacokinetic properties. Despite their numerous advantages, challenges such as production cost, scalability, and stability remain. Nevertheless, ongoing research continues to refine liposome-based drug delivery, aiming to overcome these limitations and optimize therapeutic efficacy. Overall, liposomes represent a powerful and promising platform in modern drug delivery, offering solutions for a wide range of medical conditions.

**Keywords:** Liposomes, drug delivery, phospholipid bilayers, bioavailability, targeted therapy, controlled release, PEGylation, encapsulation, cancer treatment, biocompatibility.

**LUNG CANCER****M.Farhatyassir****V.Hariharan****S.Harini sri****T.Vanitha sri****mrs.E.Elavarasi**

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**Abstract:**

Lung cancer is one of the most prevalent and deadly malignancies worldwide, accounting for a significant proportion of cancer-related deaths. It primarily arises from the epithelial cells lining the respiratory tract and is broadly classified into two major types: non-small cell lung cancer (NSCLC) and small cell lung cancer (SCLC). NSCLC comprises the majority of cases and includes subtypes such as adenocarcinoma, squamous cell carcinoma, and large cell carcinoma. Major risk factors for lung cancer include cigarette smoking, exposure to secondhand smoke, environmental pollutants, occupational exposure to carcinogens (such as asbestos and radon), and genetic susceptibility. The clinical presentation of lung cancer can vary widely, ranging from persistent cough, hemoptysis, chest pain, and dyspnea to systemic symptoms like weight loss and fatigue. Early detection remains a challenge due to the often asymptomatic nature of early-stage disease. Diagnosis typically involves imaging studies such as chest X-rays and CT scans, followed by tissue biopsy for histopathological confirmation. Advances in molecular biology have led to the identification of genetic mutations and biomarkers, aiding in personalized treatment approaches. Treatment strategies are determined by the stage and histological type of cancer and may include surgery, chemotherapy, radiotherapy, targeted therapy, and immunotherapy. Despite therapeutic advancements, the overall prognosis remains poor, especially for late-stage cases, emphasizing the need for early screening and prevention strategies. Ongoing research is focused on improving early diagnostic methods, understanding tumor biology, and developing novel therapeutics. Public health efforts aimed at smoking cessation and reducing environmental exposures play a crucial role in decreasing incidence rates.

**Keywords:**

Lung cancer, non-small cell lung cancer (NSCLC), small cell lung cancer (SCLC), smoking, carcinogens, biomarkers, diagnosis, chemotherapy, immunotherapy, targeted therapy, prognosis, early detection, prevention.

# GENERAL EXPRESSION FOR ENERGY LOSSES IN THE PROCESS OF NEUTRINO PAIR EMISSION BY CHARGED LEPTONS (ANTILEPTONS) IN A MAGNETIC FIELD

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## Abstract

In this study, one of the quantum processes occurring in stellar media in the presence of a magnetic field—namely, the emission of neutrino–antineutrino pairs by charged leptons (or antileptons)—is examined. As a result of this process, energy is lost from the stellar matter, which significantly affects the thermodynamic and structural evolution of the star. The corresponding amount of energy loss per unit volume and per unit time is calculated within the framework of statistical quantum mechanics in a generalized form.

The initial expression for energy loss is presented by equation (1), which includes the phase-space distribution functions of the initial and final states, the squared modulus of the matrix element, the conservation conditions for energy and momentum, as well as the energy carried away in the process. This expression is further refined by incorporating the influence of the magnetic field, spin polarization states of leptons, and Fermi statistics.

The distribution functions of the participating leptons and neutrinos are described by the Fermi–Dirac distribution, with due consideration given to their respective temperatures and chemical potentials (see equations (8)–(10)). Moreover, the expressions are simplified using a specific system of natural units, including Boltzmann's constant.

Due to the magnetic field, the energy levels and orbitals of charged leptons are quantized, and the calculations in this framework involve the Landau quantum number, orbital motion coordinates, and contributions from antisymmetric tensors. In this context, the squared matrix element (as expressed in equations (13) and (25)) is formulated in detail based on the momentum components, angular variables, and kinematic constraints of neutrinos and antineutrinos.

As a final result, the general energy loss per unit volume and unit time due to neutrino pair emission by charged leptons (or antileptons) in a magnetic field is derived in the form:

In this derivation, integrals are performed with the help of delta functions that enforce energy and momentum conservation, and the components of the neutrino and antineutrino momenta are expressed in terms of polar and azimuthal angles within the spherical coordinate system.

It is important to note that spin summation and averaging are not performed in the calculations, as the analysis explicitly considers the spin polarization of leptons.

**Keywords:** energy losses, distribution function, matrix element, spin summation

## THE EFFECT OF THE PERCEIVED FEELING OF SECURITY DURING THE POSTPARTUM PERIOD ON WOMEN'S POSTPARTUM COMFORT

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### ABSTRACT

**Purpose:** The purpose of this study is to determine the effect of the sense of security perceived by women during the postpartum period on their comfort levels.

**Method:** The descriptive, cross-sectional study was conducted between March 2023 and November 2023 on a sample of 147 women who had given birth (between 1-7 days) and met the inclusion criteria. Necessary permissions were obtained for the collection of data, and the “Introductory Information Form”, “Mothers’ Feelings of Security Scale” (MFSS), and “Postpartum Comfort Scale” (PCS) were used. In the analysis of the data, the statistical significance value was accepted as  $p<0.05$ .

**Findings:** The mean age of the women participating in the study was  $28.01\pm4.58$  (min=19-max=41). In the study, it was determined that 57.1% of the women had eight years or less of education, 72.8% had a nuclear family, 85% were unemployed, and 66.7% had income equal to/more than their expenses. It was determined that 54.4% of the women had been married for more than five years, and more than half had experienced less than two pregnancies (60.5%) and births (66%). It was determined that the majority of the participants had given birth vaginally (76.9%) and that their current pregnancies were planned (68.7%), and very few had attended pregnancy schools (12.9%). In the study, the mean score of the Mothers' Postpartum Sense of Security Scale (PCS) was found to be  $61.48\pm6.90$  (min=31.00-max=72.00) in the postpartum period, and no difference was found in terms of characteristics except for the current pregnancy being planned ( $p>0.05$ ). The mean score of the Postpartum Comfort Scale was determined to be  $111.97\pm14.93$  (min=52.00-max=155.00), and the comfort level was determined to be at a moderate level.

**Conclusion:** In the study, it was determined that the mothers' postpartum comfort and security feelings were at a moderate level, and that the current pregnancy being planned increased the postpartum security feeling. In order to improve the sense of comfort and security after birth, it is recommended that midwives and nurses provide qualified care by determining the individual needs and expectations of the mothers.

**Key words:** Birth, sense of security, comfort, nurse.

## THE CONCEPT OF EUTHANASIA AND THE INTERPRETATION OF THE RIGHT TO LIFE IN THE CASE LAW OF THE EUROPEAN COURT OF HUMAN RIGHTS

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### ABSTRACT

The concept of euthanasia, often translated as “a good” or “a dignified death,” is a multidimensional issue that encompasses legal, ethical, philosophical, cultural, medical, religious, and social aspects. In its simplest form, euthanasia refers to the voluntary termination of life by individuals suffering from incurable illnesses, who perceive their continued existence as unbearable. Such individuals seek to end their pain and suffering and wish to decide autonomously on the timing and manner of their death.

Euthanasia is generally classified into two main categories: **active** and **passive**. **Active euthanasia** refers to the deliberate medical intervention by a physician to end a person’s life, typically through the administration of a lethal dose of medication or injection. This practice is prohibited in most legal systems. **Passive euthanasia**, on the other hand, involves the withdrawal or withholding of medical treatment, allowing the patient to die naturally. Examples include turning off life-support devices or discontinuing artificial nutrition and medication. In cases where the patient has made a prior declaration of will and the continuation of life-sustaining treatment is deemed medically futile—that is, when the patient cannot recover and cannot survive without artificial support—terminating such treatment with the consent of the family is generally considered lawful in many jurisdictions.

Currently, **Belgium, the Netherlands, Luxembourg, Canada, Colombia, Ecuador, Spain, New Zealand**, and **six Australian states** (New South Wales, Queensland, South Australia, Tasmania, Victoria, and Western Australia) have legalized euthanasia under specific conditions. In **Portugal**, legalization is anticipated, pending the implementation of relevant legislation. However, on a global scale, euthanasia remains predominantly prohibited. In **Turkey**, under the **Turkish Penal Code**, a physician who performs euthanasia is prosecuted for **premeditated murder** and faces a sentence of **aggravated life imprisonment**.

The aim of this study is to examine how the **European Court of Human Rights** interprets the issue of euthanasia in light of the **right to life**, as enshrined in the **European Convention on Human Rights**. The first part of the study provides a brief overview of the concept, types, and historical development of euthanasia. The second part analyzes the ECHR’s approach to euthanasia within the framework of its recent case law on the right to life.

**KEYWORDS:** Euthanasia, Right to life, Human rights.

## **NUTRITIONAL EDUCATION AND ITS ROLE IN PREVENTING EATING DISORDERS AND EMOTIONAL EATING IN POLISH YOUTH (15–17 YEARS) - APILOT STUDY**

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### **ABSTRACT**

Despite the growing awareness of nutrition and the popularity of healthy lifestyles among adolescents, disordered eating behaviors—such as anorexia nervosa, bulimia nervosa, binge eating disorder (BED), and avoidant/restrictive food intake disorder (ARFID)—remain significant public health concerns. ARFID, officially recognized only in 2013, is still poorly understood among youth. This study aimed to assess the relationship between adolescents' nutritional knowledge, emotional regulation, media influence, and eating behaviors. Methods: A cross-sectional study was conducted in 2024 among 120 students aged 15–17 attending W. Reymont Secondary School No. II in Os-trów Wielkopolski, Poland. Participants completed a custom-designed, paper-based questionnaire consisting of 30 single-choice questions and demographic items. The instrument assessed knowledge of eating disorders, body satisfaction, social media impact, and the emotional determinants of food choices. The tool was developed with expert input but has not undergone formal psychometric validation. While many adolescents demonstrated basic nutritional knowledge—such as awareness of BMI norms and food group distribution—they often failed to apply this knowledge to their dietary behaviors. Results: Significant gender differences were observed: girls were more likely to restrict food intake, report emotional eating, and engage in slimming behaviors, while boys were less emotionally reactive and less influenced by social media. Most participants reported eating one meal daily with family but rarely discussed nutrition at home. Emotional involvement in eating, particularly among girls, emerged as a key factor, more influential than social media in shaping dietary behaviors. Conclusions: The findings highlight a clear gap between nutritional knowledge and actual behavior among adolescents, driven in part by emotional dysregulation and body image concerns. School-based interventions should incorporate not only nutritional education but also emotional regulation strategies and media literacy to effectively support healthy eating behaviors in youth.

**Keywords:** eating disorders; adolescent awareness; prevalence of disorders

## LUVÎS ŞEYHO'S WORK CALLED MECANUL-EDEB IN TERMS OF ITS POSITION IN ARABIC LITERATURE

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### ABSTRACT

**Introduction and Purpose:** This study examines the importance of Mecani'l-edeb fi hadâikı'l-'Arab, a work by Luvis Sheiho, an important figure in the field of literature of his time, in terms of Arabic literature. The work is an anthology book that includes easy, intermediate and advanced level construction examples. The main purpose of the study is to evaluate Sheiho's Mecani'l-edeb within the framework of its place in Arabic literature. In line with this purpose, the work in question by Luvis Sheiho, one of the important names in modern Arabic literature, is an anthology book that includes literary pieces belonging to famous Arab writers and poets. According to his own statement, he created the work with a method and style that has not been done before. The evaluation and presentation of this and his other works will contribute to the Arabic language and rhetoric. The lack of an independent study on such an important literary figure and his works has also motivated and motivated us to conduct this study.

**Materials and Methods:** After determining the subject, content and scope of the study, various and extensive literature readings such as dictionary, terminology, Arabic literature and history of Arabic literature were conducted for the person, subject and concepts that form the basis of the study. In the introduction of the study, the life, works and literary personality of Sheiho el-Yesui were examined, and in the following headings, his work named Mecani'l-edeb fi hadâikı'l-'Arab was discussed in terms of content, method and source, and the literary aspect of the work was revealed. The main source of the study is of course Sheiho's work named Mecani'l-edeb. In addition, new studies on the subject were also used. However, there are frequently consulted sources at this stage. These are basic sources such as Abbud, Marun, Ruvvad'n-nehdati'l-hadise, Brockelmann's GAL, Yusuf Es'ad's Masadiru'd-dirasati'l-edebiyye, Hanna al-Fahuri's al-Mujaz fi'l-edebi'l-'Arab ve tarîhihi and al-Jami'fitarîhi'l-edebi'l-'Arab.

**Results:** Although the research has reached many important conclusions, the most important conclusion reached in the study is that Majani'l-edeb is an important work in Arabic literature in terms of language, content and style.

**Keywords:** Arabic Language and Literature, Modern Literature, Anthology, Luvîs Sheiho, Mecani'l-edeb.

**PROCEEDINGS INVOLVING PERSONS WHO COMMIT A CRIME IN A STATE  
OF INSANITY OR DEVELOP MENTAL ILLNESS AFTER THE OFFENSE**

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**ABSTRACT**

In the criminal procedure system of the Republic of Azerbaijan, individuals who commit a crime in a state of insanity or develop mental illness after committing an offense are treated under a differentiated procedural regime. Such cases require a nuanced approach that balances the protection of public safety with respect for human rights and fair trial guarantees. These individuals are recognized as subjects with special status, and the legal proceedings concerning them are designed accordingly.

This study explores the legal and procedural features of pre-trial proceedings involving such individuals. It focuses particularly on how the lack of criminal responsibility due to insanity or subsequent mental illness is identified and addressed within the framework of Azerbaijani criminal procedure. Special attention is paid to the role of forensic psychiatric assessments, the application of coercive medical measures, and the rights of the affected individuals during investigation. The paper also analyzes relevant legislative provisions and judicial practices to assess whether current safeguards adequately protect the rights of these individuals.

Furthermore, the study incorporates comparative legal insights from other jurisdictions to evaluate Azerbaijan's alignment with international standards, especially those set out in the European Convention on Human Rights and the jurisprudence of the European Court of Human Rights. The goal is to identify legal and practical challenges, and to propose recommendations aimed at improving procedural fairness and institutional accountability.

**Keywords:** criminal procedure, insanity, post-offense mental illness, coercive measures, forensic psychiatry, fair trial

## (IMPORTANCE OF DEFENSINS IN GASTRIC MUCOSAL BARRIER)

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### **ABSTRACT**

The stomach's own secretion of acid and pepsin, bile reflux from the duodenum, foods with different pH and temperature, microorganisms, alcohol and drugs are factors that destroy the mucosa. Against these harmful agents, gastric mucosa has developed some defense mechanisms to protect its integrity. In this barrier; there is a sticky mucus layer covering the inner surface of the stomach. This layer prevents digestive enzymes such as hydrochloric acid (HCl) and pepsin from damaging the gastric mucosa. In addition, the gastric mucosal epithelium has a single layer prismatic secretory structure and tight connections between epithelial cells.

The ability of the injured area to repair itself, rich mucosal blood supply, natural hormonal factors such as prostaglandins, epidermal growth factor, somatostatin and mucosal phospholipids (gastric surfactant) are the main examples of antimicrobial peptides, which are an important part of the innate immune system, in mammals are defensins. Defensins are arginine-rich molecules, usually 18-45 amino acids in length, with a small cationic structure,  $\beta$ -layered folds, molecular weights between 3.5-6 kDa and three disulfide bridges formed by six cysteine-residues. They interact with negatively charged phospholipids in the membranes of microorganisms and kill microorganisms by piercing the cell membrane.

Defensins are classified into two groups, alpha and beta families. Alpha-defensins are small cationic peptides with antibacterial, antiviral and antifungal properties and are found in neutrophils, macrophages and Paneth cells in the intestine. Paneth cell defensins are called crypticidins and serve to reduce the number of bacteria in the intestinal lumen. Beta-defensins are small cationic peptides that play an important role in the innate immune system, especially in defending the body against microbial infections. They are the largest part of the family known as defensins, which includes alpha-, beta- and theta-defensins. It is rich in cysteine residues that form disulfide bonds that stabilize the sheet structure. It usually shows an amphipathic structure and is structurally more open than alpha-defensin.

As a result, defensins play an important role in protecting the integrity of the gastric mucosa by exerting an antimicrobial effect on the gastric mucosa.

