THE BOOK OF ABSTRACTS

15th International ZEUGMA CONGRESS ON SCIENTIFIC RESEARCH

JANUARY 19-21, 2026/Gaziantep, Türkiye

EDITOR

Prof. Dr. Özlem OVAYOLU

ISBN: 979-8-89695-323-4

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15th International
ZEUGMA
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Prof. Dr. Özlem OVAYOLU

Date: 10.02.2026

Liberty Publishing House

Water Street Corridor New York, NY 10038

www.libertyacademicbooks.com

+1 (314) 597-0372

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ISBN: 979-8-89695-323-4

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TOTAL NUMBER OF PAPERS FROM TÜRKİYE: 113
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All applications have undergone a double-blind peer review process

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15th International
ZEUGMA CONGRESS ON SCIENTIFIC RESEARCH
(THE BOOK OF FULL TEXTS)
January 19-21, 2026 / Gaziantep, Türkiye
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Gaziantep, Türkiye

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CONGRESS ON SCIENTIFIC RESEARCH

CONGRESS PROGRAM

January 19-21, 2026 / Gaziantep, Türkiye

Meeting ID: 848 5448 4368
Passcode: 151515
https://us02web.zoom.us/j/84854484368?pwd=6ewc2566Xg45e7ScRJ2KcLUMabllNP.1

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20.01.2026, Tuesday, Online Session-1, Hall-1

Ankara Local Time: 10:00-12:00

Meeting ID: 848 5448 4368 / Passcode: 151515

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HEAD OF SESSION: Prof. Dr. Özlem OVAYOLU		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Lect. Hilal BENZER Prof. Dr. Özlem OVAYOLU	*Hasan Kalyoncu University, Turkey* *Gaziantep University, Türkiye*	THE RELATIONSHIP BETWEEN GUT MICROBIOTA AND CHRONIC DISEASES: THE IMPORTANCE OF PATIENT EDUCATION IN NURSING CARE
Lect. Hilal BENZER Prof. Dr. Özlem OVAYOLU	*Hasan Kalyoncu University, Turkey* *Gaziantep University, Türkiye*	ENVIRONMENTAL IMPACTS OF PHARMACEUTICAL WASTE IN INTERNAL MEDICINE CLINICS AND GREEN NURSING
Gülsüm GÜLŞEN Prof. Dr. Özlem OVAYOLU	*Gaziantep University, Türkiye*	THE GAP BETWEEN ACADEMIA AND CLINICAL PRACTICE: BARRIERS TO THE TRANSLATION OF EVIDENCE-BASED NURSING PRACTICES INTO CLINICAL PRACTICE
Gülsüm GÜLŞEN Prof. Dr. Özlem OVAYOLU	*Gaziantep University, Türkiye*	FROM INDIVIDUAL SYMPTOMS TO HOLISTIC CARE: SYMPTOM CLUSTERS AND NURSING IN END-STAGE CANCER PATIENTS RECEIVING PALLIATIVE CARE
Lec. Seda İLGÜN Prof. Dr. Özlem OVAYOLU	*Gaziantep University, Türkiye*	COMPLEMENTARY THERAPIES USED BY TYPE 2 DIABETES PATIENTS AND THEIR EFFECT ON DIABETES TREATMENT ADHERENCE
Lec. Seda İLGÜN Prof. Dr. Özlem OVAYOLU	*Gaziantep University, Türkiye*	THE IMPACT OF CLIMATE CHANGE ON CHRONIC DISEASE MANAGEMENT AND NURSING APPROACHES
Mehmet Ali BOZKURT Prof. Dr. Özlem OVAYOLU	*Gaziantep University, Türkiye*	TREATMENT ADHERENCE IN HYPERTENSION: DETERMINANTS AND CURRENT APPROACHES
Mehmet Ali BOZKURT Prof. Dr. Özlem OVAYOLU	*Gaziantep University, Türkiye*	LIFESTYLE MANAGEMENT AND NURSING APPROACHES IN METABOLIC SYNDROME

20.01.2026, Tuesday, Online Session-1, Hall-2

Ankara Local Time: 10:00-12:00

Meeting ID: 848 5448 4368 / Passcode: 151515

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HEAD OF SESSION: Dr. Mehmet KIZILDAĞ		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Asst. Prof. Hüseyin İLCAN	*Hacettepe University, Türkiye*	ENHANCING THE PERFORMANCE OF CONCRETE WASTE VIA OPTIMIZED GRINDING CONDITIONS
Dr. Merve SÖNMEZ TUĞLUCA	*Hacettepe University, Türkiye*	EXPLORING RECYCLED CONCRETE AGGREGATE AS A FUNCTIONAL COMPONENT IN 3D PRINTING
Dr. Mehmet KIZILDAĞ	*Adana Alparslan Türkeş Science and Technology University, Türkiye*	A SECURE SOFTWARE DEVELOPMENT–BASED INTEGRATED HOSPITAL INFORMATION MANAGEMENT SYSTEM COMPATIBLE WITH E-NABIZ AND MEDULA
Dr. Mehmet KIZILDAĞ	*Adana Alparslan Türkeş Science and Technology University, Türkiye*	AN ARTIFICIAL INTELLIGENCE–BASED CONSULTANCY SERVICE–PERSONNEL MATCHING PLATFORM
Fatih SAĞLAM Asst. Prof. Dr. Ahmet Emin KARKINLI	*Niğde Ömer Halisdemir University, Türkiye*	COMPARATIVE PERFORMANCE ANALYSIS OF DEEP LEARNING MODELS FOR SUPER RESOLUTION UNDER NOISE AND BLUR CONDITIONS
Fatih DESTUR Dr. Seçkin ÖZCAN	*Çanakkale Onsekiz Mart University, Türkiye*	EVALUATION ON THE REGULAR INSPECTION OF MACHINERY AND WORK EQUIPMENT
Anıl ÇETİNEL Assist. Prof. Esin Ayşe ZAİMOĞLU Prof. Dr. İsmail Hakkı CEDİMOĞLU	*Sakarya University, Türkiye*	HISTORICAL CONFLICT/WAR PREDICTION: A MACHINE LEARNING APPROACH
Mohamed SOLIMAN	*Altınbaş University, Türkiye*	DEEP LEARNING FOR IDENTIFYING MENTAL HEALTH DISORDERS THROUGH SOCIAL MEDIA ANALYSIS
Aida Oumarou Ousseini CISSÉ Fatih YIGIT	*Altinbas University, Türkiye*	IMPROVING THE PERFORMANCE OF A THREE-MACHINE FLOW-SHOP USING A MULTI-CRITERIA AND GENETIC ALGORITHM APPROACH

20.01.2026, Tuesday, Online Session-1, Hall-3

Ankara Local Time: 10:00-12:00

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HEAD OF SESSION: Asst. Prof. Dr. Adem CANDAŞ		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Res. Assist. Aykut KARAKOR Prof. Dr. Fatih SELİMEFENDİGİL	*Manisa Celal Bayar University, Türkiye*	THE EFFECT OF CHANNEL GEOMETRY ON HEAT TRANSFER PERFORMANCE IN PLATE-FIN HEAT EXCHANGERS
Melike ÇETİNKAYA Asst. Prof. Dr. Adem CANDAŞ Prof. Dr. Cevat Erdem İMRAK	*Istanbul Technical University, Türkiye*	DETERMINATION OF MOMENT DISTRIBUTION IN A HYPERSTATIC SOLID TRIANGULAR EYE HOOK USING THE APPROXIMATE METHOD
Ahmet Can BİLGEN Asst. Prof. Dr. Adem CANDAŞ Prof. Dr. Cevat Erdem İMRAK	*Istanbul Technical University, Türkiye*	EXPERIMENTAL INVESTIGATION OF CRYOGENIC MACHINING AS AN ALTERNATIVE TO CONVENTIONAL METHODS FOR POROUS TUNGSTEN COMPONENTS
Abdulkadir DUMAN Celalettin BAYKARA	*Anadolu ISUZU, Türkiye* *Sakarya University of Applied Sciences, Türkiye*	DESIGN-ORIENTED DEVELOPMENT OF A MODULAR HEAVY-DUTY TRANSFER CHASSIS FOR BUS MANUFACTURING LINES
Tolga TUTKAN	*Ondokuz Mayıs University, Türkiye*	DESIGN AND IMPLEMENTATION OF A STATIC SUPPORT MECHANISM TO PREVENT LATERAL TIPPING FOR ROBOTIC GAIT ASSISTIVE DEVICES
Enes GÜNER Prof. Dr. Ahmet DEMİRER	*Sakarya University of Applied Sciences, Türkiye*	MECHANICAL CHARACTERIZATION OF GLASS FIBER–REINFORCED PA6 PARTS MANUFACTURED USING A COLD RUNNER SYSTEM
Nargila MAMMADOVA Asst. Prof. Dr. Hilal YILMAZ	*Bursa Technical University, Türkiye*	SOLUTION OF DYNAMIC SUPPLIER SELECTION PROBLEM WITH ANNEALING SIMULATION ALGORITHM
Onur TEZCAN Prof. Dr. Hülya DEMİRÖREN Prof. Dr. Soner BUYTOZ	*Çanakkale Onsekiz Mart University, Türkiye* *Fırat University, Türkiye*	IMPROVEMENT OF MECHANICAL AND CORROSION PROPERTIES OF NITI SHAPE MEMORY ALLOYS WITH AG ALLOY

20.01.2026, Tuesday, Online Session-1, Hall-4

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HEAD OF SESSION: Melik SAMI		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Melik SAMI Khelil SARA Tallal Abdel Karim BOUZIR	*Mohamed Khider Biskra University, Algeria*	ARCHITECTURE AS COLLECTIVE MEMORY: HUMANITIES INSIGHTS INTO MONUMENTS AND MEMORIALS
Melik SAMI Khelil SARA Tallal Abdel Karim BOUZIR	*Mohamed Khider Biskra University, Algeria*	ARCHITECTURE, PHILOSOPHY, AND THE HUMAN CONDITION IN THE BUILT ENVIRONMENT
Melik SAMI Khelil SARA Tallal Abdel Karim BOUZIR	*Mohamed Khider Biskra University, Algeria*	RELIGIOUS TOURISM AND SACRED ARCHITECTURE: GLOBAL PATTERNS AND DESIGN CHALLENGES
Melik SAMI Khelil SARA Tallal Abdel Karim BOUZIR	*Mohamed Khider Biskra University, Algeria*	THE ARCHITECTURE OF MUSEUMS AND CULTURAL VENUES: TOURISM AND LOCAL DEVELOPMENT
Melik SAMI Khelil SARA Tallal Abdel Karim BOUZIR	*Mohamed Khider Biskra University, Algeria*	ARCHITECTURAL AESTHETICS AND FUNCTIONAL PLANNING: TOWARD HARMONIZED DESIGN
Melik SAMI Khelil SARA Tallal Abdel Karim BOUZIR	*Mohamed Khider Biskra University, Algeria*	GLOBALIZATION AND ARCHITECTURE: RETHINKING PLANNING AND DESIGN IN A CHANGING WORLD
Asst. Prof. Farhana NAZ	*Lahore College for Women University, Pakistan*	INTERIOR ARCHITECTURE AND HUMAN WELLBEING: PSYCHOLOGICAL IMPACTS OF ENVIRONMENTAL DESIGN FACTORS
Melik SAMI Khelil SARA Tallal Abdel Karim BOUZIR	*Mohamed Khider Biskra University, Algeria*	RESILIENT URBAN MORPHOLOGIES: INTEGRATING PLANNING THEORIES WITH ARCHITECTURAL DESIGN
Deepa H Harini S Jefnishya J R Keerthana K	*R.M.K. Engineering College, India*	CROWDSOURCED CIVIC ISSUE REPORTING AND RESOLUTION SYSTEM

20.01.2026, Tuesday, Online Session-1, Hall-5

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HEAD OF SESSION: Mas'ud HAMDAN		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Oluwakemi Racheal OSHINOWO Moses Adeolu AGOI Rasheed Olatunde AJETUNMOBI Oluwanifemi Opeyemi AGOI	*Lagos State University of Education, Nigeria* *Obafemi Awolowo University, Nigeria*	EVALUATING THE IMPACT OF CODING BOOTCAMPS ON INSTITUTIONAL LEARNING OUTCOMES
Nimota Jibola Kadir ABDULLAHI Muinat Bolanle BELLO Mulikat L. A. MUSTAPHA Nafisat A. ADEDOKUN-SHITTU Prof. L. A. YAHAYA Hafsat A. AMEEN Halimat A. ABDULRAHIM	*University of Ilorin, Nigeria*	BRIDGING THE DIGITAL AND VOCATIONAL SKILLS GAP FOR STREET CHILDREN: EVIDENCE FROM THE CYBERCATCH PROJECT IN NIGERIA
Mas'ud HAMDAN	*University of Haifa, Israel*	A DELIBERATE HUMOR: THE MASKS OF THE OPPRESSED TRUTH
Mas'ud HAMDAN	*University of Haifa, Israel*	A SMALL TAP IN THE BIG REALM OF THE SERIO-COMICAL
Mas'ud HAMDAN	*University of Haifa, Israel*	THE DISCOURSE OF POWER AND TRUTH IN POETIC WORKS (LITERATURE AND ART): AN INTRODUCTION
Lect. Dr. Irina-Ana DROBOT	*Technical University of Civil Engineering Bucharest, Romania*	PHILOSOPHICAL QUESTIONS IN THE SHORT STORY THE NEXT BEST THING BY GRAHAM SWIFT
Solomon Onen ABAM Ismail Olaniyi MURAINA Moses Adeolu AGOI Bashir Oyeniran AYINDE Wasiu Olatunde OLADAPO	*Federal College of Education (Technical) Isu, Nigeria* *Lagos State University of Education, Nigeria*	AI-ASSISTED INFORMATION EVALUATION AND STUDENTS' ABILITY TO DETECT MISINFORMATION IN SECONDARY SCHOOLS OF CROSS RIVER STATE, NIGERIA
Asst. Prof. Dr. Raf Shakil ANSARI	*Sharda University, India*	READING CASTE AND COUNTER-HISTORY IN PHULE (2025)
Fouad BOUGHANZAI Rochdi DAIBI Youssef OUHASSAN Rania MAJDOUBI Abdelkader HADJOUDJA	*Ibn Tofail University, Morocco*	SOCIAL MEDIA IN THE MOROCCAN CLASSROOM: HOW PERCEIVED USEFULNESS SHAPES TEACHER ATTITUDES