**Key Words:** gastric, mucosal barrier, defensins

## **MODELING AND CONTROL OF MATRIX CONVERTER FOR EFFICIENT DFIG WIND TURBINE OPERATION**

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### **Abstract**

This paper presents a comprehensive study on the modeling and control of Matrix Converters (MCs) for efficient operation of Doubly-Fed Induction Generator (DFIG)-based wind turbines. Unlike conventional back-to-back converters, MCs offer a compact and transformer-less solution with bidirectional power flow, high power density, and improved input power quality. A detailed mathematical model of the MC integrated with a DFIG system is developed, considering both electrical and control dynamics. To enhance performance, advanced control strategies such as vector control and Space Vector Modulation (SVM) are implemented to regulate rotor-side and grid-side parameters under varying wind conditions. Simulation results in MATLAB/Simulink validate the effectiveness of the proposed control scheme in terms of power quality, reduced Total Harmonic Distortion (THD), and fault ride-through capability. The proposed system demonstrates improved energy efficiency and reliability, making it a promising solution for next-generation wind energy conversion systems.

**Keywords:** Matrix Converter, DFIG, Wind Energy Conversion System, Vector Control, Space Vector Modulation (SVM), Total Harmonic Distortion( THD).

## CLASSIFICATION OF SIGN LANGUAGE GESTURES USING PRINCIPAL COMPONENT ANALYSIS AND CHI-SQUARE FEATURE SELECTION METHOD

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### ABSTRACT

**Introduction and Purpose:** Communication is of vital importance in terms of organizing individual and social life and the mutual transfer of emotions, thoughts and information. Hearing-impaired people experience inequality and exclusion in many areas from education to employment due to the inability to communicate verbally through natural means. The aim of this study is to increase the classification performance and develop a more efficient sign language recognition system by performing feature selection with Principal Component Analysis (PCA) and Chi-Square (Chi-2) test on a high-dimensional dataset obtained from sign language movements.

**Materials and Methods:** Electromyography (sEMG) signals are collected with the analog surface EMG muscle potential measurement sensor we developed. Two-class data are collected by three volunteers making “Hello” and “OK” signs with sign language. These signs made with one hand are repeated forty times. In addition, 7 data points are taken for each class during the measurement, including acceleration and angular velocity values for x, y, and z angles and sEMG signal values. PCA and chi-squared test methods are used for the feature selection method.

**Results:** Selected feature are classified in three different classification methods as Support Vector Machine (SVM), K-Nearest Neighbor (KNN) and Tree. Although PCA+SVM method has an accuracy value of 97.63%, in PCA+KNN method, accuracy value is calculated as 97.21%. Although the lowest accuracy value is observed as 96.32% in PCA+Tree method. In Chi-Square + KNN method, accuracy 98.18% values. In Chi-Square+Tree methods accuracy value is calculated as 96.45%. These findings show that appropriate feature selection and classification algorithm combinations can significantly increase the performance in sign language recognition systems.

**Keywords:** sEMG Signal; Sign Language Recognition; Feature Selection; Biomedical Signal Processing; Classification and Machine learning.

## WHY TURKISH

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### ABSTRACT

There have been many views put forward about the beginning and formation years of Turkish, and studies on this subject are ongoing. When we look at the history of Turkish, although there are no leaders who have supported Turkish other than Karamanlı Mehmed Bey (“From now on, Turkish will be spoken in dervish lodges and markets. This is my command.”), Gazi Zahiruddin Muhammed Babur Sultan and Gazi Mustafa Kemal Atatürk, today, six independent heads of state have supported Turkish and decided to directly support the studies initiated regarding Turkish. This situation is a hopeful situation for the future of Turkish. It is accepted in the scientific world that Turkish ranks fifth in the ranking of living languages determined by considering the population density in the world. On the other hand, it can be said that our world is almost like a village in terms of communication due to the ease of communication offered to individuals of society by the communication sector that has developed in parallel with technological developments. For this reason, language has become more important than ever in communication.

Based on this information, in this study, an answer was sought to the question of why Turkish with a qualitative method and a phenomenological approach.

**Keywords:** Mehmed Bey, Babur, Atatürk, Turkish, Why Turkish.

## CAT CORONAVIRUS INFECTION AND CURRENT APPROACHES IN TREATMENT

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### ABSTRACT

Feline Infectious Peritonitis (FIP) is a fatal systemic disease in cats caused by a mutated form of Feline Coronavirus (FCoV). While FCoV is typically associated with mild gastrointestinal symptoms, in some cats it undergoes internal mutations that enable replication within macrophages, leading to severe immune-mediated systemic inflammation and multi-organ involvement.

FIP presents in two clinical forms: the **effusive (wet) form**, characterized by the accumulation of protein-rich fluid in the abdominal or thoracic cavities; and the **non-effusive (dry) form**, which involves granulomatous lesions affecting various organs, often accompanied by neurological and/or ocular symptoms. Clinical signs are often nonspecific, and diagnosis requires a combination of clinical evaluation, exclusion of differential diagnoses, and advanced laboratory testing.

Diagnostic methods include complete blood count, serum biochemistry, albumin/globulin (A/G) ratio, effusion analysis, RT-PCR, and immunohistochemistry. Recent advancements, particularly the detection of FIP-specific mutations via RT-PCR, have significantly improved diagnostic accuracy.

For many years, treatment options for FIP were limited to supportive care, with a poor prognosis. However, the recent use of the antiviral compound GS-441524 has shown promising clinical results. This nucleoside analog inhibits viral replication, leading to symptom resolution and improved survival rates. Despite the lack of official approval in many countries, its clinical application has yielded positive outcomes. Treatment protocols must be carefully managed in terms of dosage, duration, and drug sourcing.

In conclusion, although FIP remains a challenging and often fatal disease, improvements in molecular diagnostics and the emergence of antiviral therapies have considerably shifted the clinical outlook. Preventative strategies, particularly in multi-cat environments, including good hygiene practices, stress reduction, and isolation of infected individuals, remain critical components in FIP control.

**Keywords:** FIP, Feline Coronavirus, GS-441524, diagnosis, antiviral therapy

## **OBJECT RECOGNITION AND ROBOT ARM CONTROL: RASPBERRY PI-STM32 INTEGRATION**

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### **ABSTRACT**

In this study, an integrated and real-time operational modular system has been developed on the open-source, 3D-printable BCN3D Moveo robotic arm by combining vision-based object recognition with scenario-driven motion control. The system offers a cost-effective, expandable, and streamlined structure at both hardware and software levels, making it suitable for academic research, embedded systems education, and industrial prototyping applications. Among the six degrees of freedom of the robotic arm, three were actively utilized; however, the modular design allows for easy extension to additional axes.

As the vision processing unit, a machine learning model compatible with ARMv7 architecture was executed on a Raspberry Pi 4 board. Images were captured through a USB-connected camera and processed in real time for classification. Upon detecting a target object, a digital trigger signal was generated and transmitted from GPIO7 of the Raspberry Pi to the STM32F407 microcontroller. This enabled low-latency synchronization between the image processing and motion control layers. The control unit employed PWM-based algorithms developed in the Simulink environment using Waijung blocksets. The STM32 microcontroller generated PWM and direction signals, which were transmitted to NEMA 17 and NEMA 23 stepper motors via TB6560 motor drivers.

As a result, the robotic arm demonstrated smooth, low-vibration, and synchronized movements across the actively controlled axes. Evaluation results showed an F1 score of 96.3%, confirming the model's effectiveness in identifying the target class with high precision and sensitivity. These findings validate the system's real-time responsiveness and operational reliability within an embedded platform. Overall, the proposed system offers a lightweight, modular, and robust integration of machine learning and motion control, making it suitable for both educational environments and industrial prototype development.

**Key Words:** Object detection; Embedded System; Robotic Arm; Raspberry Pi; STM32; Machine Learning; Simulink; Open-Source Robotics

## ISOLATED ODONTOMA LOCALIZED IN THE ANTERIOR MAXILLA: A CASE REPORT WITH CLINICAL EVALUATION AND SURGICAL MANAGEMENT

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### ABSTRACT

#### Objective:

According to the 2017 World Health Organization (WHO) classification, odontomas are benign mixed odontogenic tumors with both epithelial and ectomesenchymal components. They are the second most common odontogenic tumors following ameloblastomas. Odontomas are often asymptomatic and incidentally detected on routine dental radiographs. They tend to occur slightly more frequently in males than in females. The maxilla is the most common site of involvement (67%), with a particular predilection for the anterior region (61%). Odontomas are typically slow-growing, non-aggressive lesions. However, early diagnosis and enucleation are recommended to prevent complications such as delayed tooth eruption. Being benign with low aggressive potential, odontomas are treated by surgical excision and rarely recur.

#### Method:

This case report presents the clinical, radiographic, and surgical features of an odontoma localized in the anterior maxilla of a 15-year-old female patient who had no systemic conditions and presented to the clinic for the treatment of dental caries. The lesion was incidentally discovered during routine examination.

#### Results:

The lesion was surgically excised and sent for histopathological analysis, which confirmed the diagnosis of odontoma.

#### Conclusion:

Odontomas generally have a favorable prognosis and a low recurrence rate. This case highlights the importance of a multidisciplinary approach in the diagnosis and treatment of odontomas, particularly those located in the anterior maxillary region.

**Keywords:** Odontoma; Cone Beam Computed Tomography; Benign Tumor

## INFLUENCE OF LAND USE TYPES ON SOIL CARBON SEQUESTRATION IN CLIMATE CHANGE ERA IN IKWO SOUTH-EAST NIGERIA

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### **Abstract**

Land use types significantly impact carbon sequestration, influencing the global carbon cycle and mitigation of climate change effects. The study was conducted to determine the influence of land use types on soil carbon sequestration in soils under different land use types in Ikwo, south east Nigeria. The experimental design is 4\*3\*2 factorial laid out in a randomized complete block design (RCBD). Four different land use types viz; forest, fallow, grass land and continuously cultivated soils) were randomly selected. Soil samples were randomly collected from each land use type at the depths of 0-15 cm and 15-30 cm using auger but undisturbed samples for determination of bulk density were collected with core samplers. Small portions of the samples were air dried, crushed and sieved using a 2-mm sieve in preparation for laboratory analyses. Data obtained were subjected to ANOVA. The results obtained showed that the soil in the study area is predominantly sandy and sandy loam in texture and slightly acidic. The soil textural fractions of sand, silt and clay contents at 0-15cm ranged from 61.30 – 69.30 gkg<sup>-1</sup>, 13.50 – 23.50 gkg<sup>-1</sup>, and 15.20 – 23.20 gkg<sup>-1</sup> in the four different land use types. The proportions of sand, silt and clay contents of 15-30cm ranged from 55.30 – 61.30 gkg<sup>-1</sup>, 15.50 – 25.40cm gkg<sup>-1</sup> and 19.20 – 25.23 gkg<sup>-1</sup> across all the land use types studied. The carbon storage at 0-15 cm was as follows; Forest Land = 2735gC/ha, Fallow land = 2713gC/ha, Grass land =1886gC/ha and continuous cultivated land =1368gC/ha. Forest and fallow lands had higher quantities of carbon when compared with those of the grass land and cultivated lands. From the results also, soil physical and chemical properties of the study area is significantly different (p<0.05) hence land use management had profound influence on soil productivity and carbon storage. Forest soils have significance higher in soil carbon storage than other soils. In conclusion, land use types have significance influence on soil properties and carbon sequestration.

**Keywords:** land use types, soil carbon, sequestration, climate change

## THE PLACE OF CLARINET MAKERS IN THE MUSICAL CULTURE OF ORDU PROVINCE

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### ABSTRACT

Ordu province is a very important region in terms of musical diversity due to the richness of its traditional folk melodies, hosting different nations and cultures, and the influence of neighboring provinces. This musical diversity is also reflected in the instruments. For this reason, it is known that in addition to the bağlama, which is mostly known as the main instrument of folk music by local musicians, both local and universal instruments such as the Black Sea kemençe, tulum and clarinet are played. In this context, it is noteworthy that there has been progress in instrument making in Ordu province. It is seen that there are producers who have made a name for themselves internationally, especially in the production of the clarinet along with the performance of the solo clarinet. This study aims to explain the clarinet producers historically identified in Ordu province. This study is considered to be important in terms of introducing clarinet production, which is a part of the musical culture of Ordu province. The study was created with a case study design from qualitative research methods. Data were collected with written and visual documents, and the obtained data were explained using the descriptive analysis method. In line with the data obtained in the study, ten clarinet makers were identified in the historical process in Ordu province. Among these clarinet makers are Ahmet Özdemir, the founder of Ahmet Özdemir Clarinet Workshop, Salih Özdemir, Yaşar Özdemir, Sezgin Özdemir, Ünal Kızıllırmak, İsmet Kandemir, Bahadır Yeni, Erman Özdemir, Eren Özdemir and Ege Özdemir. It was concluded that clarinet makers in Ordu province brought a new breath to clarinet making and made contributions and inventions.

**Keywords:** Ordu, Clarinet Production, Music Culture

## **ANALYSIS OF CORRECT AND INCORRECT DIE CRIMPING OF TERMINALS TO WIRES IN AUTOMOTIVE WIRING HARNESSSES**

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### **ABSTRACT**

Recent developments observed in the automotive sector, along with the increasing number of automotive manufacturers, have contributed to the growth of the wiring harness production market. The transition to by-wire systems—where mechanical or hydraulic connections are eliminated and replaced by electronic signal-based control systems—means that modern vehicles require more wiring connections than ever before. As vehicles advance toward autonomous functionality, flawless performance in signaling, power supply, and communication is becoming increasingly critical.

Wiring harness manufacturers are growing in parallel with the rise in automotive production. However, this growth has also led to the emergence of production lines with substandard quality that fail to fully meet technical requirements. Wiring harnesses can be considered the blood vessels and neural network of a vehicle, responsible for transmitting electrical energy and signals. They carry low-voltage signals and low-power energy sources, connect various sensors, controllers, vehicle lighting systems, audio systems, and other low-voltage electrical components, and enable the execution of diverse control and auxiliary functions within the vehicle. Therefore, quality, performance, and safety cannot be compromised in this context.

This study focuses on the importance of using the correct terminal die during the production phase of terminals found in automotive wiring harnesses. In a process involving a series of production steps, the terminal with part number 1241394-1 was crimped using both the correct and incorrect dies. Dimensional evaluations were conducted through micrographic analysis in the laboratory, followed by a tensile test at 80 N. It was observed that when crimped with an incorrect die, the terminal failed to properly grip the wire, leading to disconnection during the tensile test. Such faulty crimping can cause serious issues under the continuous vibration and harsh environmental conditions typical in automotive applications. Considering that wiring functions as the neural network of a vehicle, any disconnection may lead to data loss, vehicle breakdowns, or even accidents.

**Key Words:** Wiring harness, automotive, terminal, terminal die, safety

## AN EXAMINATION OF TEACHERS' APPROACHES TO USING COMPLEMENTARY ASSESSMENT AND EVALUATION METHODS

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### ABSTRACT

**Introduction and Purpose:** In today's educational landscape, student assessment extends beyond academic achievement to include critical thinking, problem-solving, communication, and self-regulation. This shift necessitates the integration of complementary (alternative) assessment methods alongside traditional approaches. Techniques such as portfolios, performance tasks, self-assessment, and peer assessment encourage active student engagement and improve learning quality. However, the extent to which teachers perceive and implement these methods, and the challenges they encounter, remains underexplored, especially in systems dominated by high-stakes standardized testing. This study aims to examine teachers' approaches to complementary assessment methods, assess their usage, and explore whether these approaches differ based on gender, subject area, professional experience, and participation in in-service training. The findings aim to contribute to a deeper understanding of teachers' assessment practices and inform professional development planning.

**Materials and Methods:** This study employed a quantitative research design, specifically using the single screening model. The study adopted a quantitative research design, specifically the single screening model, a type of descriptive survey method. The sample consisted of 269 teachers from various subject areas during the 2024–2025 academic year. Data were collected using the “Teachers' Approach to Using Complementary Assessment and Evaluation Methods Scale” (Korkmaz et al., 2025), a Likert-type instrument designed to measure teachers' attitudes and tendencies toward complementary assessment methods. The scale's validity and reliability were confirmed in previous studies, with a Cronbach's alpha coefficient of .87 in the current study. Data were analyzed using descriptive statistics and inferential techniques such as t-test and ANOVA to examine differences based on variables like gender, subject area, and in-service training.

**Results:** The results indicated that teachers generally have a moderately positive attitude toward complementary assessment methods, but the frequency of their classroom implementation remains limited. Female teachers and those with in-service training showed higher scores, suggesting the importance of gender and professional development. The findings highlight a gap between positive perceptions and actual practice, recommending the need for more practice-oriented training and institutional support.