20.01.2026, Tuesday, Online Session-1, Hall-6

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HEAD OF SESSION: Mohamad JAFARI		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Samim BISWAS	*Bidhan Chandra Krishi Viswavidyalaya, India*	WHY FARMERS HESITATE: ADOPTION CONSTRAINTS OF AGROFORESTRY SYSTEMS IN THE INDIAN SUNDARBANS
Ristina Siti SUNDARI Ahmad YAZID D Yadi HERYADI Adnan ARSHAD Farhan AHMAD	*Universitas Perjuangan Tasikmalaya, Indonesia* *Universitas Siliwangi, Indonesia* *Lanzhou University, China* *UNWFP-FRD (Food for Assets Project), Pakistan*	THE FEASIBILITY OF WHITE OYSTER MUSHROOM FARMING USING COMMERCIAL AND HOME-PRODUCED SEEDLINGS
M'hamed MAJJI Abdelhak TALHA Brahim AOUZIOU Ouiam CHETTO Rachid BENKIRANE Hamid BENYAHIA	*National Institute for Agricultural Research (INRA), Morocco* *Ibn Tofail University, Morocco*	THE IMPACT OF ROOTSTOCKS ON "VALENCIA LATE" ORANGE FRUIT QUALITY IN NORTHWEST OF MOROCCO
Kainat MEHMOOD Haroon Zaman KHAN Anjum NAEEM Eisha HABIB Asif IQBAL Muhammad SHAHBAZ Muhammad ABUZAR	*University of Agriculture Faisalabad, Pakistan*	OPTIMIZING SULFUR MANAGEMENT FOR CANOLA (BRASSICA NAPUS L.) PRODUCTIVITY IN ALKALINE SOILS OF FAISALABAD
Sani Yakubu KHALIFA Usman Idris ABUBAKAR Nura Idris ABDULLAHI Aliyu Adamu DANDAJE	*Ahmadu Bello University Zaria, Nigeria*	DESIGN OF BASIN IRRIGATION SYSTEM FOR PEPPER IN GONAR GANYE, TUDUN WADA, ZARIA
Mohamad JAFARI	*Hormozgan Agricultural and Natural Resources Research and Education Center (AREEO), Iran*	ADMINISTRATION OF THE EFFECTIVENESS OF CHEMICAL FERTILIZERS CENTERED ON INTEGRATED NUTRITION IN ARID AND SEMI-ARID AREAS
ELABBARI Chaimaa Prof. Najoua LABJAR EL BOUZIDI Ahmed Prof. Souad EL HAJJAJI	-	OPTIMIZING NITROGEN MANAGEMENT FOR ENVIRONMENTALLY FRIENDLY AGRICULTURE

20.01.2026, Tuesday, Online Session-2, Hall-1

Ankara Local Time: 12:30-14:30

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HEAD OF SESSION: Merve KÜÇÜK		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Busra ERKAN Andrew R GREEN	*University of Nottingham, UK*	UNDERSTANDING OF DOWNSTREAM MECHANISMS AND PERSONALISED THERAPY IN BREAST CANCER
Busra ERKAN Andrew R GREEN	*University of Nottingham, UK*	NOVEL BIOMARKERS ASSOCIATED WITH TUMOUR AGGRESSIVENESS AND PROGNOSIS IN OESTROGEN RECEPTOR-POSITIVE BREAST CANCER
Dr. Deniz YILMAZ	*Independent Researcher, Türkiye*	EVALUATION OF KETEM PRACTICES IN CANCER CONTROL FROM A PUBLIC HEALTH AND HEALTH POLICY PERSPECTIVE IN TURKEY
Asst. Prof. Dr. Sezgin YENİ	*Mudanya University, Türkiye*	SYMPTOMATIC ECTOPIC URETERAL STUMP: EXPERIENCE WITH ENDOSCOPIC ABLATION
Dr. Mehmet Cem BAŞEL	*VM Medical Park Bursa Hospital, Türkiye*	FREQUENCY OF VISITS FOR INR MEASUREMENT AND EFFECTS ON BLOOD INR LEVELS IN PATIENTS WHO UNDERWENT PROSTHETIC HEART VALVE SURGERY AND USED WARFARIN SODIUM DURING THE COVID-19 PANDEMIC: A RETROSPECTIVE ANALYSIS
Asst. Prof. Sinan MERMER	*Izmir University of Economics, Türkiye*	BLOOD CULTURE CONTAMINATION RATES AND CONTAMINANT MICROORGANISMS: A SINGLE-CENTER RETROSPECTIVE STUDY
Asst. Prof. Dr. Alper AYTEKİN Asst. Prof. Dr. Latif YILMAZ	*Gaziantep University, Türkiye*	CLINICAL VALUE AND NECESSITY OF INTRAOPERATIVE METHYLENE BLUE LEAK TESTING IN LAPAROSCOPIC SLEEVE GASTRECTOMY: A RETROSPECTIVE ANALYSIS
Nurcihan Ayça FIRAT Prof. Dr. Hüseyin POLAT	*Aksaray University, Türkiye*	HISTOPATHOLOGICAL EVALUATION OF LIVER TISSUES IN RATS TREATED WITH PERMETHRIN AT DIFFERENT DOSES AND DURATIONS AND ITS EFFECTS ON BLOOD SERUM GH, IGF-1, IGFBP-3 LEVELS

20.01.2026, Tuesday, Online Session-2, Hall-2

Ankara Local Time: 12:30-14:30

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HEAD OF SESSION: Asst. Prof. Dr. Esra BOZYİĞİT		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Şeyma Sena TERZİOĞLU	*Adiyaman University, Türkiye*	THE PLACE OF PIERRE BOURDIEU'S SOCIOLOGY IN EDUCATION AND THE MYTH OF MERITOCRACY
Mehmet Nazif DOĞAN	*Adiyaman University, Türkiye*	INVESTIGATION OF IN-CLASS ACTIVITIES BASED ON THE 'TURKEY CENTURY MAARİF MODEL' WITHIN AN ARTIFICIAL INTELLIGENCE FRAMEWORK
Nazan ATAYIK	*Adiyaman University, Türkiye*	FROM HISTORICAL CONSTRUCTION TO MEDIATIZED DECAY: THE ONTOLOGICAL AND SOCIOLOGICAL DEMISE OF THE CHILDHOOD PARADIGM
Esengül İSPİR Asst. Prof. Hasan AYDEMİR	*Inonu University, Türkiye*	INVESTIGATION OF THE 2024 SOCIAL STUDIES CURRICULUM IN TERMS OF ITS SUITABILITY FOR STEAM INTEGRATION
Şemsa ÖZCAN	*Istanbul Aydin University, Türkiye*	AN EXAMINATION OF FATHERS' LEVELS PARTICIPATION IN EARLY CHILDHOOD EDUCATION INSTITUTIONS AND STUDIES ON THE PATERNAL ROLE: A SYSTEMATIC REVIEW
Aleyna YÜKSEL Merve KOÇER	*TÜBİTAK Science High School, Türkiye*	VALUES EDUCATION THROUGH GAMIFIED METHODS
Asst. Prof. Dr. Esra BOZYİĞİT	*Bilecik Seyh Edebali University, Türkiye*	COULD SOME COUPLETS INCLUDED IN ABU'L-HAYR OF IPSALA'S MAWLID HAVE BEEN BORROWED FROM SHEIKH ASHRAF B. AHMED'S MAWLID?
Prof. Dr. Gülden TÜM Nermin GÖKEL	*Cukurova University, Türkiye*	STRESS MANAGEMENT AND STUDENT WELLBEING IN FOREIGN LANGUAGE LEARNING

20.01.2026, Tuesday, Online Session-2, Hall-3

Ankara Local Time: 12:30-14:30

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HEAD OF SESSION: Prof. Dr. Serap DURMUS OZTURK		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Prof. Dr. Serap DURMUS OZTURK Research Assistant Dr. Melis YAZICI Asst. Prof. Dr. Oguz KIRCI	*Karadeniz Technical University, Türkiye* *Artvin Coruh University, Türkiye* *Avrasya University, Türkiye*	SENSORY TEMPORAL ATLAS: URBAN SPATIAL EXPERIENCES WITHIN THE TRABZON BEDESTEN
Prof. Serap DURMUŞ ÖZTÜRK Muhammet Enes ÖKSÜZ Research Assistant Asude BALİ	*Karadeniz Technical University, Türkiye*	FROM SENSORY LAYERS TO LINEAR CODES: DISCOURSE ANALYSIS OF TAŞHAN SPACE THROUGH MULTI-SENSORY SKETCHES
Beyzanur TAŞÇI Assoc. Prof. Dr. Ali Osman KURUŞCU	*Yildiz Technical University, Türkiye*	ASSESSMENT OF A PREFABRICATED COMPOSITE PANEL MANUFACTURED FROM POLYESTER–FIBER COMPOSITE AND BOX-SECTION STEEL AS A CONSTRUCTION MATERIAL
Dr. Ferhat ÇEÇEN Prof. Dr. Mehmet SALTAN	*Süleyman Demirel University, Türkiye*	COMPARISON OF FINITE ELEMENT AND EXPERIMENTAL MODAL ANALYSIS RESULTS OF RAILWAY SLEEPER PROTOTYPES MANUFACTURED BY 3D PRINTING IN ACCORDANCE WITH PARTIAL SIMILITUDE THEORY
Asst. Prof. Rıza Fatih MENDİLCİOĞLU	*Baskent University, Türkiye*	THE DIGITAL TRANSFORMATION OF SPATIAL POWER: A MACHIAVELLIAN READING OF SMART CITY PRACTICES

20.01.2026, Tuesday, Online Session-2, Hall-4

Ankara Local Time: 12:30-14:30

Meeting ID: 848 5448 4368 / Passcode: 151515

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HEAD OF SESSION: Fatima CHARBOUB		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Soukaina AMEUR Assiya ATIF Abdellah ZEROUAL	*Chouaïb Doukkali University, Morocco*	EXPLORING THE CHEMICAL REACTIVITY AND THERAPEUTIC POTENTIAL OF 1H-PYRROLE-2,3-DIONE CYCLOADDITION DERIVATIVES: INSIGHTS FROM MOLECULAR DOCKING AND ADMET PREDICTIONS
Assiya ATIF Soukaina AMEUR Houssine AIT SIR	*Chouaib Doukkali University, Morocco*	SYNTHESIS AND BIOLOGICAL ACTIVITIES OF THIOPHENE DERIVATIVES
Valery V. BELAKHOV	*Technion – Israel Institute of Technology, Israel*	DESIGN, SEARCH, DEVELOPMENT AND APPLICATION OF NON-MEDICAL ANTIFUNGAL ANTIBIOTICS TO PROTECT AGRICULTURAL PLANTS FROM DISEASES CAUSED BY FUNGAL PHYTOPATHOGENS AND HARMFUL INSECTS
Tanzeela Tanzeela RIAZ Sana ASLAM Matloob AHMAD	*Government College Women University Faisalabad, Pakistan*	PHARMACOLOGICAL ASSESSMENT OF FUSED HETEROCYCLIC COMPOUNDS AS POTENTIAL THERAPEUTIC AGENTS
Rawia NASRI	*University of Tunis El Manar, Tunisia*	SYNTHESIS AND BIOLOGICAL ACTIVITY OF A NEW DECAVANADATE COMPOUND
Tanzeela RIAZ Tanzeela Sana ASLAM Matloob AHMAD	*Government College University Faisalabad, Pakistan*	SYNTHETIC APPROACHES TOWARDS FUNCTIONALIZED THIAZOLIDINONE DERIVATIVES
Soukaina AMEUR Assiya ATIF Abdellah ZEROUAL Noureddine MAZOIR	*Chouaïb Doukkali University, Morocco*	ADSORPTION BEHAVIOR AND INHIBITORY POTENTIAL OF 1H-PYRROLE-2,3-DIONE DERIVATIVES: A COMBINED DFT, ADMET, AND MOLECULAR DOCKING STUDY
Soukaina AMEUR Assiya ATIF Abdellah ZEROUAL Noureddine MAZOIR	*Chouaïb Doukkali University, Morocco*	INTEGRATED DFT, ADMET, AND MOLECULAR DOCKING INSIGHTS INTO THE REACTIVITY AND THERAPEUTIC POTENTIAL OF 1H-PYRROLE-2,3-DIONE DERIVATIVES
Assala MARIR Mounia GUERGOURI Rafik BENSEGUENI	*Frères Mentouri University Constantine, Algeria* *Mohamed Cherif Messaadia University, Algeria*	A THIOPHENE-MODIFIED CARBAZOLE MONOMER: SYNTHESIS, ELECTROCHEMICAL BEHAVIOR, AND CONJUGATED POLYMER FORMATION
Fatima CHARBOUB Rachid AIT AKBOUR Abdallah ALBOURINE	*Ibn Zohr University, Morocco* *SupMT I, Morocco*	GREEN SYNTHESIS AND ADSORPTIVE PERFORMANCE OF ZNO@CUO NANOCOMPOSITES DERIVED FROM EUCALYPTUS CAMALDULENSIS FOR LEAD AND CADMIUM REMOVAL

20.01.2026, Tuesday, Online Session-2, Hall-5

Ankara Local Time: 12:30-14:30

Meeting ID: 848 5448 4368 / Passcode: 151515

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HEAD OF SESSION: Dr. Fahima NABI		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
A. Vinolia CHRISTY S. HEMALATHA	*B.S. Abdur Rahman Crescent Institute of Science and Technology, India*	EFFECT OF QUERCETIN MEDIATED ZNO NANOPARTICLES TO INHIBIT PROTEASE ACTIVITY IN E. COLI
Kovendan M S. HEMALATHA	*B.S. Abdur Rahman Crescent Institute of Science and Technology, India*	NANO-ENGINEERED ANTIMICROBIAL FORMULATION FOR THE CONTROL OF PLANT PATHOGEN
Asst. Prof. Bikash BANIA Asst. Prof. Nitul ALI Asst. Prof. Dr. Guddu Prasad BASUMATARY Asst. Prof. Dr. Prem Kishan SINGHA	*Rangia College, India*	ETHNOBOTANICAL AND ETHNOLINGUISTIC DOCUMENTATION OF WILD EDIBLE PLANTS USED BY THE BODO COMMUNITY OF ASSAM, INDIA
HAMMANI Noureddine MESMOUDI Nihal AMMOUCH Khawla MOUSTAGHFIR Abdellah ENNAJI Hanane IBENMOUSSA Samir OUKKACHE Naoual	*Hassan II University, Morocco* *Pasteur Institute of Morocco, Morocco*	TOXICOLOGICAL AND BIOLOGICAL CHARACTERIZATION OF CERASTES CERASTES VENOMS FROM MOROCCO: HEMORRHAGIC, EDEMATOUS, AND MYOTOXIC EFFECTS IN MICE
Anas FELLAKI Mohamed ABOUROUH Houda ELYACOUBI Asmaa ELYAMANI Atmane ROCHDI	*Ibn Tofail University, Morocco*	ETHNOMYCOLOGICAL SURVEY OF CANTHARELLUS CIBARIUS IN THE MAAMORA FOREST (MOROCCO)
Nihal MESMOUDI Khawla AMMOUCH Noureddine HAMMANI Samir IBENMOUSSA Abdellah MOUSTAGHFIR Naoual OUKKACHE	*Mohammed V University in Rabat, Morocco* *Institut Pasteur of Morocco, Morocco* *Hassan II University, Morocco*	BIOTECHNOLOGICAL AND TOXICOLOGICAL CHARACTERIZATION OF CERASTES CERASTES VENOM: IMPLICATIONS FOR DIAGNOSIS AND THERAPEUTIC MANAGEMENT
Kovendan M Ranjani S S. HEMALATHA	*B.S. Abdur Rahman Crescent Institute of Science and Technology, India*	NANO ENGINEERED FOOD PACKING MATERIAL TO INCREASE SHELF LIFE AND PROTECT FROM FOOD PATHOGENS
Dr. Fahima NABI Meriem CHEBAANI	*Université Dr Yahia Farès de Médéa, Algérie* *Ecole Normale Supérieure Cheikh Mohamed El-Bachir El-Ibrahimi, Algérie*	UNLOCKING STRESS TOLERANCE IN LEGUMES THROUGH THERMO- AND HORMONAL SEED PRIMING
Faisal AHMED Johirul ISLAM Tasmia Jahin MIM Iftakhar AHMAD	*Noakhali Science and Technology University, Bangladesh* *BRAC University, Bangladesh* *National University of Bangladesh, Bangladesh*	CRYSTAL VIOLET DYE DEGRADATION USING MONOCULTURE AND BLENDED CULTURE BACTERIA ISOLATED FROM POULTRY FAECES

20.01.2026, Tuesday, Online Session-2, Hall-6

Ankara Local Time: 12:30-14:30

Meeting ID: 848 5448 4368 / Passcode: 151515

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HEAD OF SESSION: Dr. Chukwuemeka G. EME		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Tugga, H. A. David, I. J. Adubisi, O. D.	*Federal University Wukari, Nigeria*	DIFFERENT ENTROPIES ESTIMATION FOR A ONE-PARAMETER ENTROPY TRANSFORMED EXPONENTIAL DISTRIBUTION WITH APPLICATION TO WEIGHT OF INFANTS AT DELIVERY
Hanane RAHMOUNI	*University of Oran 2 Mohamed Ben Ahmed, Algeria*	UNDERSTANDING THE EXPECTATIONS OF THE SCIENTIFIC RESEARCH AND TECHNOLOGICAL DEVELOPMENT LABORATORY AT THE UNIVERSITY
Yusuf Ahmed TIJJANI Abubakar BALA	*Ahmadu Bello University Zaria, Nigeria* *WoodHall Capital International, Nigeria*	FINANCIAL INTERMEDIATION, MULTILATERAL INSTITUTIONS, AND CROSS-BORDER CAPITAL FLOWS IN EMERGING MARKETS: EVIDENCE FROM STRUCTURED FINANCING MECHANISMS
Yusuf Ahmed TIJJANI Abubakar BALA	*Ahmadu Bello University Zaria, Nigeria* *WoodHall Capital International, Nigeria*	GOVERNANCE, RISK STRUCTURING, AND ACCESS TO INTERNATIONAL CAPITAL: THE ROLE OF ADVISORY INTERMEDIARIES IN EMERGING ECONOMIES: EVIDENCE FROM STRUCTURED FINANCING MECHANISMS
Yusuf Ahmed TIJJANI Iliyasu Garba YUNUSA	*Ahmadu Bello University Zaria, Nigeria* *Kaduna State University, Nigeria*	INTEGRATING RISK MANAGEMENT PRACTICES FOR ENHANCING ENVIRONMENTAL SUSTAINABILITY IN NIGERIAN MANUFACTURING INDUSTRIES: AN EMPIRICAL STUDY
Dr. Chukwuemeka G. EME	*National Open University of Nigeria, Nigeria*	AN APPRAISAL OF SUCCESSION PLANNING IN FAMILY-OWNED BUSINESSES IN NIGERIA: EMPIRICAL EVIDENCE FROM SELECTED SMES IN LAGOS STATE, NIGERIA
Dr. Chukwuemeka G. EME	*National Open University of Nigeria, Nigeria*	IMPACT OF EMPLOYEE MOTIVATION ON THE PERFORMANCE OF MANUFACTURING FIRMS IN LAGOS STATE, NIGERIA
Dr. Chukwuemeka G. EME	*National Open University of Nigeria, Nigeria*	THE ROLE OF HUMAN CAPITAL DEVELOPMENT IN THE NIGERIAN PUBLIC AND PRIVATE SECTORS: INSIGHT FROM SELECTED MANUFACTURING FIRMS

20.01.2026, Tuesday, Online Session-3, Hall-1

Ankara Local Time: 15:00-17:00

Meeting ID: 848 5448 4368 / Passcode: 151515

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HEAD OF SESSION: Asst. Prof. Merve BULUT YILGÖR		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Asst. Prof. Merve BULUT YILGÖR	*Altinbas University, Türkiye*	A NOTE ON NON-CHAIN RINGS
Asst. Prof. Dr. Emine GÖZEL	*Kahramanmaras Sutcu Imam University, Türkiye*	AN EXAMINATION OF PRIMARY SCHOOL MATHEMATICS TEXTBOOK ACTIVITIES IN TERMS OF CONNECTION TO DAILY LIFE
Asst. Prof. Neslihan Ayşen ÖZBAY	*Cankaya University, Türkiye*	ON THE ALGEBRAIC STRUCTURE OF INTEGER-VALUED POLYNOMIALS OVER DUAL NUMBERS
Prof. Dr. Belgin ÖZER Ayşe BUSTANİ EYİD	*Gaziantep University, Türkiye*	THE DUPLICATION OF ALMOST ARF NUMERICAL SEMIGROUPS WITH RF (ROW-FACTORIZATION) MATRICES
Cahide BOBİÇ Assoc. Prof. Dr. Erkan İLİK	*Eskişehir Osmangazi University, Türkiye*	INVESTIGATION OF THE EFFECTS OF RARE EARTH ELEMENT OXIDE ADDITION ON THE ARMORING PERFORMANCE OF AMORPHOUS MATERIALS
Lec. Dr. Mehtap YALÇIN	*Igdir University, Türkiye*	MATHEMATICAL MODELING OF OPTICAL PHENOMENA IN PRIMARY SCHOOL: A PLANNED IMPLEMENTATION STUDY
Kamilya KAMİRDİNOVA Sema AKIN BAS	*Yıldız Technical University, Türkiye*	TRANSFORMER-BASED SENTIMENT ANALYSIS OF TURKISH E-COMMERCE REVIEWS

20.01.2026, Tuesday, Online Session-3, Hall-2

Ankara Local Time: 15:00-17:00

Meeting ID: 848 5448 4368 / Passcode: 151515

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HEAD OF SESSION:		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Orkun KAYAM Murat ÜÇÜNCÜ	*Baskent University, Türkiye*	IFM RECEIVER PROCESSOR MODULE DESIGN AND MANUFACTURE
Asst. Prof. Onur KURT	*Istanbul Technical University, Türkiye*	PREDICTION OF DAILY WIND ENERGY PRODUCTION USING MACHINE LEARNING MODELS
Asst. Prof. Mustafa Furkan KESKENLER	*Ataturk University, Türkiye*	LEARNING-BASED DECISION FUSION FOR HEART DISEASE DIAGNOSIS: A HYBRID MODEL WITH A META-LEARNER
Asst. Prof. Mustafa Furkan KESKENLER Prof. Dr. Eyüp Fahri KESKENLER	*Ataturk University, Türkiye* *Bayburt University, Türkiye*	A META-LEARNING-BASED DECISION SUPPORT APPROACH FOR QUALITY ASSESSMENT IN PRESCHOOL EDUCATION
İrfan YILDIRIM	*Iskenderun Technical University, Türkiye*	DETERMINING THE APPROPRIATE ITEM PROCESSING ORDER FOR HIGH-EFFICIENCY ITEMSET MINING
Yazan Osama Mohammed SOBOH Asst. Prof. Cengiz TEPE Mustafa Kerem PİŞKİN	*Ondokuz Mayıs University, Türkiye* *Kabataş Erkek High School, Türkiye*	EVALUATION OF FEATURE SELECTION METHODS FOR EOG SIGNAL CLASSIFICATION: A COMPARATIVE STUDY
Assist. Prof. Özer PAMUK	*Uşak University, Türkiye*	THE EFFECT OF SHALLOW CRYOGENIC TREATMENT ON THE HARDNESS PROFILES OF VACUUM CARBURETED PRE-ALLOYED POWDER METALLURGY STEEL PARTS
Asst. Prof. Dr. Mustafa TEKİN Ahmet KADİRLİOĞLU	*Kahramanmaraş Sütçü İmam University, Türkiye*	PV SYSTEM DESIGN FOR BUILDING FACADES

20.01.2026, Tuesday, Online Session-3, Hall-3

Ankara Local Time: 15:00-17:00

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HEAD OF SESSION: Hakime ÇELİK AKBAŞ		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Makbule TORLAK Assoc. Prof. Dr. Nazan DÜZ	*Usak University, Türkiye*	AN ANALYSIS OF THE IMAGE OF THE 'TREE' IN THE WORKS OF ZEKİ FAİK İZER, CEMAL TOLLU, AND ŞEREF AKDİK IN THE CONTEXT OF ART PSYCHOLOGY AND ART PHILOSOPHY
Assoc. Prof. Esra TAŞTAN ÖZKAN	*Bitlis Eren University, Türkiye*	SPORTSWEAR USED IN COLD CLIMATE CONDITIONS
Assoc. Prof. Dr. Evren ERZEN Eda Selin ŞAHİN	*Kirsehir Ahi Evran University, Türkiye*	PREDICTORS OF PSYCHOLOGICAL WELL-BEING: THE ROLES OF LONELINESS, PHUBBING AND TECHNOSTRESS
Hakime ÇELİK AKBAŞ	*Van Yuzuncu Yil University, Türkiye*	THE POWER OF ART IN FRIDA KAHLO BY RAUDA JAMIS AS A BIOFICTIONAL REFLECTIVE
Esra BALCI Sema ARIKAN Cansu KANTAR Asst. Prof. Serap ÇAŞKURLU	*Istanbul University–Cerrahpaşa, Türkiye*	FROM TURKISH MYTHOLOGY TO DESIGN: THE MEANING AND APPLICABILITY OF SYMBOLS
Şeyma ARVAS	*Van Yüzüncü Yıl University, Türkiye*	THE HEALING ROLE OF PSYCHONEUROIMMUNOLOGY AND HYPNOTHERAPY
Burak ALKAYA Asst. Prof. Eda BAYTAŞ	*Istanbul Nişantaşı University, Türkiye*	FROM MAP TO SCREEN: THE COGNITIVE ADVANTAGE OF DIGITAL GAME-BASED TRAINING IN ORIENTEERING
Abdulmecit YAKIŞIK Asst. Prof. Eda BAYTAŞ	*Istanbul Nişantaşı University, Türkiye*	EXAMINATION OF ERGOGENIC SUPPORT USE LEVELS OF KICK BOXING ATHLETES

20.01.2026, Tuesday, Online Session-3, Hall-4

Ankara Local Time: 15:00-17:00

Meeting ID: 848 5448 4368 / Passcode: 151515

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HEAD OF SESSION: Ananda MAJUMDAR		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Ananda MAJUMDAR	*Harvard University, USA*	REASSESSING LABOUR DYNAMICS: ENSLAVEMENT AND SERFDOM IN THE MEDIEVAL CAUCASUS
Asst. Prof. Muhammad FAISAL	*Allama Iqbal Open University; CRISP World Bank Project (BISP), Pakistan*	TRANSFORMING CIVIL SERVICE, A FRAMEWORK FOR DIGITAL PEDAGOGY IN GOVERNANCE EDUCATION
Prof. Dr. Tamar GOGOLADZE	*GSSU Faculty of Humanities, Georgia*	HISTORY OF BEAN CULTURE IN GEORGIA IN THE OPINION OF A WRITER AND HISTORIAN
Nadhim M. FALEH Duaa N. MEJBIL Muhammed Salman ABBAS	*Mustansiriyah University, Iraq*	SOCIAL AND POLITICAL REFORM: THE ORIGINS, DEVELOPMENT, AND IMPACT OF THE SADRIST TREND ON THE IRAQI ARENA
Sodiq Adetunji ADEKOLA Zainab OYERINDE	*University of Abuja, Nigeria* *Federal University Wukari, Nigeria*	DIGITAL HEALTH DIPLOMACY IN THE 21ST CENTURY: BALANCING CROSS-BORDER DATA SHARING, SURVEILLANCE, AND PRIVACY PROTECTION
Dr. Md. Rostom ALI Dr. Md. Fakrul ISLAM Mst. Surovi AKTHER	*University of Rajshahi, Bangladesh*	SOCIAL CAPITAL FOR PROMOTING FINANCIAL OUTCOMES AND WELLBEING TO LEFT-BEHIND HOUSEHOLD OF MIGRANT WORKER IN NORTHERN BANGLADESH
Dr. Chukwuemeka Godson EME	*National Open University of Nigeria, Nigeria*	CLIMATE CHANGE AND ITS EFFECTS ON THE SOCIO-ECONOMIC DEVELOPMENT OF NIGERIA

20.01.2026, Tuesday, Online Session-3, Hall-5

Ankara Local Time: 15:00-17:00

Meeting ID: 848 5448 4368 / Passcode: 151515

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HEAD OF SESSION: Major Gheorghe GIURGIU		
Author(S)	**ORGANISATION**	**TOPIC TITLE**
Major Gheorghe GIURGIU Prof. Dr. Med. Manole COJOCARU	*Deniplant-Aide Sante Medical Center, Romania* *Academy of Romanian Scientists; Titu Maiorescu University, Romania*	OPTIMIZING OUTCOMES IN PSORIASIS: IMPACT OF DENIPLANT NUTRACEUTICALS
S. DEEPAK A. PALANISAMY S. KALAIVANAN Lavanya BABU C. RAVI K. VAISHNAVI	*Bharath Institute of Higher Education and Research, India*	THE EVOLVING ROLE OF PHARMACISTS IN DEPRESSION CARE: A SCOPING REVIEW
Lulzime BALLAZHI Edita ALILI-IDRIZI Merita DAUTI Sihana AHMETI-LIKA Drita HAVZIU-YZEIRI Hanife RUSTEMI-AHMETI Arbnora QAHILI-NAZIFI	*University of Tetovo, North Macedonia*	BENZODIAZEPINES VS ZOLPIDEM: A PHARMACOLOGICAL PERSPECTIVE
Idris SHAMSUDDEEN Oliyide Daramola ESTHER	*Umaru Musa Yar'adua University, Nigeria* *Moshood Abiola Polytechnic, Nigeria*	PROCESS AND FORMULATION ENGINEERING OF PLANT-DERIVED ACTIVES: PHARMACEUTICAL MANUFACTURING STRATEGIES FROM EXTRACTION TO FINAL DOSAGE FORMS
Idris SHAMSUDDEEN Oliyide Daramola ESTHER	*Umaru Musa Yar'adua University, Nigeria* *Moshood Abiola Polytechnic, Nigeria*	ENGINEERING THE PHARMACOSMETIC INTERFACE: PROCESS-DRIVEN DESIGN OF BOTANICAL ACTIVES FOR THERAPEUTIC-GRADE NATURAL COSMETICS
Samruddhi Amar PİSAL Dr. P. B. VARNE	*Shivaji University, India* *Bharati Vidyapeeth College of Pharmacy, India*	FABRICATION OF FLAVONOIDS BASED NANOPARTICLES FOR TREATMENT OF COLON CANCER
Emmanuel Bukola IYIOLA Aanuoluwa Temitayo IYIOLA Esther Opeyemi AWORENI Dr. A. O. UDEZE	*University of Ilorin, Nigeria* *Federal University of Technology Minna, Nigeria* *Ladoke Akintola University of Technology, Nigeria*	PREVALENCE OF HBSAG AMONG HIV-POSITIVE PATIENTS ON ANTIRETROVIRAL THERAPY FOR THREE YEARS AT GENERAL HOSPITAL OFFA, KWARA STATE
Osunkentan OLADOTUN AYOWUMI	*Federal College of Education (Special), Nigeria*	ARTIFICIAL INTELLIGENCE APPLICATIONS IN ACADEMIC LIBRARIES: OPPORTUNITIES AND ETHICAL CONCERNS