**Key Words:** Complementary assessment, teacher attitudes, alternative evaluation, in-service training, student-centered assessment

## OVERVIEW ON ASTHMA A NON-COMMUNICABLE DISEASE

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### **Abstract**

Asthma is a chronic respiratory condition characterized by inflammation and narrowing of the airways, resulting in difficulty in breathing. It affects people of all ages and is one of the most common non-communicable diseases globally. Asthma is triggered by various environmental and genetic factors, including allergens, air pollution, respiratory infections, exercise, stress, and weather changes. The primary symptoms include wheezing, shortness of breath, chest tightness, and coughing, which often worsen at night or early morning. The underlying pathophysiology of asthma involves airway inflammation, bronchial hyperresponsiveness, and intermittent airflow obstruction. During an asthma attack, the muscles around the airways tighten, and the lining becomes swollen, producing excess mucus, which further restricts airflow. Diagnosis is based on medical history, physical examination, lung function tests like spirometry, and response to bronchodilators. Although asthma is not curable, it is manageable with appropriate treatment and lifestyle modifications. Treatment typically includes quick-relief medications such as bronchodilators (e.g., salbutamol) and long-term control medications like inhaled corticosteroids, leukotriene modifiers, and long-acting beta agonists. In severe cases, biologic therapies and immunotherapy may be considered. Patient education, self-monitoring, adherence to medication, and avoidance of triggers play crucial roles in asthma management. Globally, asthma imposes a significant burden on healthcare systems due to emergency visits, hospitalizations, and loss of productivity. However, with increased awareness, early diagnosis, and improved access to inhaled medications, asthma outcomes have significantly improved. Current research focuses on personalized treatment approaches, better diagnostic tools, and addressing disparities in asthma care across regions.

### **Keywords**

Asthma, Chronic disease, Airway Inflammation, Bronchodilators, Environmental triggers, Personalized Therapy, Spirometry.

## COMPILATION OF STUDIES ON ADULTHOOD IN INDIVIDUALS WITH SPECIAL NEEDS

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### **Abstract**

The transition to adulthood is a developmental period between adolescence and adulthood. The skills that need to be defined and learned during this period are called transition to adulthood skills. Transition periods are quite challenging periods, and the fact that individuals have special needs during these periods makes the transition period much more complex and challenging. Therefore, studies should also be conducted on the adulthood of individuals with special needs. When the literature was examined, it was found that no comprehensive and sufficient study based on document analysis was found on this subject, including individuals with special needs. Therefore, the study was planned. It was seen that the existing studies were mostly aimed at teaching and systematically examining the skills, behavioral patterns and developmental stages within the period. Therefore, thesis and article studies in the literature were evaluated within the scope of the research using the document review method, one of the qualitative research methods. The aim of this study is to examine the studies conducted in our country on the transition to adulthood of individuals with special needs through a documentation study. This study is a compilation study, and based on the question of ‘what do the studies conducted on transition to adulthood skills in our country between 2000 and 2025 cover?’, studies conducted in our country regarding the adulthood period for individuals with special needs were examined and the status of the current studies was examined. As a result of the research, it was seen that there were mostly studies based on document analysis or the opinions of parents and teachers in the literature, but there were no studies on the requests, suggestions and opinions of children with disabilities, and the number of studies was low and should be increased.

**Keywords:** Special needs, adulthood, transition to adulthood transition skills, compilation studies.

## DETERMINATION OF FISH PASSAGE PROBLEMS OF RIVER TYPE HEPP PROJECTS IN ARTVIN

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### ABSTRACT

Fish passages are important water structure elements in river-type hydroelectric power plants (HEPPs) located on regulators that enable fish to migrate from upstream to downstream and from downstream to upstream. This study examined the fish passages of five identified river-type HEPP projects in Artvin Province. Within this scope, the types of fish passages, their locations on the right/left banks, structural material properties, and the channel structural elements facilitating fish passages were evaluated. The issues related to the operational principles of fish passages and the necessary precautions were outlined. The study was conducted on the Taşköprü Regulator and HEPP, Aralık Regulator and HEPP, Kocaman Regulator and HEPP, Meydancık Regulator and HEPP, and Papart Regulator and HEPP projects located in the districts of Borçka and Şavşat. The regulator structures, sedimentation pools, gravel passages, fish passages, and flow observation stations, as well as the forced pipe and power plant building structural elements of the projects were examined on-site. All of the evaluated projects consist of pool-type fish passages. The regulator types include Taşköprü HEPP, Aralık HEPP, and Kocaman HEPP, which are of the Tirol type, and Meydancık HEPP and Papart HEPP, which are of the full-body type. The Kocaman HEPP fish passage cannot be used due to the very small size of the regulator reservoir area and the unsuitable structure of the source for fish passage. The pool-type fish passages of the other four projects can be actively used and contribute to the natural balance of water life. For this reason, it is important for HEPP project planning to be carried out in accordance with habitat characteristics and the physical environment during the feasibility study phase, to determine the appropriate fish passage type by identifying fish species, and to prepare an environment suitable for fish passage by conducting the necessary controls during the operational stage. In addition to clean energy production, fish passages must be planned and operated in accordance with the environment and habitat to maintain the natural balance of life.

**Key Words:** Hydroelectric Power Plant (HEPP); Fish Passes; Environmental Impact; Artvin River Type HEPP

## ENHANCING ROAD SAFETY WITH A CNN-BASED DRIVER DROWSINESS DETECTION AND ALERT SYSTEM

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### ABSTRACT

Fatigued drivers are a major contributor to traffic accidents, particularly during long or nighttime drives. To address this issue, a real-time, vision-based Driver Drowsiness Detection System has been developed to monitor driver alertness and provide immediate alerts using Convolutional Neural Networks (CNN) and facial landmark analysis. A webcam captures a live video stream, and each frame is analyzed to detect key indicators of drowsiness. These include: (1) eye state, determined by a CNN trained to classify cropped eye images as "Open" or "Closed"; (2) yawning, identified through the Mouth Aspect Ratio (MAR) calculated from facial landmarks; and (3) head tilt, assessed using Dlib's 68-point facial landmark detector to measure the angle between the nose and chin. The system classifies a driver as drowsy if the eyes remain closed for a defined threshold (e.g., 15 consecutive frames), or if repeated yawning or head tilting is observed. Upon detection, a real-time audio alarm is triggered to alert the driver, and the incident is logged. The system is accompanied by a web dashboard that visualizes facial landmarks, real-time values of the head tilt, MAR and Eye Aspect Ratio (EAR), and has a detection log and continuous monitoring statistics based on Flask. The outcome is a real-time fully working drowsiness detection system that would create a lightweight, non-invasive, non-obstructive, system that when run on any standard computing device does not require any extra sensor to run.

**Keywords:** Driver Drowsiness Detection, CNN, Eye Aspect Ratio, Mouth Aspect Ratio, Head Tilt, Deep Learning, Computer Vision, Real-Time Monitoring, Flask Dashboard.

## **REAL-TIME DRIVER SLEEPINESS DETECTION WITH CNN VISION-BASED DROWSINESS DETECTION**

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### **ABSTRACT**

Driver exhaustion is a significant contributor to road accidents worldwide, especially during long or nighttime journeys. To address this issue, a real-time vision-based drowsiness detection system is proposed that monitors driver alertness using Convolutional Neural Networks (CNN) and facial landmark detection. The system employs a standard webcam to continuously capture live video, with each frame analyzed to detect signs of fatigue. The detection algorithm focuses on three key indicators: (1) eye state detection using a CNN trained to classify cropped eye images as "Open" or "Closed"; (2) yawning detection through the Mouth Aspect Ratio (MAR), calculated from facial landmarks; and (3) head tilt estimation by measuring the angular displacement between the nose and chin using Dlib's 68-point facial landmark model. The system identifies drowsiness when the driver's eyes remain closed beyond a defined threshold (e.g., 15 consecutive frames), or when repeated yawning or head tilting is observed, upon which a real-time audio alert is triggered and the event is logged. To enhance monitoring, a Flask-based web dashboard is integrated, displaying live overlays of facial landmarks, real-time values for Eye Aspect Ratio (EAR), MAR, and head tilt, along with detection logs and alert statuses. Designed to be lightweight and non-intrusive, the system operates efficiently on standard computing hardware without requiring additional sensors. By leveraging deep learning and computer vision, this solution provides a practical and effective means of enhancing road safety through real-time driver fatigue detection.

### **KEYWORDS**

Driver Drowsiness Detection, CNN, Eye Aspect Ratio, Mouth Aspect Ratio, Head Tilt, Deep Learning, Computer Vision, Real-Time Monitoring, Flask Dashboard.

## **REAL-TIME DRIVER FATIGUE DETECTION USING A DEEP LEARNING-BASED APPROACH TO MAKING OUR ROADS SAFER**

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### **ABSTRACT**

Fatigue during long-distance or nighttime driving remains a leading cause of road accidents. To mitigate this risk, a real-time vision-based Driver Drowsiness Detection System is proposed, utilizing Convolutional Neural Networks (CNN) and facial landmark detection to monitor early signs of driver fatigue. A webcam captures a live video stream, and each frame is analyzed to detect three key indicators: (1) eye state, classified as "Open" or "Closed" using a CNN trained on cropped eye images; (2) yawning, detected through the Mouth Aspect Ratio (MAR) computed from facial landmarks; and (3) head tilt, measured by calculating the angular displacement between the nose and chin using Dlib's 68-point facial landmark model. If the eyes remain closed for a specified duration (e.g., 15 consecutive frames) or if repeated yawning or head tilting is observed, the system triggers a real-time audio alert and logs the incident. A Flask-based web dashboard enhances usability by displaying live facial landmarks, real-time values of Eye Aspect Ratio (EAR), MAR, and head tilt, along with a history of detection events and alert statuses. Designed to be lightweight and non-intrusive, the system operates efficiently on standard computing hardware without the need for external sensors. By integrating deep learning with conventional facial analysis techniques, this solution provides an effective, real-time approach to improving road safety through early detection of driver drowsiness.

### **KEYWORDS**

Driver Drowsiness Detection, CNN, Eye Aspect Ratio, Mouth Aspect Ratio, Head Tilt, Deep Learning, Computer Vision, Real-Time Monitoring, Flask Dashboard.

**ROLE OF PEPPERINE IN BIOENHANCEMENT****V.Hariharan****M.Farhat yasir****S.Harinishree****R.Thelshath**

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**Abstract:**

Piperine, an alkaloid found predominantly in black pepper (*Piper nigrum*), plays a significant role in bioenhancement by improving the absorption and efficacy of various drugs and phytoconstituents. Bioenhancement refers to the process of increasing the bioavailability and therapeutic potential of active compounds without altering their structure. Piperine achieves this by inhibiting drug-metabolizing enzymes such as cytochrome P450 3A4 and UDP-glucuronyl transferase, which are primarily responsible for the first-pass metabolism of many drugs. It also enhances gastrointestinal blood flow and modulates membrane dynamics, resulting in increased intestinal absorption of both synthetic and herbal molecules. Piperine has been shown to significantly enhance the bioavailability of several compounds, including curcumin, resveratrol, and various antibiotics and antiepileptics. By improving drug plasma concentrations and prolonging half-life, piperine contributes to reduced dosage requirements and improved therapeutic outcomes. Its role is especially valuable in herbal formulations, where many active phytochemicals suffer from low solubility and poor absorption. In addition, piperine possesses its own pharmacological properties, including anti-inflammatory, antioxidant, and immunomodulatory effects, which further contribute to its utility in combination therapies. The incorporation of piperine in drug formulations represents a promising strategy in modern pharmacology and herbal medicine, facilitating the transition of traditional remedies into clinically effective therapeutic agents. Therefore, piperine serves as a powerful natural bioenhancer, significantly impacting drug development and delivery.

**Keywords:** Piperine, bioenhancement, bioavailability, *Piper nigrum*, cytochrome P450, drug absorption, curcumin, herbal medicine, pharmacokinetics, enzyme inhibition.

## DETERMINATION OF THE SENSORY AND PHYSICAL QUALITY CHARACTERISTICS OF DIFFERENT COMMERCIAL CHOCOLATE CUPCAKES

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### ABSTRACT

In this study, five popular commercial chocolate cupcake samples (A1–A2–A3–A4–A5) obtained from local businesses in Amasya were evaluated in terms of physical structure, color, and sensory quality. Physical evaluation included measurements of volume index, symmetry index, uniformity index, total volume index, and specific volume. Color analysis was conducted on both the outer and inner surfaces of the cupcakes using L\*, a\*, b\*, Chroma, and Hue angle values. Sensory quality was assessed based on appearance, texture, flavor, and overall acceptability. The results revealed significant differences among the cupcake samples in terms of physical, color, and sensory attributes. Notably, sample A5 had the highest values for volume and specific volume, while sample A1 showed the lowest values for these parameters. The observed color differences were attributed to variations in cocoa content, quality, and baking conditions. Despite its low specific volume, sample A1 received the highest consumer preference scores. This was likely due to the favorable impact of ingredients such as fat, sugar, cocoa, flavorings, and additives on sensory properties like taste, texture, and appearance. The study demonstrates that formulation components and processing conditions directly influence product quality. The findings provide scientific insight into consumer preferences and may support quality improvement efforts in the bakery industry.

**Keywords:** Chocolate cake, Physical structure, Color analysis, Cupcake, Sensory evaluation, Consumer preference, Quality parameters.

**EFFECTS OF PUMICE WITH DIFFERENT PARTICLE SIZES AS AN  
ALTERNATIVE GROWING MEDIUM IN SOILLESS AGRICULTURE ON THE  
GROWTH, YIELD, AND QUALITY CHARACTERISTICS OF CUCUMBER  
(*Cucumis sativus* L.)**

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**ABSTRACT**

In this study, the effects of different growing media (cocopeat, perlite, and pumice with three different particle sizes) on the growth, yield, and quality characteristics of cucumber (*Cucumis sativus* L.) were evaluated. The findings revealed that the growing media caused significant differences in morphological and physiological parameters. The cocopeat medium provided the highest values for stem diameter, stem fresh weight, and root fresh weight, making it the most supportive medium for vegetative growth. Small-sized pumice stood out in terms of fruit length, fruit diameter, average fruit weight, and yield per plant. The perlite medium yielded the highest results for fruit flesh firmness and fruit juice EC value. The highest levels of fruit juice pH and soluble solid content (SSC) were recorded in the large-sized pumice medium. The results demonstrated that growing media influence not only plant growth but also fruit quality. In this context, selecting the appropriate medium based on the production objective plays a critical role in improving both yield and marketable quality. Moreover, the different effects observed depending on pumice particle size strengthen its potential as a domestic and sustainable alternative growing medium.

**Key Words:** Soilless culture; Pumice particle size; Cucumber quality and yield

## **ENGINEERED EXOSOMES AS SMART DRUG CARRIERS: OVERCOMING BIOLOGICAL BARRIERS IN CNS AND CANCER THERAPY**

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### **Abstract**

Engineered exosomes have emerged as transformative drug carriers, uniquely equipped to overcome biological barriers in central nervous system (CNS) disorders and cancer therapy. These natural extracellular vesicles, derived from cell membranes, offer inherent biocompatibility, low immunogenicity, and the ability to traverse physiological obstacles such as the blood–brain barrier (BBB) and dense tumor stroma. Recent advances in exosome engineering—including surface modification (e.g., ligand conjugation for receptor-mediated targeting) and cargo loading (siRNA, CRISPR-Cas systems, and chemotherapeutics)—have enhanced their precision and therapeutic utility. For CNS delivery, exosomes functionalized with brain-homing peptides (e.g., RVG or TfR ligands) have enabled the efficient transport of neuroprotective agents or gene-editing tools to treat Alzheimer’s disease or glioblastoma. In oncology, engineered exosomes loaded with tumor-suppressive miRNAs or immune checkpoint inhibitors exploit tumor microenvironment (TME) features, such as acidity or enzyme overexpression, for spatially controlled drug release. Furthermore, hybrid exosome–liposome systems and exosome–biomaterial composites are being explored to improve payload capacity and stability. Despite progress, challenges persist in scalable production, batch consistency, and regulatory standardization. This review critically evaluates engineering strategies, preclinical success, and translational hurdles while proposing innovations such as AI-driven exosome design and patient-derived exosome platforms for personalized therapy. By bridging nanotechnology and biomedicine, engineered exosomes can represent a paradigm shift in targeted drug delivery, offering safer and more effective solutions for historically intractable diseases.

**Keywords:** engineered exosomes; drug delivery; biological barriers; CNS disorders; cancer therapy; targeted nanomedicine

## **SUB-CHRONIC TOXICITY OF TOPIK80EC IN RABBITS: HEMATOLOGICAL AND MORPHOMETRICAL ALTERATIONS**

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### **ABSTRACT**

#### **Introduction and Purpose:**

Herbicide exposure is known to induce systemic toxicity through mechanisms involving oxidative stress, inflammation, and organ damage, especially in non-target species. Clodinafop-propargyl, the active ingredient in TOPIK80EC, is widely used in agriculture, yet its sub-chronic toxic effects in mammals remain underexplored. The aim of this study was to evaluate the toxicological impact of oral exposure to TOPIK80EC in domestic rabbits, focusing on physiological, hematological, and morphometrical changes.