20.01.2026, Tuesday, Online Session-3, Hall-6

Ankara Local Time: 15:00-17:00

Meeting ID: 848 5448 4368 / Passcode: 151515

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HEAD OF SESSION: Olena PANCHENKO		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Olena PANCHENKO	*Oles Honchar Dnipro National University, Ukraine*	TRANSLATION QUALITY ASSESSMENT
Dr. Soufiane ZIANI Dr. Driss KHATTACH Dr. Jamila ABDERBI Dr. Zahra ZERROUQI	*Mohammed 1st University, Morocco* *CRMEFO, Morocco*	STRUCTURAL CHARACTERISTICS AND BASEMENT DEPTHS INTERPRETED FROM MAGNETIC DATA OF THE GUENFOUDA REGION (NORTHEASTERN MOROCCO): HYDROGEOLOGICAL IMPLICATIONS
Enyew Amare ZEREFFA	*Adama Science & Technology University, Ethiopia*	SINTERED CLAY CERAMIC WATER FILTER: E. COLI AND FLUORIDE
Aziz BOURASS Miloud CHAKIT Rajaa KADDAR Sanae EL HARCHE Mohamed MANAOUCH Mohamed AGHAD Mohamed SADIKI	*National School of Public Health, Morocco* *Ibn Tofail University, Morocco* *Hassan II Institute of Agronomy and Veterinary Medicine, Morocco*	MAPPING STORMWATER HARVESTING POTENTIAL IN SEMI-ARID ZONES USING A HUMAN-PHYSICAL ANALYSIS–GEOGRAPHIC INFORMATION SYSTEM: IMPLICATIONS FOR SUSTAINABLE DEVELOPMENT IN THE KHÉMISSET REGION
Aziz BOURASS Miloud CHAKIT Rajaa KADDAR Sanae EL HARCHE Mohamed MANAOUCH Mohamed AGHAD Mohamed SADIKI	*National School of Public Health, Morocco* *Ibn Tofail University, Morocco* *Hassan II Institute of Agronomy and Veterinary Medicine, Morocco*	INTEGRATION OF HIERARCHICAL PROCESS ANALYSIS AND GIS FOR MAPPING POTENTIAL STORMWATER HARVESTING SITES IN A SEMI-ARID CONTEXT: APPLICATION TO THE PROVINCE OF KHÉMISSET, MOROCCO
Mohamed EL MORSY Prof. Dr. Laila AFIA	*Ibnou Zohr University, Morocco*	ADVANCED PHYSICO-CHEMICAL TREATMENT OF AGRO-FOOD INDUSTRY EFFLUENTS
Dr. Soufiane ZIANI Dr. Driss KHATTACH Anass AYNAOU	*Mohammed 1st University, Morocco*	IMPACT OF CLIMATE CHANGE ON GROUNDWATER STORAGE VARIATIONS IN THE JEL AQUIFER (EASTERN MOROCCO): CONTRIBUTIONS OF IN SITU DATA AND REMOTE SENSING
Ipu Michael OGWUMA Jonathan A. OGWUCHE Edache Ernest EKOJA Idikwu Onwe UGBEM	*Joseph Sarwuan Tarka University, Nigeria* *Benue State University, Nigeria*	COMPARATIVE ASSESSMENT OF WATER QUALITY FROM BOREHOLES AND SHALLOW WELLS IN DIFFERENT LAND USE AREAS IN MAKURDI METROPOLIS, BENUE STATE, NIGERIA
EL-BOUZIDI Ahmed ELABBARI Chaimaa ACHIOU Brahim BEQQOUR Dounia ABROUKI Younes BEN AKKA Latifa LOUKILI Hayat	*Université Ibn Tofaïl, Morocco* *University of Hassan II - Casablanca, Morocco*	RARE EARTH ELEMENTS IN WATERBERG COALFIELD: MINERALOGY, EXTRACTION, AND ICP-MS ANALYSIS OF RUN-OF-MINE AND DISCARD COAL

21.01.2026, Wednesday, Online Session-1, Hall-1

Ankara Local Time: 10:00-12:00

Meeting ID: 848 5448 4368 / Passcode: 151515

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HEAD OF SESSION: Asst. Prof. Ramazan OKUDUM		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Şirin Dilan GÜLEL Prof. Dr. Turan BİNİCİ	*Harran University, Türkiye*	EVALUATION OF THE CONTRACT FARMING MODEL BY TOMATO PRODUCERS IN THE SIVEREK DISTRICT OF ŞANLIURFA: OPPORTUNITIES, PROBLEMS, AND SATISFACTION LEVELS
Asst. Prof. Ramazan OKUDUM	*Van Yuzuncu Yil University, Türkiye*	THE PRINCIPLES OF NON-REPRESENTATIONAL THEORY AND PARADIGM SHIFT
Emre Can KUYTU Murat KÖSE	*Bursa Technical University, Türkiye*	ORKÖY APPLICATIONS IN THE SOCIO-ECONOMIC DEVELOPMENT OF FOREST VILLAGES: THE EXAMPLE OF AFYONKARAHİSAR SANDIKLI FOREST ENTERPRISE DIRECTORATE
Nurettin AYDEMİR Dr. Res. Asst. Engin TAKIL Prof. Dr. Nihal KAYAN	*Eskişehir Osmangazi University, Türkiye*	EFFECTS OF DIFFERENT AMINO ACIDS APPLICATIONS ON MORPHOLOGICAL CHARACTERISTICS AND YIELD IN BEAN (PHASEOLUS VULGARIS L.)
Baran ÖNAL Asst. Prof. Tolga AYSAL	*Tekirdağ Namık Kemal University, Türkiye*	POPULATION DYNAMICS AND INFESTATION RATE OF CYDIA POMONELLA (L.) IN APPLE ORCHARDS IN THE DISTRICTS OF ÇORLU AND MARMARAEREĞLİSİ, TEKİRDAĞ PROVINCE
Tolga SÜNTER Asst. Prof. Tolga AYSAL	*Zeytursan Food Industry and Trade Inc., Türkiye* *Tekirdağ Namık Kemal University, Türkiye*	COCCINELLIDAE FAUNA IN AGRICULTURAL AND NON-AGRICULTURAL AREAS IN TEKİRDAĞ PROVINCE
Esma BEKDİKLİ Assoc. Prof. Şenay KARABIYIK Assoc. Prof. Mehmet Ali SARIDAŞ	*Çukurova University, Türkiye*	EFFECT OF PUTRESCINE APPLICATION ON MISSHAPED FRUIT FORMATION RATE IN STRAWBERRIES
Esma BEKDİKLİ Yaren Hüsne CİRİTCİ Assoc. Prof. Şenay KARABIYIK Assoc. Prof. Mehmet Ali SARIDAŞ	*Çukurova University, Türkiye*	EFFECT OF POLLEN STORAGE ON POLLEN QUALITY IN STRAWBERRY

21.01.2026, Wednesday, Online Session-1, Hall-2

Ankara Local Time: 10:00-12:00

Meeting ID: 848 5448 4368 / Passcode: 151515

https://us02web.zoom.us/j/84854484368?pwd=6ewc2566Xg45e7ScRJ2KcLUMabllNP.1

HEAD OF SESSION: Prof. Dr. Gulcin BEKER AKBULUT		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Hatice AKTUĞ Prof. Dr. Gulcin BEKER AKBULUT	*Malatya Turgut Ozal University, Türkiye*	EFFECTS OF STRIGOLACTONE APPLICATION ON THE PROSULFOCARB EXPOSED (TRITICUM AESTIVUM L.) BEREKET WHEAT VARIETY
Lect. Dr. Adem DEMİR	*Recep Tayyip Erdoğan University, Türkiye*	INVESTIGATION OF THE ANTIOXIDANT, ANTI-INFLAMMATORY, AND ENZYME INHIBITION CAPACITIES OF ARONIA MELANOCARPA FRUIT EXTRACT
Başak YERLİKHAN Mine KUÇAK Cem ÖZEL Sevil YÜCEL	*Yıldız Teknik University, Türkiye*	INVESTIGATION OF THE EFFECT OF THE BIOACTIVE GLASS–MIR-3613-3P COMPLEX ON ONCOGENIC ACTIVITY IN BREAST CANCER
Selda ERSOY Assoc. Prof. Berna KAYA UĞUR Osman BÜYÜKÇELEBİ Asst. Prof. Ahmet Şenol UYAR Prof. Dr. Ömer BAYRAK Prof. Dr. İrfan Veysel DÜZEN	*Gaziantep University, Türkiye*	COMPARISON OF THE EFFECTS OF SEVOFLURANE ANESTHESIA AND TOTAL INTRAVENOUS ANESTHESIA WITH PROPOFOL ON VENTRICULAR REPOLARIZATION PARAMETERS IN GERIATRIC PATIENTS UNDERGOING UROLOGIC SURGERY

21.01.2026, Wednesday, Online Session-1, Hall-3

Ankara Local Time: 10:00-12:00

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https://us02web.zoom.us/j/84854484368?pwd=6ewc2566Xg45e7ScRJ2KcLUMabllNP.1

HEAD OF SESSION: Asst. Prof. Emre GÖKÇELİ		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Asst. Prof. Emre GÖKÇELİ	*Kutahya Dumlupinar University, Türkiye*	THE IMPACT OF EXCHANGE RATE VOLATILITY ON ECONOMIC GROWTH AND OTHER MACROECONOMIC INDICATORS: THE CASE OF ARGENTINA
LAMSIT Manal	*Altınbaş University, Türkiye*	FORECASTING THE DEMAND FOR ELECTRIC VEHICLES IN TURKEY AND MOROCCO
Prof. Dr. Mehmet KARAGÜL Zeynep Sare YARAŞ	*Burdur Mehmet Akif Ersoy University, Türkiye*	CONTEMPORARY ECONOMIC PROBLEMS AND THE VALUES OF THE AHI TRADITION
Yeşim ÇELİKKOL Prof. Dr. Serdar BOZKURT	*Yildiz Technical University, Türkiye*	A MODEL OF THE ROLE OF ORGANIZATIONAL IDENTIFICATION IN THE EFFECT OF HUMAN RESOURCES PRACTICES ON TURNOVER INTENTION
Esin AKSOY Prof. Dr. Yunus AÇCI	*Iskenderun Technical University, Türkiye*	THE USE OF DIGITAL TECHNOLOGIES IN GREEN LOGISTICS FROM A SUSTAINABLE DEVELOPMENT PERSPECTIVE
Kenan NOVRUZOV	*Baku State University, Azerbaijan*	AUGUST 8 – WASHINGTON AGREEMENTS IN THE WORLD MEDIA
Assoc. Prof. Dr. Maya Zahir HEYDAROVA Assoc. Prof. Dr. Elnarə MƏMMƏDOVA	*Azerbaijan State Academy of Physical Education and Sport, Azerbaijan*	THE NECESSITY OF A DIGITAL APPROACH TO PHYSICAL EDUCATION IN GENERAL EDUCATION SCHOOLS

21.01.2026, Wednesday, Online Session-1, Hall-4

Ankara Local Time: 10:00-12:00

Meeting ID: 848 5448 4368 / Passcode: 151515

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HEAD OF SESSION: Prof. Dr. El Mahdi BOUABDALLI		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Prof. Dr. El Mahdi BOUABDALLI Mohamed El JOUAD Samira TOUHTOUH Ilyass El KADMIRI Nathalie GAUMER Mostapha SINITI Abdelowahed HAJJAJI	*Sidi Mohamed Ben Abdellah University, Morocco* *Université d'Angers, France* *Chouaib Doukkali University, Morocco*	TAILORING THE STRUCTURAL, PHYSICOCHEMICAL, OPTICAL, THERMAL, AND PHOTOLUMINESCENT PROPERTIES OF EUROPIUM DOPED STRONTIUM PHOSPHATE GLASSES SYNTHESIZED VIA MELT-QUENCHING FOR PHOTONIC AND PHOTOVOLTAIC APPLICATIONS
Prof. Dr. El Mahdi BOUABDALLI Mohamed El JOUAD Samira TOUHTOUH Nathalie GAUMER Abdelowahed HAJJAJI	*Chouaib Doukkali University, Morocco* *Université d'Angers, France*	INFLUENCE OF YTTRIUM DOPING ON THE STRUCTURAL, PHYSICAL, AND OPTICAL PROPERTIES OF SOL–GEL SILICOPHOSPHATE GLASSES FOR ENHANCED PHOTONIC APPLICATIONS
Prof. Dr. El Mahdi BOUABDALLI Mohamed El JOUAD Samira TOUHTOUH Nathalie GAUMER El Kebir HLIL Abdelowahed HAJJAJI	*Chouaib Doukkali University, Morocco* *Université d'Angers, France* *Université Grenoble Alpes, France*	SYNERGISTIC MULTIPHYSICAL AND JUDD–OFELT ANALYSIS OF EUROPIUM-DOPED SILICOPHOSPHATE SOL–GEL GLASSES FOR OPTIMIZED RED EMISSION IN PHOTONIC APPLICATIONS
Prof. Dr. El Mahdi BOUABDALLI Mohamed El JOUAD Samira TOUHTOUH Nathalie GAUMER Abdelowahed HAJJAJI	*Université d'Angers, France* *Chouaib Doukkali University, Morocco*	ENGINEERED ERBIUM-DOPED SILICOPHOSPHATE GLASSES: NOVEL SYNTHESIS AND TAILORED OPTICAL PROPERTIES FOR HIGH-PERFORMANCE PHOTONIC APPLICATIONS
Gbemisola Morolayo ADEGBUYI Tosin Abimbola AYODELE Temitope Aramide ADARAMOLA	*Federal College of Education (Special), Nigeria*	ACADEMIC LIBRARIES, SOCIAL RESPONSIBILITY, AND COMMUNITY-BASED EDUCATION IN THE 21ST CENTURY
Mohammed OUALI Dr. Mahfoud TOUHARI	*Khemis Miliana University, Algeria*	SEISMIC PERFORMANCE EVALUATION OF MULTI-STORY REINFORCED CONCRETE FRAMES WITH VARYING PLAN ASPECT RATIOS USING PUSHOVER ANALYSIS