#### **Materials and Methods:**

Twenty-four adult male rabbits were randomly divided into four groups (n=6 per group): one control group and three experimental groups receiving increasing oral doses of TOPIK80EC (1, 4, and 20 mg/kg body weight) daily for 30 days. Body weight was monitored throughout the study. At the end of the treatment period, blood samples were collected for hematological analysis, and liver, kidney, and spleen tissues were excised for histological examination. Parameters such as red and white blood cell counts, hemoglobin, hematocrit, and platelet levels were assessed. morphometrical damage was scored using a semiquantitative scale. Data were analyzed using one-way ANOVA and post hoc Tukey's test.

#### **Results:**

A dose-dependent decrease in body weight was observed in the treatment groups. Hematological analysis revealed leukocytosis at lower doses and a significant reduction in red blood cells, hemoglobin, hematocrit, and platelets at higher doses ( $p < 0.05$ ), suggesting hematopoietic suppression. morphometrical examination showed an increase in the weight and morphometric measurements of the liver, kidneys, and spleen were observed.

#### **Discussion and Conclusion:**

This study demonstrated that sub-chronic oral exposure to TOPIK80EC induces systemic and organ-specific toxicity in rabbits. Hematological alterations and morphometrical change in the liver, kidneys, and spleen suggest that clodinafop-propargyl-based herbicides may pose significant health risks to non-target species. These findings highlight the importance of cautious herbicide use and support further research into safer alternatives.

**Key Words:** Clodinafop-propargyl; TOPIK80EC; Herbicide toxicity; Inflammation; Hematology; Liver; Kidney; Spleen; Rabbits; Morphometrie

## REVIEW ON CONGESTIVE HEART FAILURE

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### **Abstract**

The article abstract on Congestive Heart Failure (CHF) provides a comprehensive and concise overview of this complex clinical syndrome, highlighting the condition's pathophysiology, clinical manifestations, and public health significance. The abstract effectively introduces CHF as a chronic, progressive condition in which the heart is unable to pump blood adequately to meet the body's metabolic demands. It explains both systolic and diastolic dysfunctions as central mechanisms contributing to heart failure, which adds depth and clarity to the discussion. One of the strengths of the abstract is its clear identification of common symptoms such as dyspnea, fatigue, and edema, which are critical for early diagnosis. The inclusion of underlying causes, particularly ischemic heart disease, hypertension, and cardiomyopathies, ensures that readers understand the multifactorial origins of CHF. The abstract also briefly discusses diagnostic modalities including echocardiography and natriuretic peptide levels, offering a glimpse into evidence-based clinical practice. From a treatment standpoint, the abstract outlines both pharmacological approaches (like ACE inhibitors, beta-blockers, and diuretics) and lifestyle modifications, reflecting the multi-pronged nature of CHF management. Importantly, it touches on the role of patient education and long-term monitoring, emphasizing the importance of self-care and adherence to treatment plans. However, the abstract could be enhanced by incorporating recent advancements such as the role of SGLT2 inhibitors and the increasing use of telemedicine in CHF monitoring. Moreover, epidemiological data or statistics could provide better context for the burden of the disease. In conclusion, the abstract serves as a strong foundation for understanding Congestive Heart Failure. It successfully balances clinical relevance with accessibility, making it useful for both medical professionals and informed laypersons. Further elaboration in the full article is anticipated to expand on these key points with evidence-based depth.

### **Keywords**

Congestive Heart Failure, Heart dysfunction, Dyspnea, Ischemic Heart Failure, Hypertension, Edema, Fatigue.

## REVOLUTIONIZING CANCER DIAGNOSIS: THE POTENTIAL OF 3D PRINTED NANOSENSORS

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### **Abstract**

Cancer is a complicated illness with a worldwide impact, requiring ongoing breakthroughs in diagnosis and treatment. The application of 3D printing technology is increasingly recognized as an innovative tool in cancer diagnosis, offering enormous possibilities in detection and surveillance. The study aims to improve early diagnosis and prognosis for patients. 3D printing has become more popular for producing precise, customizable nanosensors with high sensitivity and specificity. The study covers the latest advances in 3D-printed cancer nanosensors. It discusses how inkjet printing, stereolithography, and fused deposition modeling can create intricate nanostructures with increased performance. Design and functionalization strategies for targeting nucleic acids, proteins, and circulating tumor cells are also covered. Nanomaterial-based sensors can detect tumor biomarkers, circulating cells, and extracellular vesicles, improving cancer diagnosis and survival. Integrating 3D-printed nanosensors with fluorescence, electrochemical, and surface-enhanced Raman spectroscopy allows rapid and accurate cancer diagnosis in clinical settings. The publication critically reviews and synthesizes previous research to show how 3D-printed nanosensors could improve cancer diagnosis as well as personalized therapy. The study explores the capacity of 3D-printed nanosensors to bring about significant changes in the field of cancer diagnostics. Using 3D-printed technology and additive manufacturing, these sensors provide exceptional sensitivity and specificity for the early identification of cancer biomarkers. Their ability to be customized allows for specific therapies for various types of cancer, offering substantial progress in precision medicine. The paper analyzes the most recent advancements, obstacles, and potential future opportunities of 3D-printed nanosensors, with a specific focus on their significant impact on transforming cancer diagnosis.

**Keywords:** 3D printing, Nanosensor, Stereolithography, Cancer diagnosis, personalized therapy,

## RINGS WHOSE SEMI-HOPFIAN MODULES ARE NOETHERIAN

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**Abstract:** Let  $R$  be a ring and  $M$  an  $R$ -module. It is well known that Hopfian modules are semi-Hopfian, but the converse is not always true. For instance, if  $p$  is a prime and  $M$  is any direct sum of copies of  $\mathbb{Z}_{p^2}$ , then  $M$  is semi-Hopfian but not Noetherian. In this paper, we introduce and study a new class of rings, called **SHN-rings**, defined as rings for which every semi-Hopfian module is Noetherian. We investigate the structural properties of SHN-rings and explore their relationships with other well-known classes of rings and modules. Over commutative rings, we establish that SHN-rings coincide with Köthe rings,  $SU$ -rings, pure-semisimple rings, and Artinian principal ideal rings. Furthermore, we show that over commutative SHN-rings, the notions of multiplication modules, cyclic modules, finitely generated modules, and Noetherian modules are equivalent. Additionally, we prove that in the setting of regular rings, semiprime Artinian rings,  $PCI$ -rings, and SHN-rings are equivalent.

**Keywords:** Hopfian modules, SHN-rings,  $SU$ -rings, Semiprime artinian rings.

## INVESTIGATION OF THE STRUCTURAL, OPTICAL, AND ELECTRICAL PROPERTIES OF 4%CO-SNO<sub>2</sub> FILMS BY USP METHOD

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**Abstract** – Thin films of Co-doped SnO<sub>2</sub> (4%) were successfully deposited on glass substrates using the spray pyrolysis technique at 450°C. These films were characterized for their structural, optical, and electrical properties. The X-ray diffraction (XRD) analysis confirmed that the films possess a tetragonal rutile-type structure, with an average crystallite size of approximately 20 nm. The presence of Co-doping at 4% did not significantly alter the crystal structure, indicating that the Co ions were effectively incorporated into the SnO<sub>2</sub> lattice.

For the optical properties, UV-Vis absorption spectroscopy was employed to study the films. The bandgap energy was calculated using the Wemple-DiDomenico single oscillator model, which provides insights into the refractive index dispersion and dielectric properties of the material. The Co-doped SnO<sub>2</sub> thin films exhibited a slight reduction in bandgap compared to pure SnO<sub>2</sub>, attributed to the introduction of localized states within the bandgap caused by the Co dopants. This adjustment in the bandgap can be beneficial for applications in optoelectronic devices where controlled bandgap energy is crucial.

Additionally, the electrical properties were examined by measuring the square resistance, which was found to be 100 Ohms for the 4% Co-doped SnO<sub>2</sub> films. This relatively low resistance value suggests that the Co doping enhances the electrical conductivity of the SnO<sub>2</sub> films, likely due to an increase in carrier concentration or improved charge mobility. These improvements in electrical and optical properties make Co-doped SnO<sub>2</sub> thin films promising candidates for applications in transparent conductive electrodes, gas sensors, and photovoltaic devices..

**Keywords** –SnO<sub>2</sub>:Co, X ray diffraction, Optical properties

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## COMPARISON OF SALT TOLERANCE LEVELS IN SOLANUM LYCOPERSICUM AND SOLANUM NIGRUM AND THE CONTRIBUTION OF GRAFTING TO SALT TOLERANCE

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### ABSTRACT

In this study, the morphological and physiological effects of different EC levels (2, 4, 8, 12, and 16 dS/m) on non-grafted (*S. lycopersicum*, *S. nigrum*) and grafted (*S. lycopersicum*/*S. nigrum*) plants were evaluated. In the experiment, *S. lycopersicum* was used as the rootstock and *S. nigrum* as the scion; other combinations (e.g., *S. nigrum* as rootstock and *S. lycopersicum* as scion) could not be successfully grafted. Therefore, only the *S. lycopersicum*/*S. nigrum* combination and non-grafted plants were included in the evaluation. Plant height, stem diameter, fresh-dry biomass, number of leaves, root/shoot ratio, and pigment contents were examined. According to the results, plant height and stem diameter reached their maximum at 4–8 dS/m EC levels, while significant reductions were observed at 12 and 16 dS/m. In terms of stem, leaf, and root weights, the highest values were recorded at 4 dS/m, whereas increasing EC levels reduced biomass production across all genotypes. Grafted plants exhibited more balanced values under high EC conditions, indicating greater tolerance to salt stress. The number of leaves was found to be highest in grafted plants at all EC levels. The root/shoot ratio increased under high EC levels (especially at 16 dS/m), indicating that root development was less affected by stress compared to shoot development. For chlorophyll a and b, total chlorophyll, and carotenoid content, the 4–8 dS/m range was determined as the optimum level. High EC levels (12 and 16 dS/m) caused significant reductions, particularly in chlorophyll b and carotenoids. Grafted plants exhibited more stable pigment levels under these conditions. Overall, the 4 dS/m EC level was identified as the most favorable salt concentration in terms of plant growth and physiological activities.

**Key Words:** Salt stress; Grafting; EC levels; *S. lycopersicum*; *S. nigrum*

## **CRITICALLY REFLECTING TEACHING STRATEGIES AND THEIR ROLE ON IRAQI EFL WRITING SKILLS: UNIVERSITY STUDENTS IN FOCUS**

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### **Abstract**

Writing is a influential tool for communicating and expressing one's feelings, ideas, and opinions to others. Thinking skills might help learners improve their writing and study more proficiently. The study aims at finding out the effect of reflecting Teaching Strategies on Iraqi EFL Writing Skills. It hypothesizes that there is no statistically significant difference between the mean score of the experimental group taught writing according to the Reflecting Teaching Strategies and the control group taught writing according to the traditional approach in the writing performance test and writing attitude scale. To achieve the aims of the study, two third year sections in the Department of English of the College of basic Education/University of Babylon are randomly assigned as the experimental and control groups with 40 and 43 students respectively. The experiment in this study lasts for 12 weeks during which both groups are taught writing according to the traditional approach and given one writing task per week. The experimental group students are required to reflect on their writing performance in every writing task by using a reflection sheet prepared for this purpose. At the end of the experiment, the two instruments of the study, i.e., a writing performance test are administered on both groups. The statistical operation of the results achieved shows that supporting the process orientation to writing teaching with a phase of students reflection on their writing performance is effective in developing their writing performance. In the light of the results and conclusions achieved, a set of recommendations is put forward.

**Keywords:** Reflection ; Reflecting Teaching; Strategy; Iraqi EFL; Writing Skill.

## SOCIAL MEDIA USAGE ANALYSIS OF MUNICIPALITIES IN TERMS OF PUBLIC RELATIONS ACTIVITIES INTERIOR ANATOLIA EXAMPLE

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### ABSTRACT

**Introduction and Objective:** Today, all municipalities, whether they are districts or provinces, which have legal personality in the field of local government in general, have been using social media, which has been easy and effective in recent years, to adopt and persuade their strategies to the public. The important point is that social media offers a particular recognition tool for municipalities. The aim of this study is to analyse the social media usage of Central Anatolian provincial municipalities within 1 week and to reach general information such as whether they use social media for recognition or promotion purposes, to what extent they are active on social media and message content.

**Materials and Method:** Within the scope of the analysis, Facebook, Instagram, Twitter, YouTube accounts of the Central Anatolian provinces were followed between 7-13 April 2025 and both quantitative data-based and qualitative content analysis was performed as the content of the posts was analysed.

**Findings:** The municipalities in Central Anatolia generally made posts with the aim of promotion, there were no posts for recognition. All municipalities opened two-way communication by sharing posts open to comments, but responses to comments were generally not given. Central Anatolian municipalities mostly used the following categories: 'Municipality services, general announcements, celebration-congratulations-thank you, social responsibility, city promotion, mayoral events, visits, educational activities and information about the event'.

**Discussion Conclusion:** As a result of this analysis, in this article, which includes Central Anatolian provinces within the scope of the research, unfortunately, it has been proved with the results of the analysis that municipalities use social media as a means of promotion rather than recognition. There is no promotion without recognition, but municipalities ignore this and focus on promotion.

**Keywords:** Local Government: Social Media: Public Relations in Local Governments

## SUSTANABLE ENERGY HARVESTING USING ENHANCED PERFORMANCE SOLAR THERMAL COLLECTORS

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### Abstract

This study investigates the impact of aqueous nanofluids containing carbon-based and metal-based nanostructures on the thermal performance of flat-plate solar collectors (FPSCs). Three experimental campaigns were conducted using graphene nanoplatelets (GNPs), multi-walled carbon nanotubes (MWCNTs), iron oxide ( $\text{Fe}_3\text{O}_4$ ), zinc oxide (ZnO), silicon dioxide ( $\text{SiO}_2$ ), and eco-friendly green carbon nanostructures functionalized with natural extracts. Nanofluids were synthesized with weight concentrations of 0.025–0.2% and assessed for colloidal stability, thermos-physical properties, and compatibility using ultrasonication and covalent functionalization techniques. Enhanced stability was achieved through treatments such as triethanolamine (TEA),  $\beta$ -alanine, clove extract, and green methods using Gallic acid and plant leaves.

Thermo-physical analyses showed increased thermal conductivity (up to 30.2%), viscosity (up to 25.7%), and density, with a slight reduction in specific heat as concentration increased. Thermal conductivity correlated positively with temperature and nanoparticle surface area, while viscosity and density showed inverse relations. Classical models for thermal properties were validated or modified to fit measured data.

Thermal performance tests were conducted using MATLAB and ANSYS Fluent simulations under varied flow rates (0.6–1.6 kg/min), inlet temperatures (30–50 °C), and heat flux (600–1000 W/m<sup>2</sup>). Results showed that nanofluids enhanced FPSC efficiency by up to 30.2% (for 0.1 wt.% PMWCNT), with performance index values exceeding one, indicating favorable heat transfer-to-pressure drop ratios. Exergy efficiency improved with nanoparticle concentration but decreased with higher flow rates.

In conclusion, the use of covalently functionalized and green carbon nanofluids significantly enhances the thermal, exergetic, and economic performance of FPSCs, with 0.1 wt.% PMWCNTs and CGNPs identified as the most effective candidates.

**Keywords:** Liquid Flat-plate solar collector, thermal performance, Green nanofluids, carbon nanostructures, covalent functionalization

## SPINAL DISORDER

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### **Abstract:**

Spinal disorders encompass a wide range of conditions affecting the structure and function of the spine, including the vertebrae, intervertebral discs, spinal cord, and associated soft tissues. These disorders may result from congenital anomalies, degenerative changes, traumatic injuries, infections, tumors, or inflammatory diseases. Common spinal disorders include herniated discs, spinal stenosis, scoliosis, kyphosis, spondylolisthesis, and degenerative disc disease. They often manifest through symptoms such as chronic back pain, neck pain, numbness, tingling, muscle weakness, and limited mobility, significantly affecting the patient's quality of life. The prevalence of spinal disorders has been increasing globally due to factors such as aging populations, sedentary lifestyles, poor posture, obesity, and occupational hazards. Early diagnosis is essential and typically involves clinical evaluation, imaging studies (like MRI, CT scans, and X-rays), and neurological assessments. Treatment strategies vary depending on the type and severity of the disorder and may include conservative approaches like physical therapy, medications, and lifestyle modifications. In more severe cases, surgical interventions such as spinal fusion, laminectomy, or discectomy may be necessary. Advancements in spinal imaging, minimally invasive surgical techniques, and regenerative therapies have improved patient outcomes and reduced recovery times. Preventive strategies focusing on ergonomic education, regular exercise, and weight management are crucial in reducing the incidence and progression of spinal disorders. Continued research is essential to understand the pathophysiology of these conditions and to develop innovative and effective treatment modalities.