21.01.2026, Wednesday, Online Session-1, Hall-5

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HEAD OF SESSION: Imane AHNOUZ		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Nabil Ahmed KHAN Rehan KHAN Mohd KHALID Mohammad PARVEJ Ahmad Yusuf ADHAMI	*IIT Hyderabad, India* *Aligarh Muslim University, India*	HYBRID MACHINE LEARNING–DRIVEN FORECASTING AND NEUTROSOPHIC OPTIMIZATION OF CRYPTOCURRENCY MARKETS
Sindi KARMILA Putri MARSHELLA Divva Zalfa Nazwa KUSUMA Meisy Nabila Mutia SARI	*University of Lampung, Indonesia*	GAMIFICATION AND DIGITAL REWARD APPROACH IN TRANSFORMING COMPLIANT TAXPAYER PROGRAMS FOR OPTIMIZING INCOME TAX REVENUE IN INDONESIA
Md. Shahporan RIMON Dr. Sajal Chandra BANIK Dr. Jamal Uddin AHAMED	*Chittagong University of Engineering & Technology (CUET), Bangladesh*	ADDITIVE MANUFACTURING IN BIOMEDICAL ENGINEERING: A VALIDATED WORKFLOW FOR CUSTOM PROSTHETICS AND MRI/CT-BASED ANATOMICAL MODELING
Samar Jamal Hassan MAHMOUD Prof. Ts. Dr. Noor Maizura Binti Mohamad NOOR Assoc. Prof. Ts. Dr. Zuriana Abu Bakar BAKAR	*Universiti Malaysia Terengganu, Malaysia*	USER-CENTERED ADAPTIVE USABILITY MODEL FOR ACCESSIBLE E-TRANSPORTATION PLATFORMS
Imane AHNOUZ	*Mohammed V University in Rabat, Morocco*	ADVANCED MULTI-TECHNIQUE METHODS FOR MIXED RADIATION SEPARATION
Akshay R. Anand MAHENDRAN	*Vellore Institute of Technology, India*	INTERPRETABLE DEEP LEARNING WITH NEURO-SYMBOLIC AI FOR EARLY DETECTION OF RAPID EYE MOVEMENT SLEEP BEHAVIOR DISORDER
Md Saiful ISLAM	*Zhongyuan University of Technology, China*	SENTIMENT ANALYSIS OF PUBLIC OPINION TEXTS BASED ON LARGE LANGUAGE MODEL
Olaniyi Habib ALIU Joy Oluwabukola OLAYIWOLA	*Federal Polytechnic Ilaro, Nigeria*	PREDICTING EXTREME EVENTS CAUSED BY CLIMATE CHANGE IN NIGERIA USING MACHINE LEARNING AND REANALYSIS OF CLIMATE DATA

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Ankara Local Time: 10:00-12:00

Meeting ID: 848 5448 4368 / Passcode: 151515

https://us02web.zoom.us/j/84854484368?pwd=6ewc2566Xg45e7ScRJ2KcLUMabllNP.1

HEAD OF SESSION: Agbo Onyemowo FELICIA		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Fedwa BEGHDADI El-Hadj DRICHE	*Hassiba Benbouali University of Chlef, Algeria*	SAHARAN ACTINOMYCETES AS PROMISING AGENTS FOR SUSTAINABLE CROP PROTECTION
Devesh R. Rohit R. Akash R.	*RMK Engineering College, India*	APPLICATIONS OF MATRICES AND CALCULUS IN SCIENTIFIC AND ENGINEERING PROBLEMS
M. Y. ABDULLAHI B. I. BALOGUN J. I. IBEH H. M. YAKUBU Y. U. OLADIMEJI	*Federal University of Education, Nigeria* *Ahmadu Bello University, Nigeria* *Forestry Research Institute of Nigeria, Nigeria*	EFFECT OF PIGEON-PEA (CAJANUS CAJAN L.) MIXED CROPPING ON FARMER'S YIELD IN SAMARU-KATAF AGRICULTURAL ZONE, KADUNA STATE, NIGERIA
A. BHAVANA B B. DEEPIKA R C. DIVYADHARSHINI R D. KARTHIKA H	*RMK Engineering College, India*	MATRIX APPROACH TO ELECTRICAL CIRCUIT ANALYSIS
Ningsih Diliyanti BENU	*Universitas Kristen Indonesia, Indonesia*	CHRISTIAN RELIGIOUS EDUCATION AND ADOLESCENT PROTECTION: A LITERATURE REVIEW ON SEXUAL VIOLENCE AGAINST ADOLESCENTS IN KUPANG CITY, INDONESIA
Aliyu HASSAN	*Air Force Institute of Technology, Nigeria*	ARTIFICIAL INTELLIGENCE–DRIVEN TRANSFORMATION OF THE BUILT ENVIRONMENT: ADVANCED APPLICATIONS AND PERFORMANCE IMPLICATIONS FOR THE CONSTRUCTION INDUSTRY
Anene Amaka ANULIKA John FRIDAY Agbo Onyemowo FELICIA	*University of Jos, Nigeria*	EFFECTS OF JIG-SAW IV STRATEGY ON SENIOR SECONDARY TWO STUDENTS' ATTITUDE IN BIOLOGY IN JOS NORTH, PLATEAU STATE, NIGERIA
Agbefa Maria ABAH Jimwan Christiana SAMUEL Agbo Onyemowo FELICIA	*University of Jos, Nigeria*	EFFECT OF HIERARCHICAL-CONCEPT-MAPPING STRATEGY ON SENIOR SECONDARY TWO STUDENTS' MOTIVATION AND GENDER IN BIOLOGY IN JOS NORTH, PLATEAU STATE, NIGERIA

21.01.2026, Wednesday, Online Session-2, Hall-1

Ankara Local Time: 12:30-14:30

Meeting ID: 848 5448 4368 / Passcode: 151515

https://us02web.zoom.us/j/84854484368?pwd=6ewc2566Xg45e7ScRJ2KcLUMabllNP.1

HEAD OF SESSION: Dr. Ferhat ATIK		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Dr. Ferhat ATIK	*Girne American University, KKTC*	SEMIOTIC DECONSTRUCTION IN COMMUNICATION: THE POLITICS OF SIGNS AND MEANING
Dr. Ferhat ATIK Rümeysa KELEŞ	*Girne American University, KKTC* *Ankara Medipol University, Türkiye*	KAREN HORNEY AND DIGITAL NEUROSES: ANXIETY, APPROVAL, AND IDENTITY IN SOCIAL MEDIA
Prof. Dr. Fatma Gülruh GÜRBÜZ Lec. Dr. Sema GÜNDÜZ	*Fatih Sultan Mehmet Vakif University, Türkiye* *Marmara University, Türkiye*	THE EFFECT OF SOCIAL MEDIA AND WORK ENGAGEMENT ON INNOVATIVE WORK BEHAVIOUR OF ACADEMIC STAFF IN HIGHER EDUCATION INSTITUTIONS
Emin KIRMIZISAÇ	*Toros University, Türkiye*	THE STRATEGIC IMPORTANCE OF INFORMATION IN GLOBAL COMPETITION FROM THE RESOURCE-BASED APPROACH PERSPECTIVE
Asst. Prof. Mevlüde CAN	*Recep Tayyip Erdoğan University, Türkiye*	THE USE OF RHETORICAL EXPRESSION IN PUBLIC RELATIONS: AN EXAMINATION OF RHETORICAL ELEMENTS IN BANKS' SUSTAINABILITY ADVERTISEMENTS
Dr. Abdurrahman TURSUN	*Ankara University, Türkiye*	THE INVISIBILITY OF LIMITED REAL RIGHTS IN REAL ESTATE VALUATION REPORTS: A SYSTEMIC PROBLEM AREA
Lect. Dr. İbrahim YILDIZ	*İstanbul Medeniyet University, Türkiye*	THE DIMENSIONS OF HATE SPEECH: THE CASE OF THE STREET ANIMALS LAW DEBATE

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Ankara Local Time: 12:30-14:30

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HEAD OF SESSION: Asst. Prof. Tanju TOKA		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Lec. Dr. Onur TOPRAK	*Erciyes University, Türkiye*	REVITALIZING ARCHAEOLOGICAL SITES FOR MUSEUM KIOSKS AND DISPLAYS USING AI-POWERED VISUALIZATION TECHNIQUES: THE KANISH KARUM EXAMPLE
Assoc. Prof. Özlem KUM	*Tokat Gaziosmanpaşa University, Türkiye*	THE VISUAL LANGUAGE OF METAPHOR: AN ANALYSIS OF NOMA BAR'S MINIMALIST ILLUSTRATIONS
Assist. Prof. Devrim KARAKUŞ	*Mimar Sinan Fine Arts University, Türkiye*	THE AYATOLLAH SÜMER EXAMPLE: A MODEL STUDY ON THE ESTABLISHMENT AND OPERATION OF FRESCO WORKSHOPS IN FINE ARTS UNIVERSITIES
Prof. Dr. Meltem DÜZBASTILAR Saliha Melek ÖZCAN	*Trabzon University, Türkiye*	AN ANALYSIS OF A WORK FOR VIOLIN EDUCATION
Prof. Dr. Meltem DÜZBASTILAR Saliha Melek ÖZCAN	*Trabzon University, Türkiye*	AN ANALYSIS OF A VIOLIN ETUDE FOR VIOLIN EDUCATION
Prof. Dr. Tamilla BAGIROVA	*Azerbaijan State Pedagogical University, Azerbaijan*	IN OTHER ART FORMS, MUSIC SERVES AS AN ETHICAL SYMBOL
Asst. Prof. Tanju TOKA	*Erzurum Technical University, Türkiye*	THE GENDER-NEUTRALITY OF REASON AND SOCIAL JUSTICE: IBN RUSHD'S PHILOSOPHICAL APPROACH TO GENDER EQUALITY
Asst. Prof. Gülüse AKSOY	*Bartin University, Türkiye*	ON THE TYPES AND CHARACTERISTICS OF INTERACTION
Asst. Prof. Gülüse AKSOY	*Bartin University, Türkiye*	ON THE METAPHYSICAL WORLD WITHIN US

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HEAD OF SESSION: Lect. Eda BALCI		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Lec. Mert EKER İzel KOYUNCUOĞLU EKER	*Acibadem Mehmet Ali Aydinlar University, Türkiye* *Istanbul Gelisim University, Türkiye*	PAIRING TRADITIONAL TURKISH FERMENTED DRINKS WITH FOOD; A COMPILATION ON FOOD PAIRING
Bilgehan KILIÇHAN Assoc. Prof. Dr. Reha KILIÇHAN	*Erciyes University, Türkiye* *Kayseri University, Türkiye*	THE ROLE AND IMPORTANCE OF GASTRONOMIC VALUES IN THE NARRATIVES OF TOURIST GUIDES
Eyüp UYANIK Gül Damla KILIÇ	*Siirt University, Türkiye* *Antalya Belek University, Türkiye*	PRESERVATION OF TRADITIONAL RECIPES IN ARTISAN RESTAURANTS IN ANTALYA AND THEIR REFLECTIONS ON GASTRONOMY TOURISM
Lec. Eda BALCI	*Istanbul Beykent University, Türkiye*	VITAMIN D AND OBESITY
Lec. Eda BALCI	*Istanbul Beykent University, Türkiye*	PROBIOTICS AND PREBIOTICS: FUNCTIONAL EFFECTS ON GUT HEALTH
Feride DELİCE Asst. Prof. Elif DEMİRAL	*Kayseri University, Türkiye*	HISTORICAL DEVELOPMENT OF FOOD LOGISTICS AND MODERN METHODS USED TODAY
Esra ACAR Assoc. Prof. Yaşar KARADUMAN Dr. Seda KÜLEN	*Eskişehir Osmangazi University, Türkiye*	CHARACTERIZATION OF CHICKPEA FLOUR AND AQUAFABA OBTAINED BY COLD ATMOSPHERIC PLASMA APPLICATION AND INVESTIGATION OF THEIR EFFECTS ON FINAL PRODUCT AND NUTRITIONAL PROPERTIES OF BREAD

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HEAD OF SESSION: Dr. Farrah DEEBA		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Melik SAMI Khelil SARA Tallal Abdel Karim BOUZIR	*Mohamed Khider Biskra University, Algeria*	PARAMETRIC DESIGN AND PLANNING: NEW FRONTIERS IN ARCHITECTURE AND MULTIDISCIPLINARY STUDIES
Kenza EL KHAIR Madoussou TOURÉ Salaheddine REDOUANE Kenza SLAOUI Houda BENRAHMA Abdelhamid BARAKAT	*Institut Pasteur du Maroc, Morocco* *Mohammed VI University of Sciences and Health (UM6SS), Morocco*	COMPUTATIONAL STUDY OF DELETERIOUS MISSENSE SNPS IN THE USH1G GENE IMPLICATED IN USHER SYNDROME
Najia MOHAMMADI Elham VAHIDI	*Ahlul-Bayt International University, Tehran, Iran*	WOMEN'S ACCESS TO FINANCIAL AND CREDIT RESOURCES IN DEVELOPING COUNTRIES
Dr. Farrah DEEBA Dr. Muhammad ADIL Prof. Dr. Anas Sarwar QURESHI	*University of Agriculture Faisalabad, Pakistan* *Riphah International University, Pakistan*	ETHNOVETERINARY APPROACH FOR THE CONTROL OF SUBCLINICAL MASTITIS IN COWS
Muhammad Muzammil NAZIR Zubair AHMED Asma ASHRAF	*Government College University Faisalabad, Pakistan*	TOXICITY ASSESSMENT OF HELICTERES ISORA WITH BIOLOGICAL ACTIVITIES POTENTIAL
Prof. Dr. Sanae HANINE	*Hassan I University, Morocco*	THE HUMAN BRAIN: THE NEW BATTLEGROUND OF COGNITIVE WARFARE
Najiba MOHAMMADI Dr. Elham VAHIDI	*AllahBayt International University, Iran*	EMOTIONAL INTELLIGENCE AND ITS RELATIONSHIP WITH MENTAL HEALTH
Abira NADIR Muhammad Ahmad SHAKIR Muhammad Adnan Sabir MUGHAL Asghar ABBAS Noor ZAHRA	*MNS University of Agriculture Multan, Pakistan* *Shahida Islam Medical and Dental Complex, Pakistan*	BURDEN AND DETERMINANTS OF MATERNAL AND CHILD HEALTH IN PAKISTAN

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https://us02web.zoom.us/j/84854484368?pwd=6ewc2566Xg45e7ScRJ2KcLUMabllNP.1

HEAD OF SESSION: Assoc. Prof. Dr. Zehra ESKİMEZ		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Assoc. Prof. Dr. Sevil Pamuk CEBECI Hanife KÜÇÜK	*Eskisehir Osmangazi University, Türkiye*	THE DEVELOPMENT OF THE CONCEPT OF WOUND-RELATED WELL-BEING IN NURSING LITERATURE: A CONCEPTUAL ANALYSIS BASED ON RODGERS' APPROACH
Mehtap TOPRAK Assoc. Prof. Dr. Zehra ESKİMEZ	*Seyhan State Hospital, Türkiye* *Cukurova University, Türkiye*	THE EFFECT OF NURSES' ATTITUDES TOWARD SPECIALIZATION ON THE QUALITY OF CARE THEY PROVIDE
Ayça ÜNNÜ Assoc. Prof. Dr. Yeliz KAYA	*Eskisehir Osmangazi University, Türkiye*	ARE WE READY FOR THE MENOPAUSE?
Prof. Dr. Özlem OVAYOLU Nur Dilara GÖKÇE	*Gaziantep University, Türkiye*	COMPLEMENTARY METHODS IN FATIGUE MANAGEMENT
Prof. Dr. Özlem OVAYOLU Nur Dilara GÖKÇE	*Gaziantep University, Türkiye*	NURSING APPROACHES TO THE MANAGEMENT OF IRON DEFICIENCY ANEMIA
Büşra ÇARK Asst. Prof. Seyhan ÇANKAYA	*Selcuk University, Türkiye*	THE RELATIONSHIP BETWEEN THE MATERNAL GENITAL TRACT MICROBIOME AND THE HEALTH OF WOMEN, THE FETUS, AND THE NEWBORN
Res. Asst. Hatice Günnur ALTUNSAYAR	*Ankara Yıldırım Beyazıt University, Türkiye*	THE EFFECT OF SEQUENTIAL USE OF FUNCTIONAL APPLIANCES ON SKELETAL GROWTH IN A CLASS III PATIENT: A CASE REPORT WITH CEPHALOMETRIC ANALYSIS
Assoc. Prof. Dr. Bilge Kaan TEKELİOĞLU	*Çukurova University, Türkiye*	BASIC STRUCTURAL AND MORPHOLOGICAL CHARACTERISTICS OF VIRUSES

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HEAD OF SESSION: Adrian LOICHITA		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Muhammad Ijaz KHALID Muhammad Yasin NAZ Shazia SHUKRULLAH	*University of Agriculture Faisalabad, Pakistan*	ENHANCED ELECTROCHEMICAL PERFORMANCE OF PRISTINE AND RARE-EARTH-DOPED CU–CO–V TERNARY OXIDE NANOCOMPOSITES FOR HYBRID SUPERCAPACITOR APPLICATIONS
Reda CHAHIR Salma CHAKIR Océane PERTEGAZ Hinde AASSILA Marie Potier-CARTEREAU Naoual OUKKACHE	*Hassan I University, Morocco* *INSERM, France* *Pasteur Institute of Morocco, Morocco*	ION CHANNEL–MODULATING PEPTIDES FROM MOROCCAN SCORPION AND COBRA VENOMS: EXPLORING POTENTIAL ANTI-CANCER EFFECTS
Noureddine HAMMANI Nihal MESMOUDI Khawla AMMOUCH Abdellah MOUSTAGHFIR Hanane ENNAJI Samir IBENMOUSSA Naoual OUKKACHE	*Pasteur Institute of Morocco, Morocco* *Mohammed V University in Rabat, Morocco* *Pasteur Institute of Morocco, Morocco*	LETHALITY AND PATHOPHYSIOLOGICAL EFFECTS OF DABOIA MAURITANICA VENOM FROM MOROCCO: HEMORRHAGIC, EDEMATOUS, AND MYOTOXIC EFFECTS IN MICE
Adrian LOICHITA Izabella PETRE Miruna SAMFIREAG Dacian OROS Nicoleta MIRICA Melinda MITRANOVICI Ion PETRE	*Victor Babes University of Medicine and Pharmacy, Romania* *West University of Timisoara, Romania*	TYPE OF THROMBOPHILIA – A FACTOR THAT INFLUENCES THE CHARACTERISTICS OF NEW-BORN PARAMETERS - RETROSPECTIVE STUDY
Shama PARVEEN Vijay KUMAR Jitendra Kumar SHARMA Vikas VERMA Amarjeet SINGH	*Jamia Hamdard, India* *Apex University Jaipur, India* *Innovative College of Pharmacy, India*	RECENT ADVANCES AND FUTURE PERSPECTIVES ON FLOATING–MUCOADHESIVE FAST-DISSOLVING FILMS: A REVIEW
Elmehdi MAJDI Soufiane ZERRAF Said BELAAOUAD	*Hassan II University of Casablanca, Morocco*	COMBINED EXPERIMENTAL AND THEORETICAL INVESTIGATION OF MELAMINIUM DIHYDROGEN PYROPHOSPHATE: SYNTHESIS, CRYSTAL STRUCTURE, HIRSHFELD SURFACE ANALYSIS, AND REACTIVITY MAPPING
Dr. Sahil CHOUHAN Dr. Anju THAPA	*Amritsar Group of Colleges, India* *Central University of Jammu, India*	THE IMPACT OF ECO-INNOVATION ON GREEN SUPPLY CHAIN EFFICIENCY IN THE AGRICULTURAL SECTOR

21.01.2026, Wednesday, Online Session-2, Hall-7

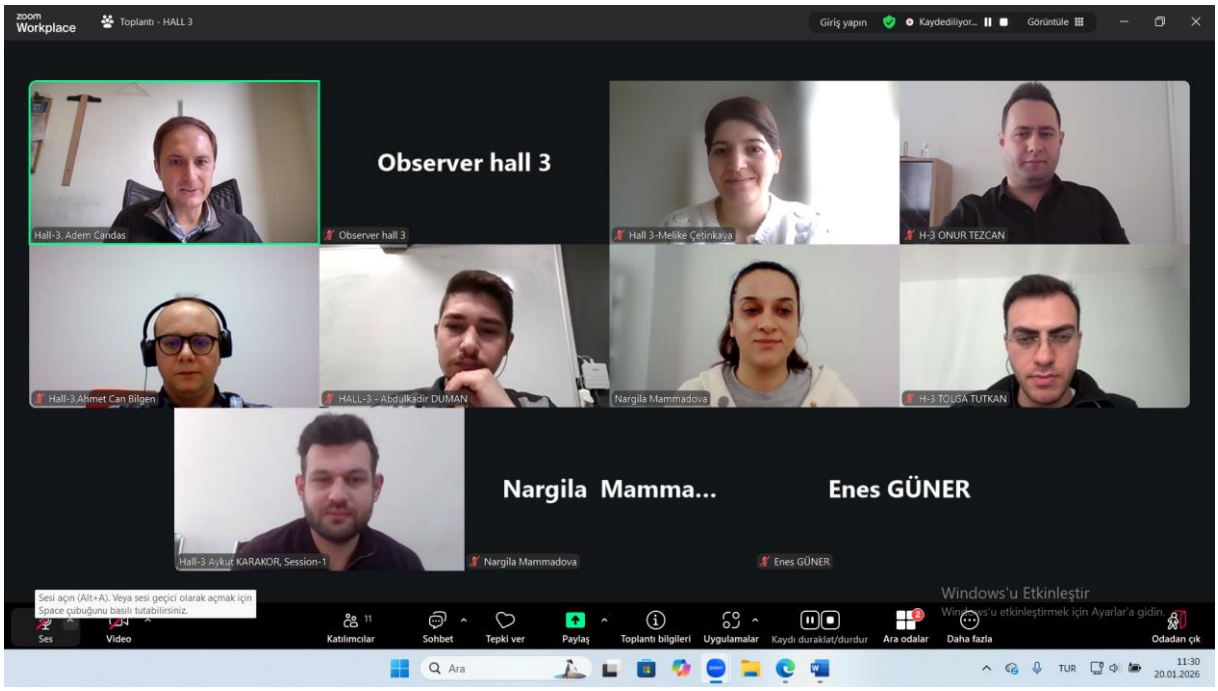
Ankara Local Time: 12:30-14:30

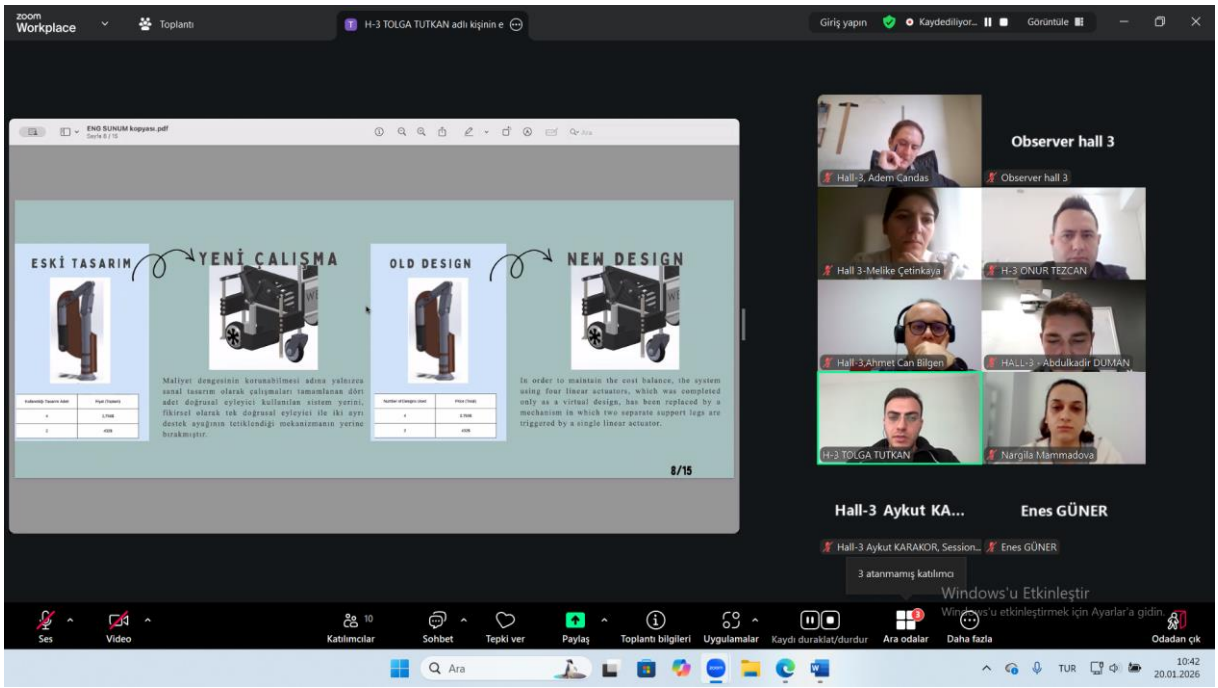
Meeting ID: 848 5448 4368 / Passcode: 151515

https://us02web.zoom.us/j/84854484368?pwd=6ewc2566Xg45e7ScRJ2KcLUMabllNP.1

HEAD OF SESSION: Luis Ángel Sevilla Hernández		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Alfa Mohammed Abdulrahman Mohammed Saba	*Federal Polytechnic Bida, Nigeria*	COMPUTER SOLUTION TO REPLACEMENT MODELS FOR ITEMS THAT FAILS SUDDENLY
Abdeljalil ELMAHDAOUI Lansine DIAKITE Aziz AUHMANI	*University Cadi Ayyad, Morocco*	ANALGESIC EFFECTS OF AQUEOUS LEAF EXTRACT OF MERCURIALIS ANNUA IN MICE
Rajae TRIBAK Hicham SETTI Aziz DKIOUAK Larbi SETTI	*Abdelmalek Essaadi University, Morocco Chouaib Doukkali University, Morocco*	REDUCING MUTUAL COUPLING IN 2.4 GHZ MIMO ANTENNAS USING ORTHOGONAL POLARIZATION DIVERSITY
Luis Ángel Sevilla Hernández	*Universidad Juárez Autónoma de Tabasco, México*	THE IMPACT OF ARTIFICIAL INTELLIGENCE ON INTELLECTUAL PROPERTY AND IMAGE RIGHTS
Ingrid Villegas Hernández Mayrani Vázquez Pérez Dr. Gloria Auristela Hernández Pérez	*Universidad Juárez Autónoma de Tabasco, México*	RIGHTS OF GROUPS IN SITUATIONS OF VULNERABILITY: LIKE PEOPLE WITH DISABILITIES, LGBTI, MIGRANTS, INDIGENOUS PEOPLE, OR PEOPLE DEPRIVED OF LIBERTY
Fabiola Pérez LÓPEZ Martha Carolina Vidal ARELLANO Dr. Gloria Auristela Hernández PÉREZ	*Universidad Juárez Autónoma de Tabasco, México*	RIGHT TO INFORMATION DURING PREGNANCY, CHILDBIRTH AND PUERPERIUM