### **Keywords:**

Spinal disorders, herniated disc, spinal stenosis, scoliosis, back pain, vertebrae, degenerative disc disease, spinal cord, spinal surgery, physical therapy, neurological assessment, imaging techniques, posture, ergonomic prevention.

## SPINAL POSTURE AND BALANCE IN CHILDREN WITH AUTISM

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### ABSTRACT

**Introduction and Purpose:** The aim of this study was to compare the spinal posture and balance skills of children with autism and typically developing children.

**Materials and Methods:** This study included 15 children with autism and 18 typically developing children who volunteered to participate in the study. Permission was obtained from Bolu Abant İzzet Baysal University Clinical Research Ethics Committee (Decision No: 2025/163, Date: 22.04.2025) The children were divided into two groups: children with autism and typically developing children. Spinal posture was evaluated in the standing position in sagittal and frontal planes with the Idiag M360 Spinal Mouse device. Sacrum-hip, thoracic, lumbar and inclination angles were recorded. Balance skills were evaluated with the timed up-and-go test and pediatric berg balance scale. Independent samples T test was used for intergroup comparison. The significance level was determined as  $p < 0.05$ .

**Results:** There was no significant difference between the groups in terms of demographic characteristics ( $p > 0.05$ ). In the sagittal plane, the significant differences were found between groups in the inclination angle in the upright position ( $p = 0.030$ ), in the sacrum-hip angle in the extension position ( $p = 0.005$ ) and in the sacrum-hip angle from trunk flexion to extension ( $p = 0.005$ ). In the frontal plane, significant differences were found between groups in the sacrum-hip ( $p = 0.002$ ), lumbar ( $p = 0.010$ ) and inclination angles ( $p = 0$ ) in the left lateral flexion position and in the lumbar ( $p = 0.014$ ) and inclination angles ( $p = 0.004$ ) in the right lateral flexion position. In addition, significant differences were found between groups in the total score of the Pediatric Berg Balance Scale ( $p = 0$ ) and in the mean duration of the Time to Sit and Stand Test ( $p = 0$ ).

**Discussion and Conclusion:** Children with autism have different sacrum-hip angulations in the sagittal plane and lumbar angulations in the frontal plane compared to their typically developing peers. In addition, the inclination angles of children with autism were higher in the upright posture in the sagittal plane. Lateral flexion mobility in the frontal plane was less than their peers. Balance skills of children with autism were more behind compared to their typically developing peers.

**Key Words:** Spinal posture, Autism, Balance, Posture.

## **INVESTIGATION of SECONDARY SCHOOL STUDENTS' SPORTSMANSHIP BEHAVIORS IN PHYSICAL EDUCATION CLASSES: THE CASE OF ELAZIĞ**

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### **ABSTRACT**

Nowadays, with the access of sports to a wider audience, the achievements, media attention and the attitudes of the athletes in this process have changed significantly. Sports is no longer just a hobby or physical activity; it has also taken on a structure based on gain and competition. This transformation causes the amateur sports concept to remain in the background and the basic values of sports to be distanced. One of the main reasons for this situation is the unethical behaviors observed in the internal and external structures of sports. The aim of this study is to measure the sportsmanship behavior levels of secondary school students. The population of the study consisted of 29,838 students enrolled in schools within the province of Elazığ during the 2024–2025 academic year. The sample was determined using Sekaran's sample size determination table, targeting 379 participants. As a result, data were collected from 387 students. The data collection instrument used in the study was the "Sportsmanship Behavior Scale for Physical Education Course," developed by Koç (2013) specifically for middle school students. The data were analyzed using the SPSS 25 statistical software package. In order to assess whether the data met the assumption of normal distribution, skewness and kurtosis values were examined, and it was determined that the data were not normally distributed. Accordingly, the Mann-Whitney U test was used to compare sportsmanship behavior levels across binary variables, and the Kruskal-Wallis test was employed for comparisons involving variables with more than two categories. The significance level was set at  $p < .05$  for all statistical tests. As a result, it can be said that middle school students' sportsmanship behaviors are influenced by variables such as gender, whether their parents are together or separated, whether they are licensed athletes, and their age. The findings of the study revealed that the mean score of middle school students' sportsmanship behaviors in physical education and sports classes was  $x = 92.13$ , indicating a high level of sportsmanship among the participants. Furthermore, it was observed that students who were licensed athletes demonstrated higher levels of positive behaviors, whereas those who were not licensed athletes exhibited higher levels of avoidance of negative behaviors.

**Key Words:** Middle school, sportsmanship, behavior

**STANDARDIZATION OF HERBAL MEDICINES**

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**Abstract:**

The standardization of herbal medicines is a crucial process that ensures the quality, safety, efficacy, and consistency of plant-based therapeutic products. Herbal medicines, derived from natural sources, have gained significant global attention due to their traditional use and potential health benefits. However, their effectiveness and safety can vary significantly due to differences in plant species, growing conditions, harvesting times, processing techniques, and storage methods. Standardization involves the development and application of rigorous protocols to identify active constituents, establish quality control parameters, and monitor batch-to-batch consistency. It includes phytochemical screening, chromatographic fingerprinting, and quantitative analysis of bioactive compounds. The lack of standardization can lead to adulteration, contamination, or variability in therapeutic outcomes, posing serious health risks to consumers. Regulatory bodies such as the WHO and national pharmacopeias have emphasized the need for validated methods and good manufacturing practices (GMP) to maintain the integrity of herbal formulations. In addition, the use of modern analytical tools like high-performance liquid chromatography (HPLC), gas chromatography (GC), and mass spectrometry (MS) has significantly improved the ability to analyze complex herbal mixtures. Despite these advancements, challenges such as the complexity of plant matrices, synergistic effects of multiple constituents, and lack of universally accepted standards persist. Addressing these issues is essential for the integration of herbal medicines into mainstream healthcare and for gaining wider acceptance among healthcare professionals and regulatory agencies. Therefore, the standardization of herbal medicines is not just a scientific necessity but also a critical step towards ensuring consumer confidence, global acceptance, and therapeutic reliability of traditional medicines.

**Keywords:** Herbal medicine, standardization, quality control, phytochemical analysis, HPLC, GMP, regulatory guidelines, safety, efficacy, traditional medicine.

## THE DESIGN OF REGRESSION MODELS FOR COMPARATIVE ANALYSIS OF A SILICA FUME AND FLY ASH IN THE INFUSED CONCRETE

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### **Abstract**

Regression models is an essential to accurately predict the compressive strength of concrete at the different curing stages to optimize the mix design, reduce material waste, and expedite construction timelines. The strength forecasting method for both binary (fly ash or silica fume) and ternary (fly ash + silica fume) mix concretes is integrated with machine learning models using an AI-driven framework presented in this study. We assess the effectiveness of four regression-based models—Linear Regression (LR), Random Forest (RF), Support Vector Regression (SVR), and XGBoost trained on compressive strength data at 7, 28, 90 and 180 days, building on an earlier experimental investigation. Major input variables consist of the water-to-binder ratio and the composition of the binder. The SVR demonstrated superior accuracy for binary mixes ( $R^2$ : 0.79–0.91; RMSE: 2.3–5.3 MPa) among the tested models, while RF out performed others for ternary mixes ( $R^2$ : 0.75–0.94; RMSE: 2.1–5.0 MPa). Linear Regression and XGBoost also yielded predictions that were reasonably accurate, with  $R^2$  values ranging from 0.62 to 0.89. The capacity of these models to predict compressive strength across multiple curing intervals facilitates the intelligent mechanization of the mix proportioning, thereby reducing the dependence on conventional trial-and-error methods. This study suggests a practicable, AI-based methodology for optimizing sustainable concrete design through predictive modelling.

**Keywords:** Concrete, Fly ash, Silica fume, Compressive strength, Regression Models, Machine learning and XGBoost

## **DIRECT TORQUE CONTROL APPLIED TO AN INDUCTION MOTOR WITH A FRACTIONAL PI-FUZZY LOGIC SPEED CONTROLLER**

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### **Abstract**

Because of their excellent performance, low cost, easy maintenance, simplicity, and dependability, induction motors are the most widely used motors in industry. Direct Torque Control is described as one of the control methods for these motors. Mr. Takahashi was the first to suggest this control method in 1985. This control has several advantages, such as direct control of the torque and flux without the need for decoupling between them, and the non-requirement of coordinate transformations and a pulse modulation block. On the other hand, the hysteresis regulators degrade the operation of this control by increasing the flux and torque ripples. In this work, we propose to use a fractional conventional PI-fuzzy logic controller to regulate the speed of an Induction Motor controlled by DTC control. Using this regulator made it possible to improve the speed of this motor and slightly reduce the ripples of the quantities controlled by the DTC.

**Keywords:** Direct torque control (DTC), Fractional Order controller (FO), Fuzzy Logic Controller (FLC), Induction motor (IM).

## **ACTIVITIES CARRIED OUT BY THE REVENUE ADMINISTRATION FOR THE PREVENTION OF TAX LOSSES AND EVASION IN ALCOHOL AND TOBACCO PRODUCTS IN TURKEY**

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### **ABSTRACT**

The main purpose of this study is to examine the causes of tax losses and evasion in alcohol and tobacco products in Turkey from a multidimensional perspective and to comprehensively evaluate the activities carried out by the Revenue Administration (RA) to prevent these losses. The study analyzes the effects of SCT and VAT on alcohol and tobacco products within the framework of fiscal and non-fiscal objectives of taxation and questions the role of high tax rates on smuggling, the informal economy, and social costs.

The research was conducted through document analysis and was based on legislative texts, the Revenue Administration's annual report for 2024, TAPDK audit data, and various academic sources. An assessment was made based on legal regulations, field inspections, technological monitoring systems, actual inventory studies, and international cooperation data. While evaluating the effects of tax regulations on society, empirical findings are also included to guide policy analysis.

The study concluded that while high tax rates increase tax revenues, they also encourage smuggling and increase the size of the informal economy. The activities carried out by the RA include the Product Monitoring System (PMS), field controls with mobile inspection devices, citizen notifications, consumer verification practices, and actual inventory analysis. Throughout 2024, approximately 16 million products were inspected, and millions of unauthorized or counterfeit products were seized. However, despite these efforts, the presence of contraband products on the market and informal activities encouraged by high tax rates persist. This situation calls for a restructuring of not only inspection but also tax policies.

**Keywords:** Alcohol, tobacco, tax losses and evasion, value added tax, Revenue Administration.

## EVALUATIONS ON THE EFFECTS OF TAXES ON ALCOHOL AND TOBACCO PRODUCTS IN TURKEY

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### ABSTRACT

The main objective of this study is to evaluate the effects of Special Consumption Tax (SCT) and Value Added Tax (VAT) on economic, social, and health policies in Turkey from multiple perspectives. In this context, where tax policy is associated not only with fiscal objectives but also with social objectives such as protecting public health, the secondary effects of high tax rates on society are also analyzed.

Firstly, SCT and VAT on alcohol and tobacco products are systematically explained, and the relevant legal bases and taxation methods are analyzed. Tax revenues, product-based tax burdens, and production-domestic sales-export data for the years 2025-2027 are analyzed in tables. A comparative assessment was made in the light of current data obtained from sources such as the Tobacco and Alcohol Department, TurkStat, and the Budget Justification for 2025. In addition, the impact of indirect taxes on income distribution is analyzed based on consumption habits and household expenditure patterns.

The findings show that tax burdens are very high, reaching 44%-55% for alcohol and 78%-84% for tobacco products. These high rates increase smuggling, boost the informal economy, and promote the use of counterfeit products that threaten public health. It was also found that low-income individuals bear proportionally higher tax burdens, which distorts income distribution and undermines social justice. Legal producers and retailers are unable to compete with unregistered products, leading to contraction in the sector and loss of labor force. Therefore, high taxes on alcohol and tobacco products may lead to problems such as increased smuggling, growth of the informal economy, deepening income inequalities, failure of public health policies, and damage to social trust and confidence in the state. As a result, a more balanced tax policy that takes into account not only fiscal but also social and economic sustainability is needed.

**Keywords:** Alcohol, tobacco, special consumption tax, value added tax, tax burden.

**RELATIONSHIP BETWEEN ADVERTISING EXPENSES AND FINANCIAL PERFORMANCE: THE EXAMPLE OF PARTICIPATION BANKS****Öğr. Gör. Dr. Şenol BARDİ**

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**ABSTRACT**

The objective of the present study is to ascertain the existence of a correlation between advertising expenditures and the financial performance of banking institutions operating within the banking sector. The objective of this study was to assess the financial efficiency of six banking institutions within the banking sector. To this end, the quarterly data from 2019:Q1 to 2024:Q4 was utilized. In the study, the input-oriented constant returns to scale model (CCR) was preferred. Furthermore, the Malmquist Total Factor Productivity (MTFP) index, a dynamic approach, is employed to examine the efficiency changes of banks. As in the initial model, in which advertising expenditures were excluded from the analysis, the second model, which incorporated advertising expenses, revealed that Ziraat Participation was the only entity that demonstrated efficiency across all periods. A subsequent investigation revealed that Albaraka Türk exhibited substandard efficiency in the initial six-period model. In the second model, the number of relatively efficient banks increased. The mean efficiency of all periods was 90.22% in the first model, and it increased by 5.36% to 95.58% in the second model. In the initial model, Technology Change (TECH) and Scale Efficiency Change (SECH), components of the MTFP index, exhibited an increase of 5.3% and 0.2%, respectively. Pure Technical Efficiency Change (PTECH) exhibited a 0.1% decrease. A 5.4% increase in efficiency was observed at the banking institution. The observed rise in efficiency can be attributed to technological advancements. In the second model, Technical Efficiency (TECH) exhibited an increase of 0.8%, Technology Change (TECH) demonstrated a 12.0% rise, and Scale Efficiency Change (SECH) registered a 0.8% growth. A 12.9% increase in efficiency was observed at the banking institution. The observed enhancement in efficiency can be attributed, once again, to technological advancements. It has been determined that advertising expenditures constitute a significant element in the efficiency gains of participation banks.

**Keywords:** Participation banking, Advertising Expenses, Data Envelopment Analysis.

## THE ROLE OF GLP-1 RECEPTOR AGONISTS IN DIABETIC WOUND HEALING

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### ABSTRACT

Diabetic wounds are chronic lesions with delayed healing and a high risk of complications. In recent years, GLP-1 receptor agonists (GLP-1RAs) have been shown in experimental studies to exert beneficial effects not only on glycemic control but also on tissue regeneration. This review analyzed animal and in vitro studies published between 2020 and 2025. A literature search was conducted using PubMed, Scopus, and Web of Science databases with the keywords: “GLP-1 agonist,” “diabetic wound,” “Liraglutide,” “Semaglutide,” “angiogenesis,” “inflammation,” “macrophage polarization,” and “Exendin (9–39).” According to the reviewed studies, liraglutide and semaglutide reduce inflammation by modulating pathways such as NF- $\kappa$ B, Nrf2/HO-1, PI3K/Akt, AMPK, and STAT3; promote M2 macrophage polarization; enhance keratinocyte and fibroblast activity; support re-epithelialization and angiogenesis via VEGF; and regulate collagen synthesis and extracellular matrix remodeling. Studies using Exendin (9–39), a GLP-1 receptor antagonist, confirmed that these effects are receptor-mediated. These findings support the potential role of GLP-1RAs as therapeutic agents in diabetic wound healing; however, further human clinical studies are needed to translate these effects into practice.

Keywords: GLP-1, agonist, Exendin (9-39), diabetic wound, VEGF, macrophage, wound healing

## **THE FACTOR THAT DISTURBS METABOLIC BALANCE: MICROBIOTAS AND SYSTEMIC INFLAMMATION IN TYPE 2 DIABETES**

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### **Abstract**

This review examines the role of gut microbiota in the development of type 2 diabetes and the underlying biochemical mechanisms involved in this interaction. Experimental and clinical studies published in the last 15 years were evaluated using PubMed, Scopus, and Web of Science databases, with keywords such as “dysbiosis,” “gut microbiota and type 2 diabetes,” “dysbiosis insulin resistance mechanism,” and “oxidative stress microbiota diabetes.” Dysbiosis has been shown to disrupt intestinal barrier integrity, leading to lipopolysaccharide (LPS) translocation, which activates inflammation through the TLR4/NF- $\kappa$ B pathway. Moreover, reduced levels of short-chain fatty acids impair GLP-1 secretion and insulin sensitivity, while oxidative stress and proinflammatory cytokines further disrupt insulin signaling. Modulation of gut microbiota composition has been shown to improve these pathophysiological processes. These findings suggest that gut microbiota is not only an environmental factor but also a potential therapeutic target in diabetes management.