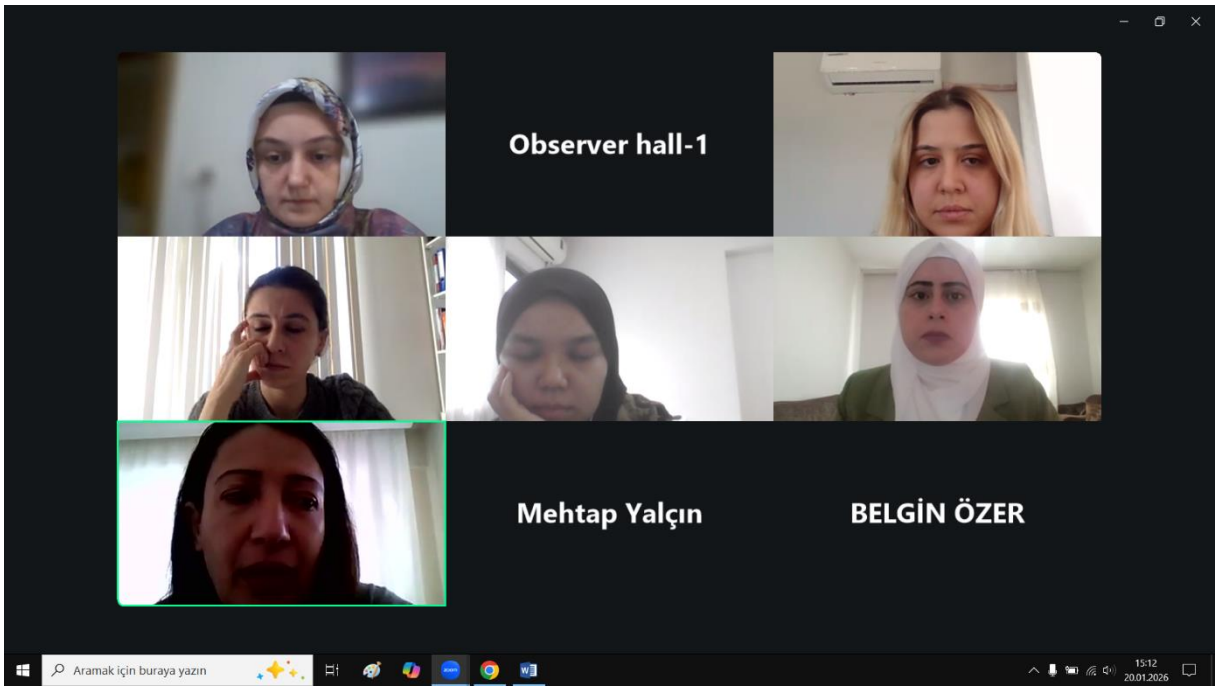
CONFERENCE GALLERY

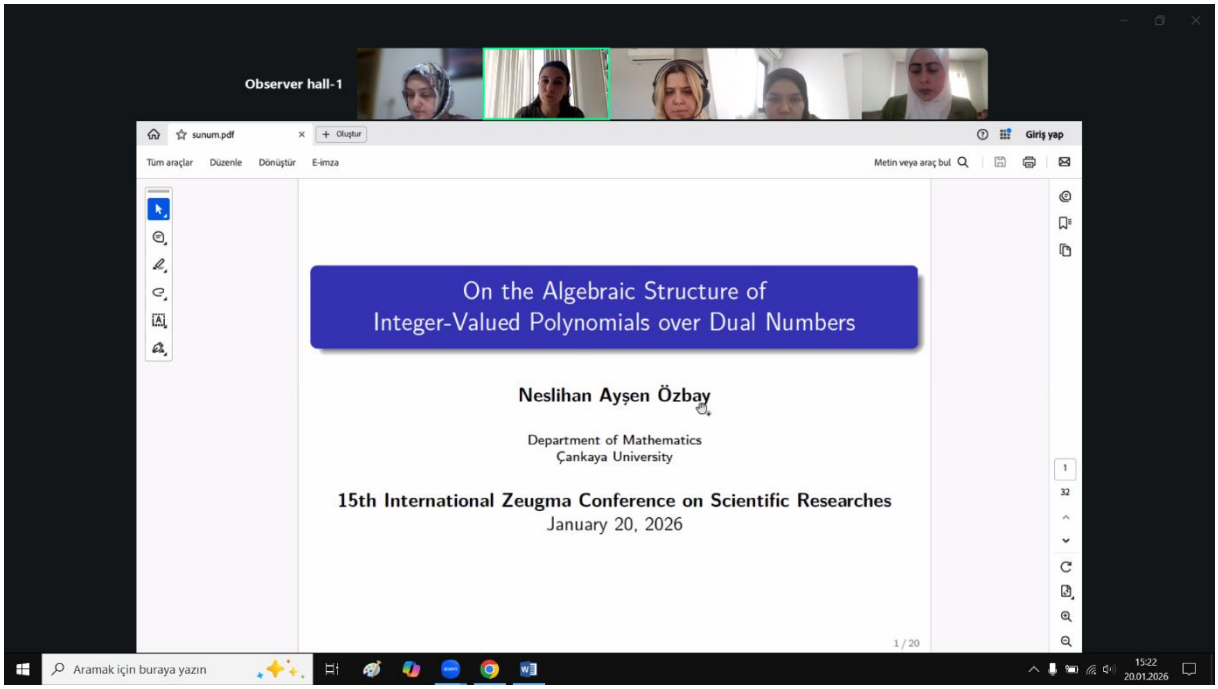




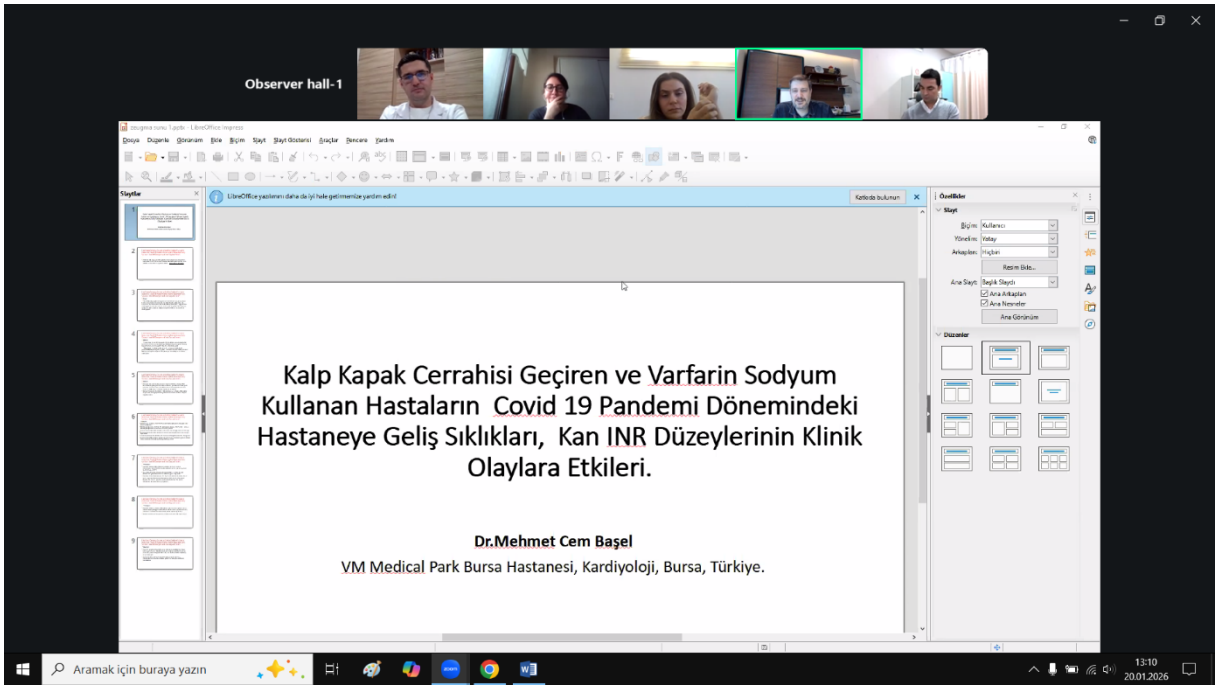
Observer hall-1
Aramak için buraya yazın
11:03
20.01.2026

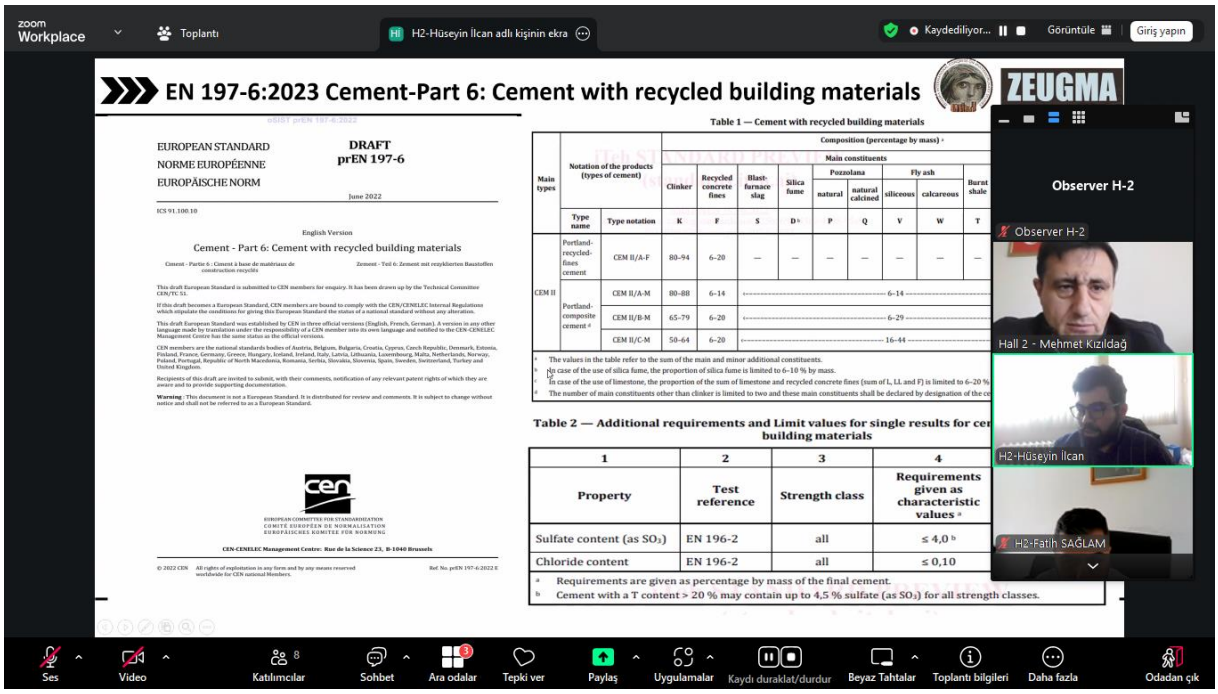
zoom Workplace
Toplantı
Mehmet Ali Bozkurt adlı kişinin ek
Kaydediliyor..
Görüntüle
Observer hall-1
Observer hall-1
Hall 1 - SEDA İLGÜN
Prof.Dr. Özlem Ovayolu
gülsüm
Hilal Benzer hall-1
Mehmet Ali Bozkurt
ZEUGMA
HİPERTANSİYONDA TEDAVİYE UYUM: ETKİLEYEN FAKTÖRLER VE GÜNCEL YAKLAŞIMLAR
Mehmet Ali BOZKURT [1], Prof. Dr. Özlem OVAYOLU [2],
[1] Gaziantep Üniversitesi, Sağlık Bilimleri Enstitüsü, Hemşirelik Ana Bilim Dalı, İç Hastalıkları Hemşireliği Doktora Programı, Gaziantep, Türkiye
[2] Gaziantep Üniversitesi, Sağlık Bilimleri Fakültesi, Hemşirelik Bölümü, Gaziantep, Türkiye
Ses
Video
Katılımcılar
Sohbet
Tepki ver
Paylaş
Uygulamalar
Ara odalar
Kaydı duraklat/durdur
Alt yazıları göster
Toplantı bilgileri
Daha fazla
Odadan çık
Aramak için buraya yazın
10:52
20.01.2026

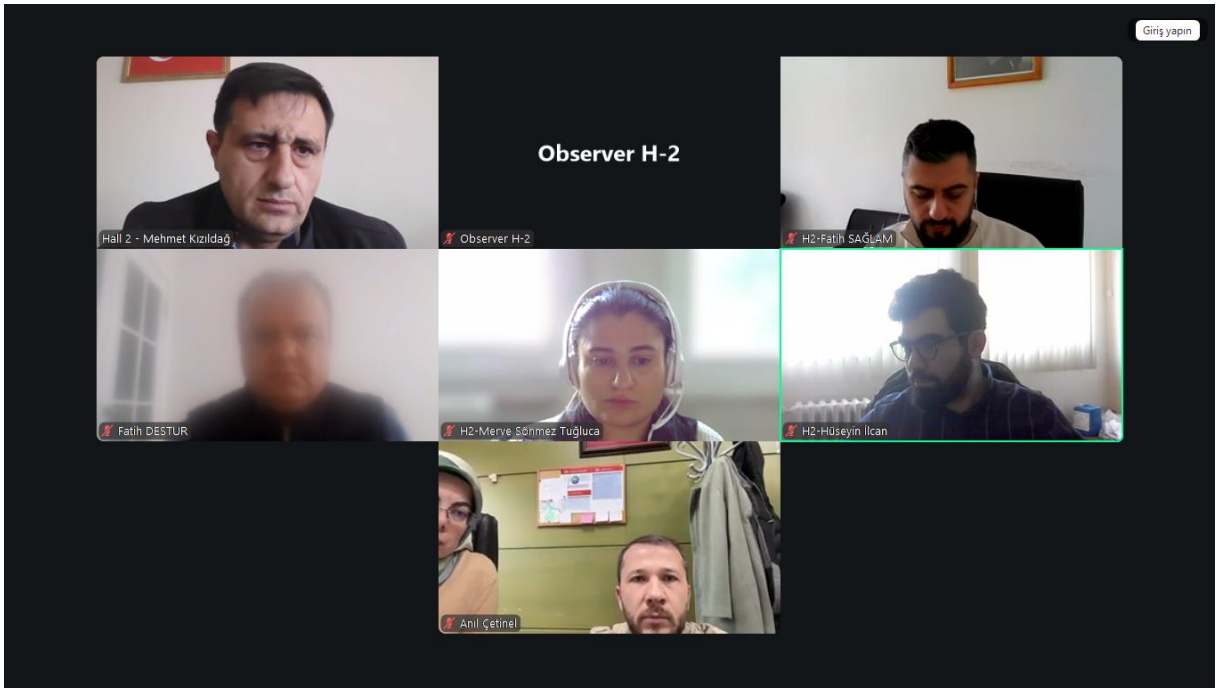

Observer hall-1
Mehtap Yalçın
BELGİN ÖZER
Aramak için buraya yazın
15:12
20.01.2026

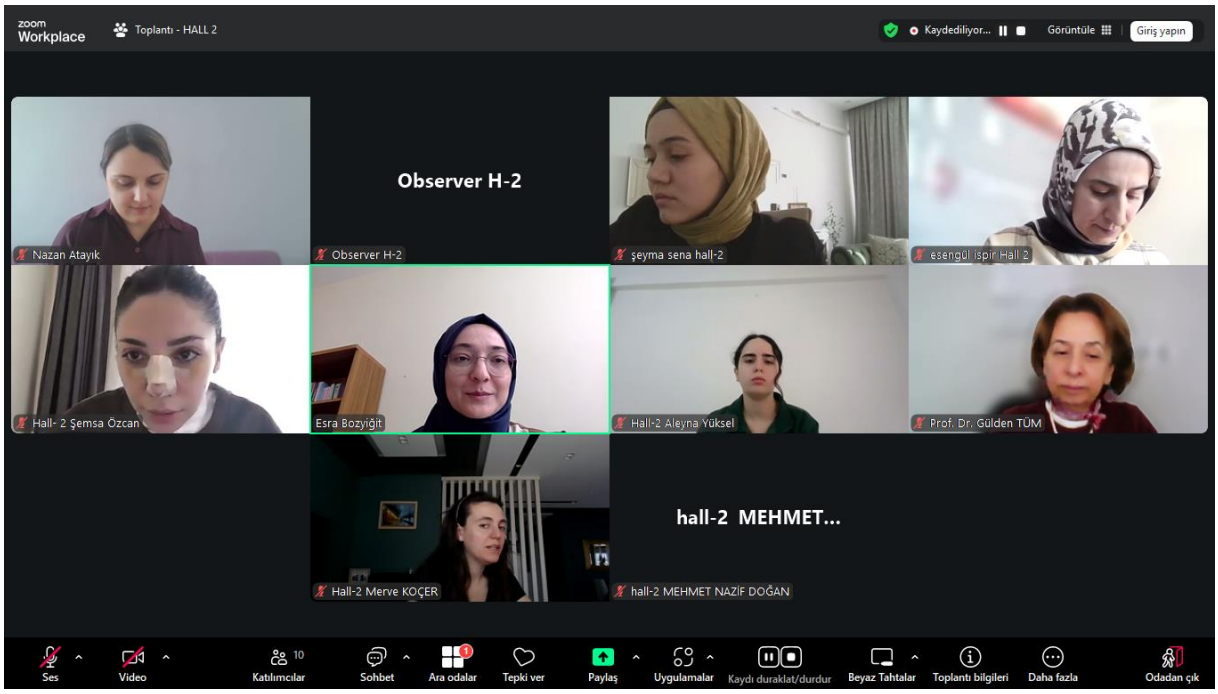

Observer hall-1
sunum.pdf
Oluştur
Giriş yap
Tüm araçlar
Düzenle
Dönüştür
E-imza
Metin veya araç bul
On the Algebraic Structure of
Integer-Valued Polynomials over Dual Numbers
Neslihan Ayşen Özbay
Department of Mathematics
Çankaya University
15th International Zeugma Conference on Scientific Researches
January 20, 2026
1 / 20
Aramak için buraya yazın
15:22
20.01.2026