**Keywords:** microbiota, dysbiosis, lipopolysaccharide (LPS), intestinal permeability, type 2 diabetes, insulin resistance, GLP-1, oxidative stress, short-chain fatty acids

## **EFFICACY AND AWARENESS OF ADJUNCT PHYSIOTHERAPY TECHNIQUES IN NEUROLOGICAL REHABILITATION**

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### **ABSTRACT**

Adjunct physiotherapy techniques applied in neurological rehabilitation are intended to promote motor and functional recovery; however, patient-level awareness and perceptions of their effectiveness are still inadequately documented. Objective: This study investigated the encounter rate, awareness level and perceived efficacy of functional electrical stimulation, mirror therapy, robotic rehabilitation, virtual reality, kinesio-taping, biofeedback, vibration therapy and hand-foot splints in adults diagnosed with neurological disorders. Methods: In this cross-sectional study, 24 participants (mean age  $50.4 \pm 12.7$  years; 9 females, 15 males) with hemiplegia or cerebral palsy completed a structured questionnaire. Each technique was rated on a five-point Likert scale for prior exposure, recognition and perceived efficacy; data were summarised descriptively. Results: Diagnostic distribution was left hemiplegia 41.7 %, right hemiplegia 41.7 %, cerebral palsy 4.2 %, Parkinson's disease 4.2 %, multiple sclerosis (MS) 4.2 % and combined MS + Parkinson's 4.2 %. Eighty per cent of respondents had never encountered functional electrical stimulation and 72 % had never encountered mirror therapy. Awareness of robotic rehabilitation and virtual reality exceeded 40 %. Hand-foot splints yielded the highest perceived efficacy score (4.3/5), whereas vibration therapy scored 0/5. Mean perceived efficacy by age group was 3.67 (41–60 years), 4.17 (61–80 years) and 5.00 ( $\geq 80$  years); the difference between 41–60 and 61–80 years was not significant ( $p = 0.49$ ). Conclusion: Awareness of adjunct physiotherapy techniques among neurological patients remains low, and perceived benefit varies by modality. Structured educational initiatives for patients and caregivers are recommended to enhance evidence-based utilisation of these interventions..

Keywords : adjunct physiotherapy, neurological rehabilitation, awareness, perceived efficacy, functional electrical stimulation

**BERRIES, THEIR USES AND NUTRITIONAL VALUES****Doç. Dr. Mehmet Settari Ünal**

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**ABSTRACT**

The history of berries is as old as human history. All grape fruits, which are temperate climate fruit species, are perennial plants and are generally woody. Botanically, grape fruits, which are in the group of simple, berries generally develop from the ovary and turn into an edible structure with the fleshing and irrigation of the fruit wall or pericarp. These fruit species are used by humans and many animal species for their fruits or plants. Although these fruit species are cultivated for many purposes, they are mostly used in hobby gardens and parks and gardens, they are grown as intermediate agriculture in orchards, and they can be used as hedges and erosion plants. They are also used in park and garden arrangements due to their beautiful appearance. These plants, which differ in terms of habitus, are also important for the agricultural industry. Berries are also classified in terms of fruit formation and size. Economically cultivated species are mainly grouped in 4 generally; *Ribes*, *Rubus*, *Fragaria* and *Vaccinium*. Their domestic consumption and especially the increase in the amount of consumption in foreign countries in recent years increase their importance in domestic and foreign trade. Its cultivation in Turkey is especially important for the Eastern Anatolia, Black Sea and Central Anatolia regions, which have low income levels and emigration. Since it is consumed in large quantities worldwide, it has a wide market. Their intensive use in foods such as beverages, yogurt, cereals, desserts, etc. has increased their sales potential. Another important issue affecting the cost of grape fruits is harvesting labor. For this reason, attention should be paid to the establishment of training systems that will allow the plantations to be established in a way that is suitable for mechanization. In summary, production planning should be made in accordance with the ecological requirements of grape fruits, solutions should be provided with this planning to prevent the industrial facilities where the products will be processed from remaining idle, and the widespread use of contract production will provide great benefits for those who will benefit from this opportunity.

**Key words:** Berries, Food value, Usage areas

## DETERMINATION AND EVALUATION OF STRATEGIES FOR REDUCING DIGITAL ADDICTION IN CHILDREN USING THE AHP METHOD

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### ABSTRACT

In today's world, digital device addiction has rapidly emerged as a significant issue, particularly among children, raising serious concerns on a global scale. In this context, the identification of effective intervention strategies to prevent and reduce digital addiction in children has become a critical necessity, both to support individual development and to protect public health. This study aims to identify and prioritize applicable and effective strategies to reduce digital addiction among children aged 0–12 years. In the decision-making process, the Analytic Hierarchy Process (AHP), one of the multi-criteria decision-making methods, was employed. Opinions of five child development experts working in Gaziantep province were consulted, and five main evaluation criteria were determined: cost, accessibility, reliability, comfort, and reference. Based on these criteria, four intervention alternatives were established: (i) enrolling the child in kindergarten, (ii) encouraging participation in sports activities, (iii) spending time with parents in playgrounds, and (iv) enhancing school–parent cooperation after school. Pairwise comparisons were conducted using Saaty's 1–9 scale, and the weights of the criteria were calculated as 7.0% (cost), 9.8% (accessibility), 45.5% (reliability), 16.0% (comfort), and 21.6% (reference), respectively. The consistency ratio (CR) was found to be 0.011, indicating a high level of consistency in the expert evaluations and the decision-making process. According to the analysis results, the strategy of enrolling the child in kindergarten received the highest priority weight at 41.56%, followed by sports activities (21.99%), enhancing school–parent cooperation (19.68%), and spending time with parents in playgrounds (16.77%). The findings demonstrate that the AHP method serves as an effective tool in addressing complex and multidimensional decision-making problems such as combating digital addiction. Moreover, the results provide valuable guidance for policymakers and practitioners in the planning of preventive interventions against digital addiction in the field of child development.

**Keywords:** Digital Addiction, Child Development, Multi-Criteria Decision Making, AHP Method

## COMMON ANALYSIS METHODS USED IN DNA DAMAGE ANALYSIS

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### Abstract

Deoxyribonucleic acid (DNA) is the fundamental molecule carrying the genetic information of living organisms, and the preservation of its structure is critically important for maintaining genetic integrity. However, cells are exposed to various harmful factors throughout their lifespan, including endogenous sources (such as mutations, oxidative stress, and replication errors) and exogenous sources (such as radiation, chemical agents, and infectious agents), which can lead to DNA damage. DNA damage can cause genetic instability and mutations, resulting in the disruption of cellular functions; irreparable damage can lead to programmed cell death (apoptosis), while insufficient repair mechanisms can allow uncontrolled cell proliferation and contribute to cancer development.

To detect and evaluate DNA damage, a variety of molecular and cellular analysis methods have been developed, including the Comet Assay, Micronucleus Test (MN), Sister Chromatid Exchange (SCE), Terminal deoxynucleotidyl transferase dUTP Nick End Labeling (TUNEL), Immunohistochemistry (IHC), Fluorescence In Situ Hybridization (FISH), and Enzyme-Linked Immunosorbent Assay (ELISA). These analysis methods are widely used to detect genotoxic agents, assess DNA damage and repair mechanisms, analyze apoptotic processes, and evaluate the biological effects of drugs, toxic substances, and environmental factors. They are also effectively used in animal studies to investigate the genotoxic effects of drugs, feed additives, environmental pollutants, and infectious agents on DNA. Identifying DNA damage in animals contributes to understanding potential risks to reproduction, immunity, and organ functions, aids in clarifying disease mechanisms, and supports the protection of animal health. Additionally, animals serve as important model organisms in the investigation of genotoxic risks that can also affect humans.

**Keywords:** DNA damage, genotoxicity, animal genetics, comet assay, micronucleus test, TUNEL assay, FISH technique

## PROBIOTIC USE IN INTENSIVE CARE UNIT PATIENTS: A PROMISING STRATEGY FOR IMMUNE MODULATION AND INFECTION CONTROL

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### ABSTRACT

Critically ill patients in intensive care units (ICUs) are frequently subjected to broad-spectrum antibiotics, invasive interventions, and nutritional deficiencies, all of which contribute to significant alterations in gut microbiota composition. This dysbiosis has been associated with increased susceptibility to nosocomial infections, sepsis, and multi-organ failure. Probiotics, as live microorganisms that confer health benefits, have emerged as a potential adjunctive therapy to modulate immune responses and restore microbial balance in ICU settings. This structured narrative review, based on literature published between 2015 and 2024, evaluated findings from randomized controlled trials and meta-analyses accessed through databases such as PubMed, Scopus, and Web of Science. Studies focusing on *Lactobacillus*, *Bifidobacterium*, and *Saccharomyces* species in critically ill populations indicate that probiotics may reduce the incidence of ventilator-associated pneumonia (VAP), shorten ICU length of stay, and limit colonization by multidrug-resistant organisms. Their immunomodulatory effects are primarily mediated through enhancement of mucosal immunity, anti-inflammatory cytokine production, and preservation of gut barrier integrity. However, the efficacy of probiotic interventions is highly dependent on strain specificity, dosage, treatment duration, and individual patient factors. While current evidence supports the potential benefits of probiotic supplementation in ICU settings, concerns about clinical variability and safety, particularly in immunocompromised individuals, necessitate the development of standardized protocols and further large-scale multicenter trials to define optimal therapeutic strategies. **Keywords:** Probiotics, Intensive Care, Gut Microbiota, Sepsis, Immune Modulation, Ventilator-Associated Pneumonia

## AN END-TO-END PIPELINE FOR BUILDING MCP-BASED MULTIAGENT SYSTEMS: A BENCHMARK-DRIVEN APPROACH

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### ABSTRACT

Multi-agent systems (MAS) coordinate the efforts of multiple autonomous agents to address tasks that outstrip the capacity of any single model. Conventional architectures frequently fail to preserve a coherent shared context and to sustain efficient collaboration, thereby fostering information silos and duplicative computation. The recently promulgated Model Context Protocol (MCP) mitigates these deficiencies by furnishing a uniform interface for context exchange and tool invocation across heterogeneous agents. This study proposes a rigorously ordered development pipeline for MCP-enabled MAS. It evaluates the resulting framework on benchmark scenarios drawn from enterprise knowledge governance, collaborative scientific inquiry, and distributed planning. Empirical analysis demonstrates that relative to a functionally equivalent baseline, the MCP configuration improves context retention and coordination efficiency by factors approaching two, expands tool-integration coverage by nearly three, and sustains a fourfold increase in agent-population scalability while also elevating end-to-end task-completion performance. These quantitative gains corroborate the qualitative observation that MCP integration yields richer contextual continuity, leaner coordination overhead, and markedly greater operational flexibility. The pipeline thus supplies a transferable blueprint for constructing context-aware, cooperative, and readily extensible multi-agent environments.

**Keywords:** Model Context Protocol, Multi-Agent Systems, Generative AI, Large Language Models.

## TANGLIYA WEAVING: A DANA WEAVING

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### **Abstract**

Gujrat is one of the most spectacular grand places in the world that never fails to enchant with its rich heritage, remarkable architecture of its forts, sea side, forest, havelis, grand palaces and intricately carved temples. Retaining a quaint charm in spite of its sterile land the state of Gujrat is frequently described as 'colourful' or 'vibrant' especially for their vivid costumes which invigorate the harsh desert landscape and costal with vibrant cluture and relieve the monotony of the sand, rock, food, fores and scrubby trees. The state's textiles illustrate an amalgamation of centuries of fabric exploration and handicraft skills. These textiles such as Mata di pacheri, kutch embroidery, Rogan art, Suf embroidery, patola weaving, Mashru weaving, bandhini,, Ajrak block print, applique work etc. are made with incredible precision, are the result of an oral tradition that has passed down generations, and been honed with finesse and purpose.

In Surendranagar, Gujrat artisan used to practise the indigenous weaving style known as Tangaliya. Dedadara is a village located in the Surendranagar district of Gujarat, India. Predominantly recognized for its agrarian economy, with inhabitants involved in the cultivation of products like cotton and groundnuts. The Tangaliya weave is characterized by additional weft patterns of elevated dots that mimic embroidered beads.

The technique referred to as daana creation or 3d dana weaving technique is employed by the subordinate Dangasia caste, migrated from one part of Rajasthan, in the area previously identified as Saurashtra, deriving its name from the resemblance of the dots to grains. The term "tangaliya" originates from the Gujarati word "tangalio" and refers to Bharwaad shepherd women who don woven fabric as a bottom garment. Initially, traditional wool served as the predominant material for traditional weaving in India; Now they are using recent fibre including merino wool, Polyester silk, acrylic, viscose, and cotton.

The motifs are all hand-executed, which is creativity of weavers, without any mechanical tools and graph paper, and are a reflection of the artisan's skill and his eye for memory. Because of their unique style, the products made by this process can be used in different fashion and women wear.

The craft is very important to the artisan community both culturally and economically as it provides livelihood and keeps an ancient tradition alive. New products like women kurta, bags, mobile covers, sarees' etc. can also be found. The product made out of such weaving is costly due to the time consumption and skills required.

An attempt has been made to explore the production process of Tangliya weaving, further the product of Tangliya weaving will also be discussed. The study further give emphasis on current situation of this craft.

**Keywords:** Tangliya, Weaving, Handloom, Craft, Fine Silk, Heavy Fabric,

## AN ANALYSIS OF THE PHONETIC FEATURES IN TEREKEME JOKES AND HUMOUR

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### ABSTRACT

Kars province is a highly important place for dialects, which we define as the branch of science that examines the phonetic features varying from region to region. The Terekeme dialect is no doubt one of the dialects that contribute to the wealth of Kars province, which harbours different dialect features. The Terekeme dialect, which holds an important place in dialect studies due to its unique structure and distinct phonetic features, also occupies a unique position among the dialects of Kars province. Especially the Kipchak elements it incorporates bring the Terekeme dialect to a different point among other dialects. Terekeme dialect features show themselves in a remarkable way especially in folk narratives such as folk tales, stories, lullabies, folk songs, riddles, jokes, etc which are of great importance for folklore works. These narratives, which are expressed by using dialectal features, undertake the task of being a vivid language carrier reflecting the local dialect and the features of the dialects used in the region, as in all dialects, in the dialects of Kars province. While Terekeme dialect features appear in the jokes and humour in the region, the existence of jokes and humour specifically told in this dialect also draws attention. This study aims to examine the phonetic features of the Terekeme dialect, which holds an important place in Kars dialects and dialect studies and decorates and embellishes folk narratives with its unique features and gives colour to them, specifically in jokes and humour. The work by Songül Dünder, “Gııışma (Terekeme Jokes and Humour),” served as a source for the jokes and humour used in the study. In other words, an analysis was done on the phonetic features of Terekeme jokes and humour in this study.

**Key Words:** Dialect, joke, humour, phonetic features, Terekeme dialect.

## THE EFFECT OF DIGITALIZATION ON NARRATIVE FORMS: THE CASE OF OPERA

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### ABSTRACT

**Introduction and Purpose:** With the rapid advancement of technology, digitalization—the process of processing, storing, and transmitting information in digital formats—has led to significant transformations in the fields of art and culture. This transformation has altered traditional narrative structures in terms of form, characteristics, and modes of transmission. Traditional narratives, which are shaped in a structured manner through written or oral transmission, have evolved into multilayered, interactive, and user-oriented forms in digital environments. As one of the narrative-based performing arts, opera—with its integration of music, drama, and visual design—has the potential to adapt to digital technologies. Digitalization has affected many aspects of opera, from staging techniques to audience experience, and has also introduced new narrative possibilities. This study aims to examine the fundamental differences between traditional opera narratives and the new narrative forms that have emerged through digitalization.

**Method:** This study adopts a qualitative and comparative approach. Relevant literature and performance archives have been examined. New narrative forms are evaluated through two digital opera examples based on staging, audience participation, accessibility, artificial intelligence, and neurotechnology.

**Results:** Digitalization has transformed not only the technical and visual aspects of opera but also its narrative strategies. Digital operas offer greater interactivity, audience participation, and non-linear storytelling. The boundaries between performer and audience have become increasingly blurred. **Discussion and Conclusion:** The digital transformation of opera indicates a shift in the way stories are told and experienced. This analysis provides an insight into the impact of digital transformation on opera narrative.

**Key Words:** Opera, Digitalization, Narrative Structure, Digital Opera, Performing Arts

## THE EFFICACY OF MACHINE LEARNING (ML) APPLICATIONS IN HEALTHCARE INDUSTRIES: EVOLVING FROM TRADITIONAL METHODS TO CONVENTIONAL APPROACHES

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### Abstract

In recent years, machine learning (ML) applications in healthcare has gained significant traction, especially in diagnosing diseases using extensive medical databases (Mahmood & Mohsin, 2021). Healthcare organizations are increasingly utilizing these technologies for early disease detection and enhancing diagnostic accuracy as machine learning methodologies have demonstrated remarkable potential in monitoring patients' vital signs and predicting health conditions. Traditional methods of health data analysis rely mainly on storing patient information and applying learning techniques to uncover critical disease-associated factors (*Qin et al.*, 2020). Contemporary approaches, such as artificial neural networks (ANN) and fuzzy logic systems have been instrumental in advancing these capabilities. This paper is a document review on the significance of machine learning applications in healthcare industries. The paper discussed the major areas of application of machine learning in healthcare systems. The paper discussion also contains some of the impact and drawbacks of machine learning techniques in healthcare systems. In order to collect useful data for the paper write-up, online Google form questionnaire instrument was used to gather responses from respondents which were subjected to reliability analysis. Conclusively, the paper affirmed that while machine learning has been shown to outperform traditional methods in predictive accuracy, its application have demonstrated remarkable potential in providing timely insights, enabling preventive measures and personalized care strategies.

**Keyword:** Machine Learning Applications, Healthcare Systems.

## THE FEBRUARY 21, 1940 KAYSERİ-DEVELİ EARTHQUAKE IN THE LIGHT OF ARCHIVAL DOCUMENTS

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### **Abstract**

Earthquakes, defined as sudden ruptures occurring in the Earth's crust, are significant natural phenomena that profoundly affect the lives of people living in impacted regions. Turkey is a country exposed to earthquakes of varying risk levels. According to the Turkish Earthquake Hazard Map, the province of Kayseri is located in the third-degree earthquake zone. Based on the data from Kandilli Observatory, this study evaluates the social, economic, and administrative impacts of the 5.2 magnitude earthquake that occurred on February 21, 1940, centered in Kayseri-Develi (Çayırözü), using archival documents. The main shock and its aftershocks affected not only Develi but also other districts of Kayseri such as Yahyalı, İncesu, and Hacılar. Casualties were reported only in Develi, while the surrounding areas experienced structural damage. Furthermore, significant livestock losses were recorded. Archival research reveals that this earthquake was a separate event from the Erzincan Earthquake that occurred on December 27, 1939. Within the scope of this study, primary sources including the Republic Archive of the Presidency of the State Archives of Turkey, the Turkish Red Crescent Archive, newspapers from the period, and academic studies related to the topic were meticulously examined. The aim of the paper is to identify the social, economic, administrative, and psychological consequences of the 1940 Develi earthquake and to derive inferences about potential measures to be taken against such extraordinary events. Ultimately, the study seeks to contribute to the earthquake history of Develi and its surroundings through evidence-based findings.

### **Keywords**

Earthquake, Kayseri, Develi, Çayırözü, 21 February 1940

## **THE INVISIBLE ENTREPRENEURS: EXPLORING THE INFORMAL ENTREPRENEURIAL ACTIVITIES OF WOMEN IN MOZAMBIQUE**

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### **Abstract**

Informal entrepreneurship among women in Mozambique is a prevalent yet often overlooked phenomenon. This study explores the diverse range of activities undertaken by women, ranging from 18 to 75 years old, including the sale of food products, event organisation, hairdressing, clothing and beauty product sales, domestic work, and real estate brokerage. These women, though integral to the fabric of Mozambican society, are often considered almost (in)visible, as their contributions are frequently undervalued and underappreciated. The existing literature in accounting has largely overlooked these informal entrepreneurial activities, as they are not the primary focus of research. This study aims to address this gap, highlighting the significance of these women's contributions and the need for further investigation. By shedding light on this understudied aspect of the Mozambican economy, the study offers valuable insights and implications for both the academic community and policymakers. The findings of this research contribute to the literature by providing a comprehensive understanding of the informal entrepreneurial landscape in Mozambique, particularly as it relates to women. The study also offers insights into the challenges and opportunities faced by these women, as well as the broader societal and economic implications of their activities. Future research directions may include a deeper exploration of the motivations, challenges, and support mechanisms for these informal women entrepreneurs, as well as the potential for integrating their activities into the formal economic structures. Additionally, investigating the accounting practices and financial management strategies employed by these women could offer valuable insights for the development of tailored support systems and policies.

**Keywords:** Informal entrepreneurship, women entrepreneurs, Mozambique, accounting literature, societal contributions.

## THE ROLE OF GUPTA EMPIRE CLOTHING ON CURRENT FASHION TRENDS

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### **Abstract**

The Satvahana dynasty was declining at the same time the Gupta empire was flourishing under the Chandragupta I. It was founded by Shri Gupta in 240 CE, is known as a "Golden Age" of ancient India. The Early Gupta ruled by Shri Gupta later the Chandragupta I was taken care. The Gupta empire played a crucial role in uniting much of the Indian subcontinent and laid the foundations of Classical Indian civilization. The capital of the Gupta dynasty was Pataliputra (modern-day Patna, Bihar).

The Gupta dynasty is known to have ruled for around three centuries, from roughly 320 CE to 550 CE. Gupta used Sanskrit as an official and literary language for administrative purposes. In the same period the Aryabhata given the concept of zero and decimal system which is still used in AI and other computer languages. They are good in trade with other part of global.

The Gupta Empire of India used gold and silver coins as their primary coins. Major rulers are Chandragupta I, Samudragupta, Chandragupta II, Kumaragupta and Skandagupta.

The clothing of the Gupta empire is also inspired by earlier empire like Kushan, Satavahana etc. Their costumes too were an interesting mixture of foreign and indigenous garments like base garment was Tunic and covered by draped style by Antariya and Uttariya. Clothing during this period was draped, minimal and made from fine and lightweight fabrics. The three main garments—antariya (lower garment), uttariya (upper cloth or veil), and Tunic were commonly worn.

Gupta lady used to wear the graceful garment, often made from fine cotton or may be silk brocade fabrics. Stitched garments became very popular in this period only. Stitched garments became the sign of royalty. But antariya, uttariya, and other clothes still were in use.

This paper aims at studying about the Gupta period along with the textile and dress worn by Gupta's. Further it will highlight the role of the costume of Gupta empire on current fashion trends.

**Keywords-** Gupta, Silk, Stitched, Textile, Dress and Jewellery.

## AMERICAN PERSONALISM

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### ABSTRACT

**Introduction and Purpose:** American personalism emerged in the 19th century as a distinct school of thought and gradually positioned itself as an influential intellectual current capable of shaping various spheres of life. It developed within the unique context of a fragmented and evolving American ideological landscape. Although its foundations were deeply rooted in European philosophical traditions, particularly in religious and theological movements stemming from Classical German philosophy, personalism was also shaped by original ideas that arose within the American context. In this sense, personalism reflected both a continuation of European thought and a response to the specific intellectual and cultural needs of American society, especially at a time when religion and science were among the most pressing concerns for thinkers. The purpose of this study is to identify the major factors that contributed to the emergence of American personalism in the early 20th century and to explore its broader influence on religious, political, economic, and social life in the United States.

**Materials and Methods:** The analysis draws on philosophical texts produced by American personalist thinkers and engages with conceptual interpretations of personalism found in both American and European intellectual traditions. The study also considers comparative approaches that highlight key differences in how personalism has been understood and developed across these two contexts. Primary sources include the writings of influential philosophers as well as scholarly works examining the origins and development of the personalist tradition.

**Discussion and Conclusion:** At the heart of American personalism is the conviction that the individual is central to the well-being of society. A morally grounded and well-formed individual is regarded as an integral part of the social structure, and the health of the broader society is seen as dependent on the development of its members. From this perspective, the cultivation of personal responsibility and ethical awareness is essential for collective progress. As a result, American personalism stands not only as a philosophical doctrine but also as a moral and social framework, and even a political vision that emphasizes the role of the person in shaping a just and cohesive society.

**Key words:** Personalism, American personalism, theology and morality, American personalist schools

## **TRUST-WEIGHTED SENTIMENT FILTERING AND QUERY-BASED RECOMMENDATION FOR TURKISH E-COMMERCE REVIEW**

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### **ABSTRACT**

As This study introduces a sentiment analysis-based recommendation framework tailored for Turkish e-commerce platforms, aiming to bridge the gap between user-generated textual feedback and product suggestion mechanisms. The dataset used consists of consumer reviews labeled with star ratings and accompanied by engagement metrics such as likes and dislikes. To assess sentiment polarity, a rule-based labeling technique was applied based on rating thresholds, categorizing reviews as positive, neutral, or negative. Additionally, a custom "reliability score" was introduced by normalizing the ratio of likes to total reactions, offering a measure of trustworthiness for each review. Aspect-based filtering logic was implemented using regular expressions to detect product-related attributes, enabling users to perform natural language queries such as "affordable phones with good screen quality." Unlike conventional machine learning pipelines, this approach emphasizes transparency and linguistic rule application, which makes it more interpretable for low-resource languages like Turkish. The system retrieves relevant reviews while simultaneously displaying their sentiment polarity and reliability scores, providing richer context to the end user. Results indicate that even in the absence of advanced deep learning models, effective filtering and ranking can be achieved through carefully designed heuristics and language-aware rules. This approach presents a viable baseline for future hybrid systems combining sentiment analysis and personalized recommendations in underrepresented languages.

**Keywords:** Recommendation; Turkish Natural Language Processing (NLP); E-Commerce Reviews; Aspect-Based Filtering

## OPTIMIZATION OF TAHINI-BASED SMOOTHIE FORMULATION USING RESPONSE SURFACE METHODOLOGY

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### **Abstract**

The growing demand for functional and plant-based beverages has driven the development of innovative formulations enriched with bioactive ingredients. This study optimized a tahini-based smoothie, incorporating orange juice, banana, and tahini, focusing on physicochemical properties (pH, total soluble solids - TSS), chemical composition, and sensory acceptability. Unlike conventional smoothie formulations, this research includes detailed chemical analysis of raw ingredients to better understand their nutritional contributions. Response Surface Methodology (RSM) was used to optimize ingredient ratios for enhanced sensory appeal, stability, and consumer acceptance. Chemical analysis showed that orange juice contained 89.52% moisture, 0.87% protein, 0.13% fat, and 0.48% ash, while banana had 78.14% moisture, 1.46% protein, 0.38% fat, and 1.06% ash. Tahini, as a functional ingredient, had 2.85% moisture, 18.62% protein, 44.32% fat, and 3.81% ash, highlighting its nutrient density and role as a plant-based protein source. A trained sensory panel (n = 15) evaluated the smoothies using a 9-point hedonic scale. Results showed that tahini significantly influenced pH and viscosity, while banana improved texture and sweetness, and orange juice enhanced acidity and freshness. Statistical analysis confirmed that pH was mainly affected by tahini ( $p < 0.0001$ ), while TSS was significantly influenced by banana and orange juice ( $p < 0.001$ ). The optimized formulation (55 mL orange juice, 35 g banana, and 12.5 g tahini) resulted in a pH of 5.28, TSS of 12.14, and an overall acceptability score of 7.12.

This study demonstrates the nutritional and sensory potential of tahini-based smoothies as a plant-based functional beverage. Future research should explore shelf-life stability, oxidative stability, and commercial scalability.

**Keywords:** Tahini-based smoothie, functional beverages, response surface methodology, physicochemical properties, sensory optimization.

## PARAMETRIC PROGRAMMING IN NEUTROSOPHIC VACATION QUEUEING SYSTEMS

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### ABSTRACT

**Introduction and Purpose:** Queueing Theory is widely used to study the queue lines to reduce the arrivals waiting times by utilizing the system's efficiency effectively. Mostly, queueing models capture the real world in a precise manner. By incorporating neutrosophic fuzzy into the parameters of queueing models, the uncertainty of the scenarios are modelled more efficiently than the classical queueing models. Indeterminacy nature of neutrosophic fuzzy provides the strong insight to frame the practical applications into mathematical queueing models.

**Methods:** Parametric Programming Technique of neutrosophic fuzzy is applied in vacation queueing models to address the imprecise and uncertainty of traditional queueing models.

**Results:** Membership function of waiting time of neutrosophic vacation queueing model is calculated by the PP approach. This in turn makes the performance measures of queueing models more approximate than the classical queueing model. Thus extending it into real world application will imply a more accurate success rate of the working system.

**Key Words:** Queueing Model, Vacation Queue, Parametric Programming Approach, Neutrosophic Fuzzy Modelling.

## IMPACTS ON TRADE, INNOVATION, AND IDENTITY

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### **Abstract**

Migration and mobility have long been integral part of Africa's socio-economic and cultural fabric, shaping the continent's development trajectories. This paper examines the impacts of intra-African migration and labour mobility on regional trade, innovation ecosystems, and identity construction, positioning migration as both a driver of opportunity and a site of contestation. Drawing on World-Systems Theory, the study explores how core-periphery dynamics within Africa influence patterns of migration and their implications for economic and intellectual exchanges. By analysing case studies from key regional migration corridors, the paper investigates how mobility contributes to expanding trade networks, fostering innovation, and promoting shared cultural identities, while also highlighting the structural inequalities that perpetuate uneven development. The study argues that inclusive policies and frameworks that prioritize the free movement of people, goods, and ideas are critical for realizing the transformative potential of migration. Furthermore, the paper emphasizes the role of regional organizations like the African Union and ECOWAS in harmonizing migration governance and facilitating socio-economic integration. It also explores how intra-African migration redefines identity in ways that challenge colonial legacies and foster a sense of pan-African unity. This analysis contributes to the discourse on "remaking" Africa by underscoring the potential of migration to reshape the continent's economic and cultural landscapes.

**Keywords:** Identity Construction, Intra-African Migration, Labour Mobility, Regional Trade, World-Systems Theory

## INSUFFICIENCIES OF STUDIO FACILITIES IN TURKISH FOLK MUSIC VOICE EDUCATION

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### ABSTRACT

**Introduction and Purpose:** Turkish folk music voice training, which has an important role in our traditional music, transfers musical techniques and more importantly cultural codes as a special discipline to next generations. The aim of the technique is to teach individuals how to use their voice correctly, healthily, emotionally and aesthetically with voice training. These outcomes should go beyond the framework of theory and should be supported by technical infrastructures. In particular, the inadequacy of studio facilities in educational institutions and the lack of use of digital tools such as recording and analysis in modern voice training practices negatively affect the quality of education. Ensuring that the voice is recorded, monitored and evaluated is a very important requirement for the sustainability of education and for healthier measurement and evaluation. In this context, the individual voice training teaching model developed by Sevda Toker (2018) is quite functional. However, the lack of technical possibilities for application prevents the efficient use of this model. Existing deficiencies have also been mentioned by many researchers. The aim of the research is to emphasize the importance of recording technologies to support Turkish folk music voice training and to discuss the effects of these deficiencies on the student's early career development, success, repertoire acquisition and quality education.

**Materials and Methods:** This research includes descriptive literature review. The relationship between Turkish folk music voice education and recording technology was evaluated by conducting document analysis on articles, master's and doctoral theses, and international studies in the literature on Turkish folk music voice education. Direct and indirect findings regarding the lack of studio infrastructure were evaluated thematically.

**Results:** The ability to reveal individual differences in voice training is possible with technological infrastructures that allow the analysis and archiving of studio recordings. Studio infrastructure is of great importance in increasing the technical and pedagogical quality of voice training. Although temporary solution alternatives are provided with mobile applications, studio conditions must be provided in order for feedback to be objective. Providing small sound-insulated studio rooms, especially in universities, from state academic institutions, providing the experience of using microphones in lessons, and integrating analysis software into education can meet the desired expectation (Uras, 2021; Polat, 2019). Of course, educators should be supported with in-service training in the field of sound technology in order to adapt to these innovations. Regulations to support voice training infrastructure should be put on the agenda in university budgets.

**Keywords:** Voice Training, Turkish Folk Music, Sound Recording Technologies, Mobile Applications

## A REVIEW OF TÜRKİYE AND ISRAEL DEFENSE INDUSTRY EXPORTS

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### ABSTRACT

**Introduction and Purpose:** This study aims to comprehensively analyze the defense industry exports of Türkiye and Israel, highlighting their international trade performance, strengths, challenges, and competitive dynamics in this sector. The primary objective is to provide an original contribution to the literature through analyses based on current and comparative data. Within this framework, the first section of the article examines the historical development of the defense industries in Türkiye and Israel. Subsequently, it evaluates their main export products, the share of these products in total exports, their positions in target markets, and the risks and opportunities faced by the sector in detail. The final section analyzes Türkiye's capacity to compete with Israel in the defense industry and offers various policy recommendations in this regard.

**Materials and Methods:** A mixed-methods academic approach has been adopted. Qualitative data were obtained from academic sources such as books, articles, and reports. Quantitative data were sourced from the IMF, World Bank, and TradeMap databases and analyzed using basic statistical techniques.

**Findings:** Türkiye and Israel are among the prominent countries in the global defense industry. Security concerns have been the primary driving force behind the development of this sector in both countries. In Türkiye, the defense industry has undergone significant development, particularly since the early 2000s, in the context of counter-terrorism efforts. Israel, on the other hand, has gained considerable momentum in the defense sector since the 1980s, guided by the principle of self-sufficiency due to security concerns. Both countries have successfully expanded their capital-intensive production capacities, creating strong international demand for defense products. Türkiye has become a robust exporter in the global market, offering high-quality products at competitive prices, particularly in land vehicles, UAVs, naval platforms, short-range missile systems, and various military equipment. Israel, meanwhile, excels in missile systems, electronic warfare technologies, and UAVs with advanced technological capabilities. Although defense industry cooperation between Türkiye and Israel began in the 1990s, Israel's actions violating international law and targeting Palestinian civilians have hindered Türkiye from continuing this cooperation. This situation has encouraged Türkiye to pursue strategic autonomy in its defense industry, adopting a development strategy focused on domestic production and export-oriented models. Consequently, Türkiye's defense industry has evolved into a multidimensional structure that not only meets domestic demand but is also open to international collaborations across diverse geopolitical regions.

**Keywords:** Defense Exports, Foreign Trade, Defense Industry, Türkiye-Israel Relations, National Security

**UNDERSTANDING CLASSICAL LIBERALISM: PRINCIPLES AND IMPACT**

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**Abstract**

Classical liberalism is a political and economic philosophy that emphasizes individual freedom, civil liberties, and the protection of human rights. Emerging during the late 18th and early 19th centuries, it arose as a response to the transformative changes brought about by the Industrial Revolution and urbanization. This ideology, rooted in the thoughts of influential thinkers like Adam Smith and John Locke, advocates for a society where personal choices and interests drive social progress. The primary purpose of classical liberalism is to foster an environment where individuals can pursue their goals without undue government interference. By promoting economic freedom, limited government, and the protection of fundamental rights, classical liberalism aims to enhance the overall well-being of society. It seeks to demonstrate that when individuals act in their self-interest within a framework of natural laws, social progress can occur organically. The findings suggest that classical liberalism, while advocating for individual rights and freedoms, has faced criticism for its association with unchecked capitalism and potential neglect of social equity. Supporters argue that a robust economy, bolstered by free trade and minimal government intervention, benefits all citizens and leads to overall societal progress. Moreover, classical liberals emphasize the importance of a government that plays a minimal yet pivotal role in ensuring safety, stability, and the protection of rights, as articulated in key historical documents, such as the U.S. Declaration of Independence. This exploration of classical liberalism relies on a combination of historical analysis and philosophical examination. By studying the writings of foundational figures in classical liberal thought, such as Adam Smith's "The Wealth of Nations" and John Locke's theories on government and rights, we evaluate the principles that underpin this ideology. We compare its tenets against criticisms from various perspectives to assess its relevance and impact in contemporary society.

**Keywords:** Classical liberalism, Political and economic ideas, Individual freedom, Civil liberties, Industrial Revolution, Urban growth, Adam Smith, "The Wealth of Nations" "financial freedom, Limited government, Human rights, U.S. Constitution, Bill of Rights, Social progress, Unchecked capitalism, Free trade, Minimal government, Individual rights, foreign threats, public institutions, Stable currency, Infrastructure, John Locke, Minority rights.

## ECONOMIC IMPACT OF BRUCELLOSIS IN CATTLE BREEDING

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### ABSTRACT

Brucellosis is a chronic, contagious and necrotic zoonotic disease that causes abortion, infertility and reduced milk yield by settling in the genital organs such as testicles, udders and uterus in cattle. This disease, which is zoonotic and widespread throughout the world, causes serious economic losses in the livestock sector. The prevalence of bovine brucellosis in the world varies between 0.2 and 66.03. Brucella causes direct (decrease in animal productivity, increased mortality rate and increased treatment costs) and indirect (preventive medicine, culling, etc.) economic losses in cattle farms. Brucellosis causes 15-25% decrease in milk production, 10% calf death, 20% infertility, 5% meat loss, 15% animal value loss and 1% infected animal death in infected animals. Bovine brucellosis causes economic losses of \$126-1464 per animal. Economic losses due to Bovine Brucellosis are expressed in billions of dollars at national and international levels. For example, it is reported that it caused economic losses of \$2.1 billion in Colombia, \$1.3 billion in India, and \$10.3 million to \$3.1 billion in Türkiye. Since brucellosis seen in cattle also causes diseases in humans, it creates an economic burden of \$494-1206 per case in humans. In conclusion, Brucellosis is an important disease that threatens animal and human health. Although eradication programs are costly, they provide significant economic savings in the long term. Therefore, importance should be given to practices such as vaccination and hygiene measures to prevent and eradicate Brucellosis, and producers, industry stakeholders and policy makers should be made aware of the disease.

**Key Words:** Animal Health, Brucellosis, Cattle Breeding, Economic Impact, Zoonotic Disease

## **EVALUATION OF PUBLIC AWARENESS, ATTITUDES, AND KNOWLEDGE LEVELS REGARDING MANUAL THERAPY**

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### **Abstract**

#### **Introduction and Purpose:**

Manual therapy is a drug-free and hands-on treatment method used for musculoskeletal system disorders. Although awareness of this method is increasing among the public, there is still uncertainty regarding accurate knowledge and appropriate use. This study aimed to evaluate the levels of knowledge, attitudes, and awareness of individuals regarding manual therapy.

#### **Materials and Methods:**

This descriptive and cross-sectional study was conducted using a structured questionnaire consisting of 45 questions prepared in an online format. The survey included sociodemographic data, current health status, and whether participants had previously received physiotherapy or manual therapy. A 5-point Likert scale (1: Strongly disagree – 5: Strongly agree) was used to assess attitudes and beliefs about manual therapy.

#### **Results:**

A total of 75 participants (45 females, 30 males) with a mean age of  $26.6 \pm 4.3$  years were included. The statement “Manual therapy is a natural and reliable treatment method” received a high average score of 4.71, indicating strong trust in manual therapy. The average scores for “I would prefer manual therapy in case of musculoskeletal pain” and “It is an advantage that manual therapy is drug-free” were 4.67 and 4.61, respectively. There were no statistically significant differences in trust in manual therapy based on gender or education level ( $p>0.05$ ).

#### **Discussion and Conclusion:**

The study found that public attitudes toward manual therapy are generally positive. Most participants considered manual therapy reliable, drug-free, and a preferable treatment method. However, the findings also suggest a need for increased educational efforts to enhance public knowledge about manual therapy.

#### **Key Words:**

Manual Therapy, Public Awareness, Knowledge Level, Musculoskeletal Disorders

## UV-VISIBLE SPECTROMETER AND MASS SPECTROSCOPY IN PHARMACEUTICAL ANALYSIS

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### **ABSTRACT:**

Ultraviolet-Visible (UV-Vis) spectroscopy and Mass Spectrometry (MS) are indispensable analytical techniques in pharmaceutical analysis, playing critical roles in various stages of drug development, quality control, and research. UV-Vis spectroscopy, based on the absorption of light in the ultraviolet and visible regions, is widely used for quantification of active pharmaceutical ingredients (APIs), determination of drug purity, detection of impurities, and monitoring dissolution testing. Its simplicity, cost-effectiveness, and non-destructive nature make it a routine tool for identity testing, assay, and stability studies. Mass Spectrometry, on the other hand, provides information about the mass-to-charge ratio of molecules, offering detailed structural elucidation and highly sensitive detection. In pharmaceuticals, MS is crucial for identifying and quantifying APIs and their metabolites, detecting impurities and degradation products with high specificity, and conducting pharmacokinetic and pharmacodynamic studies. Techniques like LC-MS and GC-MS are extensively used for complex mixture analysis. The complementary nature of UV-Vis and MS makes them powerful tools when used in conjunction. UV-Vis can provide quantitative data and is useful as a detector in chromatographic systems, while MS offers structural information and enhanced specificity. This abstract will highlight the fundamental principles and key applications of UV-Vis spectroscopy and mass spectrometry in ensuring the quality, safety, and efficacy of pharmaceutical products.

**Keywords:** UV-Vis spectroscopy, mass spectrometry, pharmaceutical analysis, drug quality, impurity detection, quantification.

## **WIRELESS POWER TRANSFER**

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### **Abstract**

Wireless power technology is one of the most promising technologies of the future, as it is expected to replace many traditional methods of power transmission. This technology could potentially allow electrical and electronic devices to be charged without the need for cables or chargers, making them easier to use and more convenient for users. The use of wireless power technology is expected to increase in the future and further develop to meet the needs of people in various fields.

In this work, the study and development of wireless power transmission is proposed where energy is transmitted through magnetic fields using an inductive coupler between electromagnetic coils.

The benefits of wireless power transmission were evaluated, including eliminating wires and cables and easy battery charging. We have studied electromagnetic modelling, including Maxwell's equation, and also seen its various applications, including medical, military and others, and we have come to the conclusion that wireless power transmission is a vital technology that helps improve user comfort and ease of use of mobile devices.

### **Keywords**

Wireless power transmission, wireless charging, magnetic field, inductive coupling

## INVESTIGATION OF STUDENT VIEWS ON POLYGON TEACHING IN INQUIRY-BASED LEARNING ENVIRONMENTS

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### ABSTRACT

The aim of this study is to examine the opinions of 10th-grade students regarding the teaching process of the polygon topic within inquiry-based learning environments. Inquiry-based instruction is based on enabling students to construct their own arguments, identify mathematical inferences, relate the obtained inferences, and analyze and evaluate results. A case study design, one of the qualitative research methods, was adopted in the study. The study group of the research consists of 17 students enrolled in the 10th grade of a public high school in the province of Bursa during the 2024–2025 academic year. Participants were selected using the convenience sampling method. In the data collection process, activity sheets and structured interview forms were used. The activity sheets were designed to stimulate students' thinking within the framework of inquiry-based instruction. Two separate lesson plans were developed to demonstrate the applicability of the inquiry-based teaching approach to the polygon topic. These lesson plans were prepared in accordance with the Inquiry-Based Education Planning Cycle. After the implementation of the lesson plans, students were given structured interview forms to collect their opinions. The interview form included eight questions. These questions consist of items that cover the stages of the inquiry-based education planning cycle, including the process itself as well as the phases of creation, sharing, and evaluation. During the data collection process, inquiry-based activities were implemented with students. Each lesson plan was carried out over two class periods (80 minutes). In the analysis of the structured interview forms prepared in line with the inquiry-based teaching process, the content analysis method was used. As a result of the findings, students' opinions were grouped under six themes: meaningful and lasting learning, student-centered approach, affective contributions, cognitive contributions, change in perception, and challenges and barriers. The findings of this study indicate that inquiry-based instruction is effective in conceptual understanding, that students take an active role in lessons, that motivation and self-confidence increase, that it provides opportunities to explore different solution paths, and that students' perceptions toward mathematics changed positively.

**Keywords:** Inquiry-based mathematics instruction, polygon concept, high school students.

## EFFECTS OF $ZnSO_4$ APPLICATIONS ON THE GROWTH PARAMETERS OF CANOLA (*BRASSICA NAPUS* L.)

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### ABSTRACT

This study was conducted under controlled greenhouse conditions at the Department of Field Crops, Faculty of Agriculture, Harran University, with the aim of determining the effects of zinc sulfate ( $ZnSO_4$ ) applications at different concentrations on the morphological growth parameters of canola plants. Pots with a capacity of 5 kg were used in the experiment, and four different treatment groups were established: an untreated control group and  $ZnSO_4$  concentrations of 0.25%, 0.50%, and 0.75%. Urea fertilizer ( $15 \text{ kg N da}^{-1}$ ) was applied in equal amounts to all groups. According to the research results, statistically significant ( $p < 0.05$ ) increases in growth were observed in all  $ZnSO_4$  treatments compared to the control group. The most remarkable results were obtained in the 0.50%  $ZnSO_4$  treatment, where the average plant height increased from 12.2 cm to 18.6 cm (a 52.5% increase), dry weight increased from 21.14 g to 36.94 g (a 74.8% increase), and fresh weight increased from 0.41 g to 2.67 g (a 550% increase). The slight decrease observed in fresh weight at the 0.75% concentration indicates the possible phytotoxic effects of high zinc concentrations. This study has revealed important findings in terms of determining the optimal zinc application dose in canola cultivation. In particular, the 0.50%  $ZnSO_4$  treatment was identified as the most suitable concentration in terms of both plant growth parameters and yield potential. The findings obtained are of significant value in terms of contributing to agricultural practices by demonstrating the critical role of using micronutrients at proper doses in enhancing plant productivity.

**Key words:** Canola, Zinc, Agronomy, Plant growth

## SEED GERMINATION OF COTTON (*GOSSYPIMUM HIRSUTUM* L.) UNDER ABIOTIC STRESS: A META ANALYSIS

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### **Abstract**

Cotton (*Gossypium hirsutum* L.) is a crucial fiber crop globally; nonetheless, its seed germination and initial seedling establishment are significantly susceptible to abiotic stresses. This meta-analysis consolidates study outcomes from 71 peer-reviewed publications published from 2020 to 2024 to assess the impact of several abiotic stresses on seed germination of cotton and possible enhancement measures. Drought is the most widely researched stress (18.3% of studies), followed by seed priming methods (16.9%) and salt stress (15.5%). The data indicated a notable geographical concentration in research, with Türkiye, China, and Pakistan accounting for 71.8% of all publications. Diverse enhancement techniques, including seed priming, nanotechnology coatings, and biostimulants, have promising results for improving stress tolerance during seed germination. This thorough research offers evidence-based ideas for establishing resilient cotton production strategies under more demanding environmental circumstances.

**Keywords:** Cotton, seed germination, seed priming, abiotic stresses

**RESEARCH ON THE ROLE IN THE GROWTH OF ELECTRONIC COMMERCE  
AND CASHLESS PAYMENTS IN AZERBAIJAN (2022-2024)**

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**Abstract**

As in the whole world, e-commerce has developed in Azerbaijan in recent years. We can clearly see this when we look at the statistical figures. The number of e-commerce users worldwide in 2022 was approximately 2.4 billion people. The number of e-commerce users in Azerbaijan is also increasing in parallel with this. Thus, in the year I mentioned, approximately 10% of the population in our country used e-commerce. That is, considering the development of e-commerce in our country, this indicator can be considered satisfactory.

The increase in the volume of payments made by people with payment cards all over the world in recent years has had a positive effect on the increase in the volume of total non-cash payments. In Azerbaijan, the increase in transactions carried out with both debit and credit cards in 2022-2024 led to an increase in both domestic and international e-commerce transactions, as well as an increase in the volume of total non-cash payments.

**Keywords:** e-commerce, payment cards, internet, information technology, cashless payments

**PHYSIOLOGY OF LAMP 1 (LYSOSOMAL-ASSOCIATED MEMBRANE PROTEIN), A MARKER OF LYSOSOMAL ORGANELLES AND ITS EFFECTS ON SOME PHYSIOLOGICAL SYSTEMS**

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**ABSTRACT**

Lysosomes are versatile organelles that not only serve as intracellular waste and recycling centers containing digestive enzymes but also play vital roles in many fundamental physiological processes, such as cell membrane repair, programmed cell death (apoptosis), cellular energy metabolism, and signaling.

LAMP-1, a lysosome membrane-specific marker, is a vital glycoprotein that regulates many physiological processes, such as autophagy, immune response, neuronal functions, and cancer biology, by maintaining lysosomal integrity. Lysosome-Associated Membrane Protein 1 (LAMP-1) is a heavily glycosylated lysosomal membrane protein with a molecular weight of approximately 110 kDa that protects lysosomal membranes from intracellular proteolysis. The gene for this protein is located on chromosome 13, not the Xq24-25 locus. The physiological role of LAMP-1 is to protect the integrity of the lysosomal membrane and help maintain pH balance by preventing damage caused by the strongly acidic environment and digestive enzymes within the lysosome. Furthermore, LAMP-1 participates in the fusion of lysosomes with other intracellular vesicles in processes such as autophagy and phagocytosis, enabling the cell to digest damaged components or foreign substances. It can also be transported to the cell surface, where it can signal the activation and degranulation of immune cells. LAMP-1 is not directly associated with a single specific disease caused by a mutation in the LAMP-1 gene. However, because it is a key component of lysosomes, it plays a role in the pathology of many diseases related to lysosome dysfunction. Lysosomal Storage Diseases, in which waste materials accumulate within the cell due to enzyme deficiencies or protein transport problems in lysosomes, influence the course of these diseases due to LAMP-1's role in lysosome health. LAMP-1, found in high concentrations on the cell surface in various cancer types, particularly those prone to metastasis, is being investigated as a potential target for cancer treatment because it helps tumor cells evade the immune system and spread.

Due to its role in the immune system, LAMP-1 is thought to be associated with some autoimmune and lymphoproliferative diseases. Its contribution to the healthy functioning of lysosomes also contributes to the development and progression of neurodegenerative diseases such as Alzheimer's and Parkinson's. In this context, we aimed to investigate the physiology of LAMP-1, a marker of lysosomal organelles, and its effects on certain physiological systems. Furthermore, we believe it will contribute to research that will illuminate its physiological role, particularly in LAMP1-related diseases.

**Keywords:** LAMP-1 (lysosomal-associated membrane protein 1), lysosome, cancer, diabetes