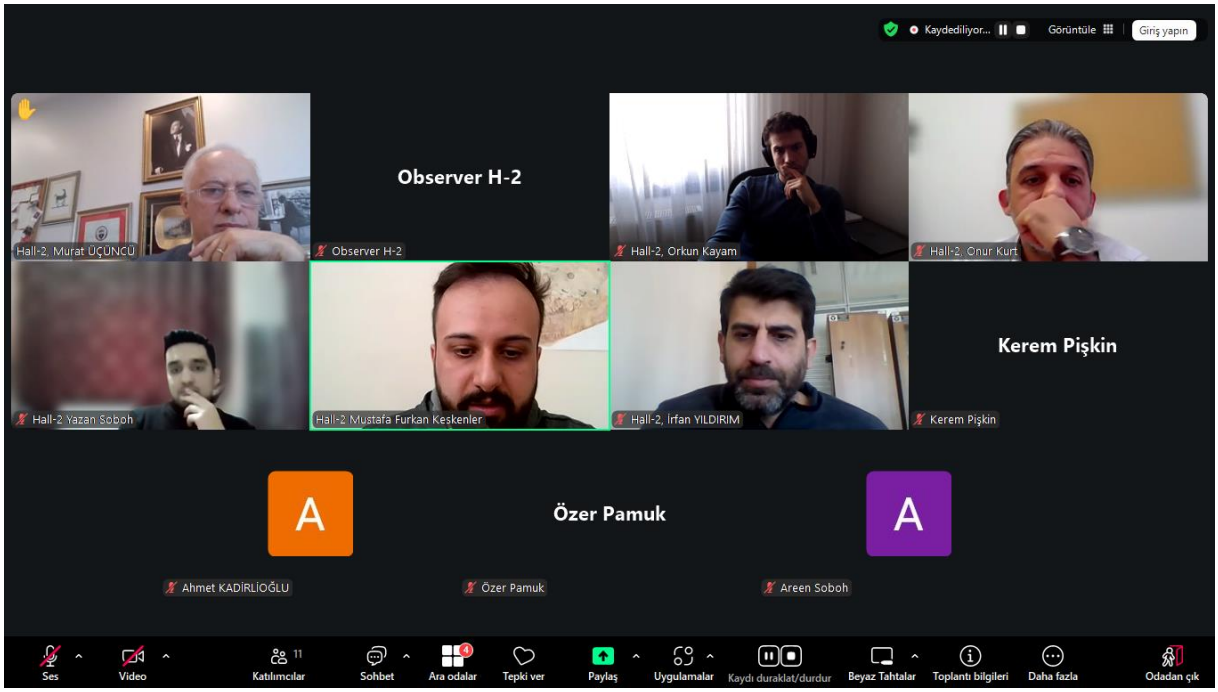
Observer hall-1
Aramak için buraya yazın
12:59
20.01.2026

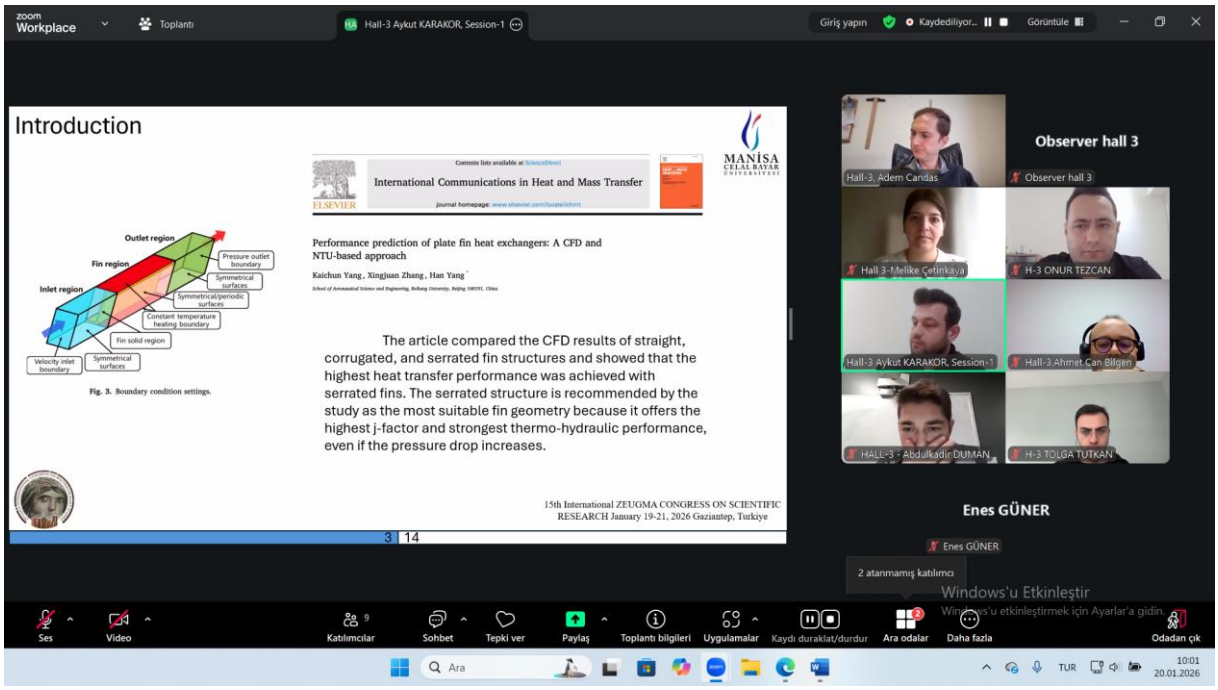

Observer hall-1
Kalp Kapak Cerrahisi Geçiren ve Varfarin Sodyum Kullanan Hastaların Covid 19 Pandemi Dönemindeki Hastaneye Geliş Sıklıkları, Kan INR Düzeylerinin Klinik Olaylara Etkileri.
Dr.Mehmet Cem Başel
VM Medical Park Bursa Hastanesi, Kardiyoloji, Bursa, Türkiye.
Aramak için buraya yazın
13:10
20.01.2026

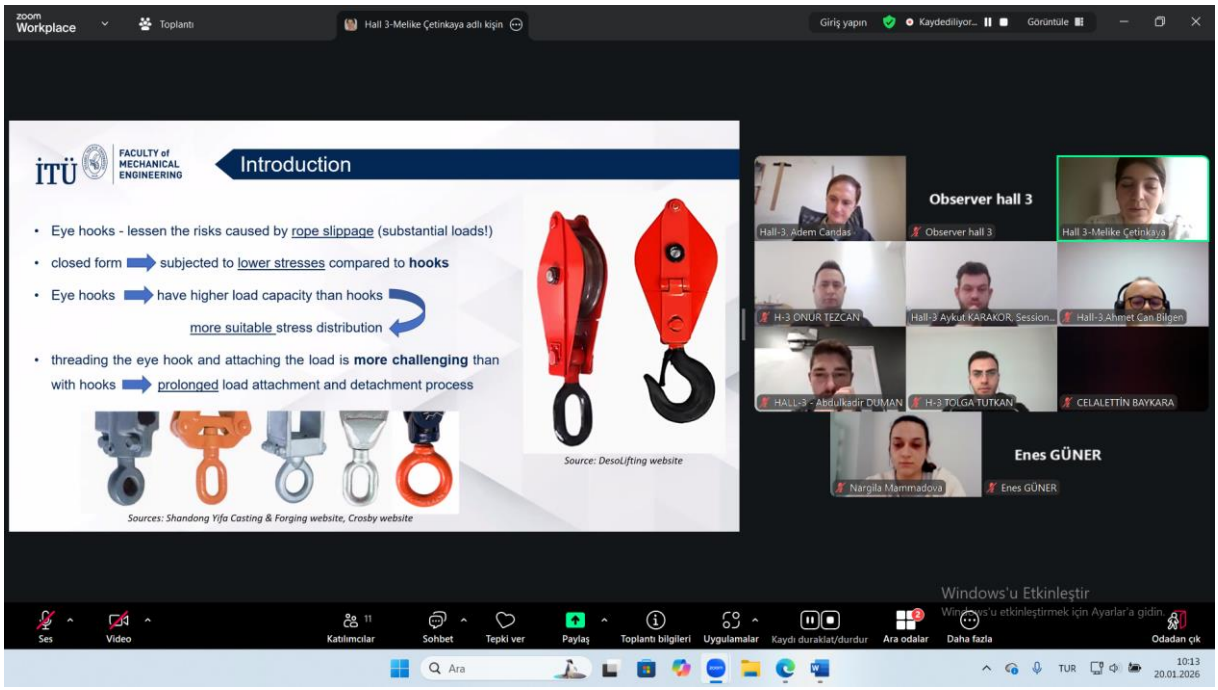

zoom Workplace
Toplantı
H2-Hüseyin İlcan adlı kişinin ekra
Kaydediliyor...
Görüntüle
Giriş yapın
EN 197-6:2023 Cement-Part 6: Cement with recycled building materials
ZEUGMA
EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM
DRAFT
prEN 197-6
June 2022
English Version
Cement - Part 6: Cement with recycled building materials
Table 1 — Cement with recycled building materials
Table 2 — Additional requirements and Limit values for single results for cer
building materials
Property
Test reference
Strength class
Requirements given as characteristic values
Sulfate content (as SO3)
EN 196-2
all
≤ 4,0
Chloride content
EN 196-2
all
≤ 0,10
Requirements are given as percentage by mass of the final cement.
Cement with a T content > 20 % may contain up to 4,5 % sulfate (as SO3) for all strength classes.
Observer H-2
Hall 2 - Mehmet Kızıldağ
H2-Hüseyin İlcan
H2-Fatih SAĞLAM
Ses
Video
Katılımcılar
Sohbet
Ara odalar
Tepki ver
Paylaş
Uygulamalar
Kaydı duraklat/durdur
Beyaz Tahtalar
Toplantı bilgileri
Daha fazla
Odadan çık

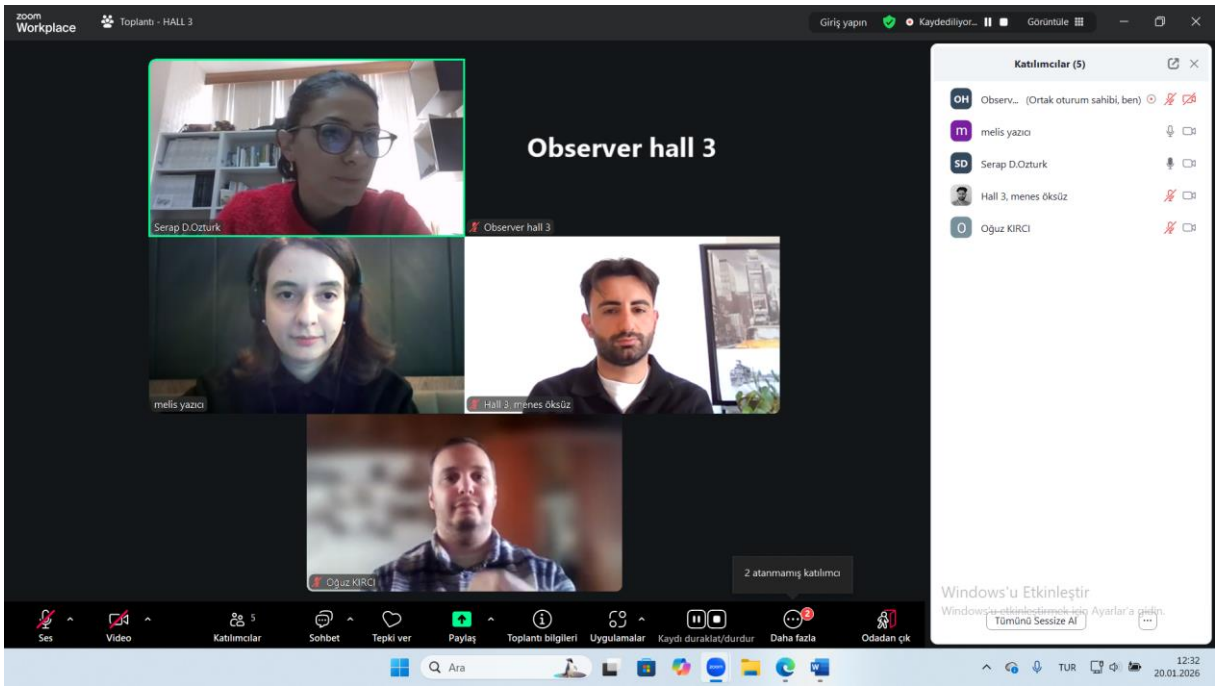

Giriş yapın
Hall 2 - Mehmet Kızıldağ
Observer H-2
H2-Fatih SAĞLAM
Fatih DESTUR
H2-Merve Sönmez Tuğluca
H2-Hüseyin İlcan
Anıl Çetinel

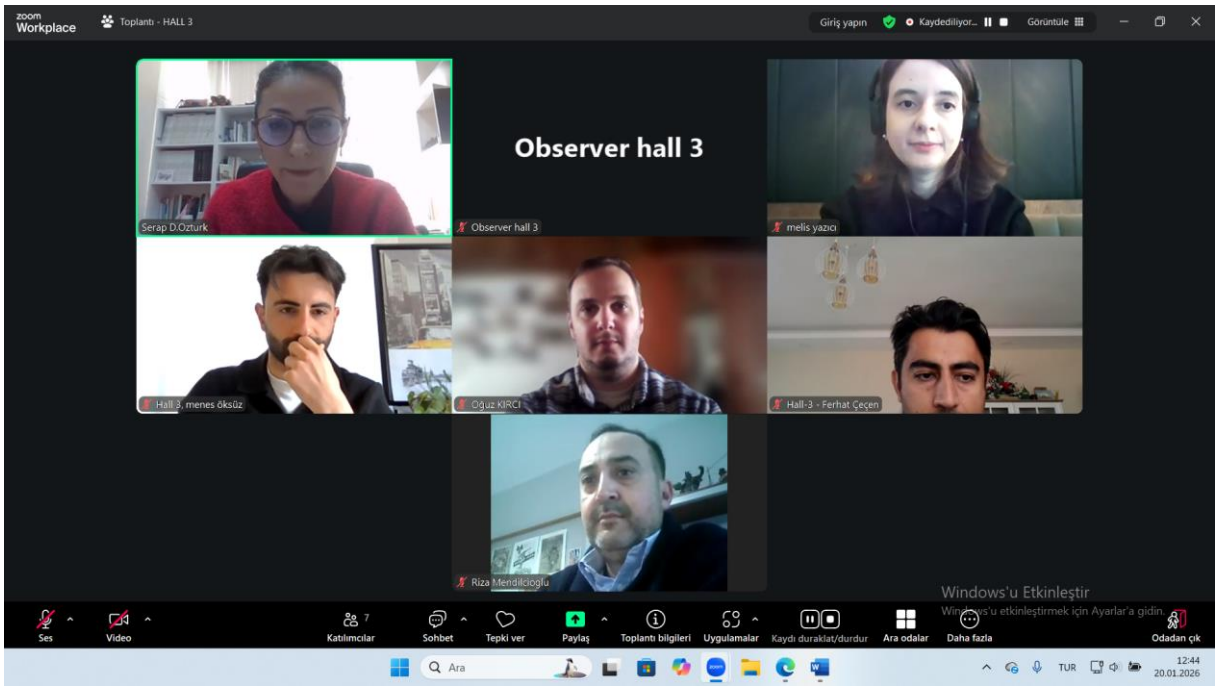

zoom Workplace
Toplantı - HALL 2
Kaydediliyor...
Görüntüle
Giriş yapın
Observer H-2
Nazan Atayık
Observer H-2
şeyma sena hall-2
esengül ispir Hall 2
Hall- 2 Şemsa Özcan
Esra Bozyiğit
Hall-2 Aleyna Yüksel
Prof. Dr. Gülden TÜM
Hall-2 Merve KOÇER
hall-2 MEHMET...
hall-2 MEHMET NAZİF DOĞAN
Ses
Video
Katılımcılar
Sohbet
Ara odalar
Tepki ver
Paylaş
Uygulamalar
Kaydı duraklat/durdur
Beyaz Tahtalar
Toplantı bilgileri
Daha fazla
Odadan çık

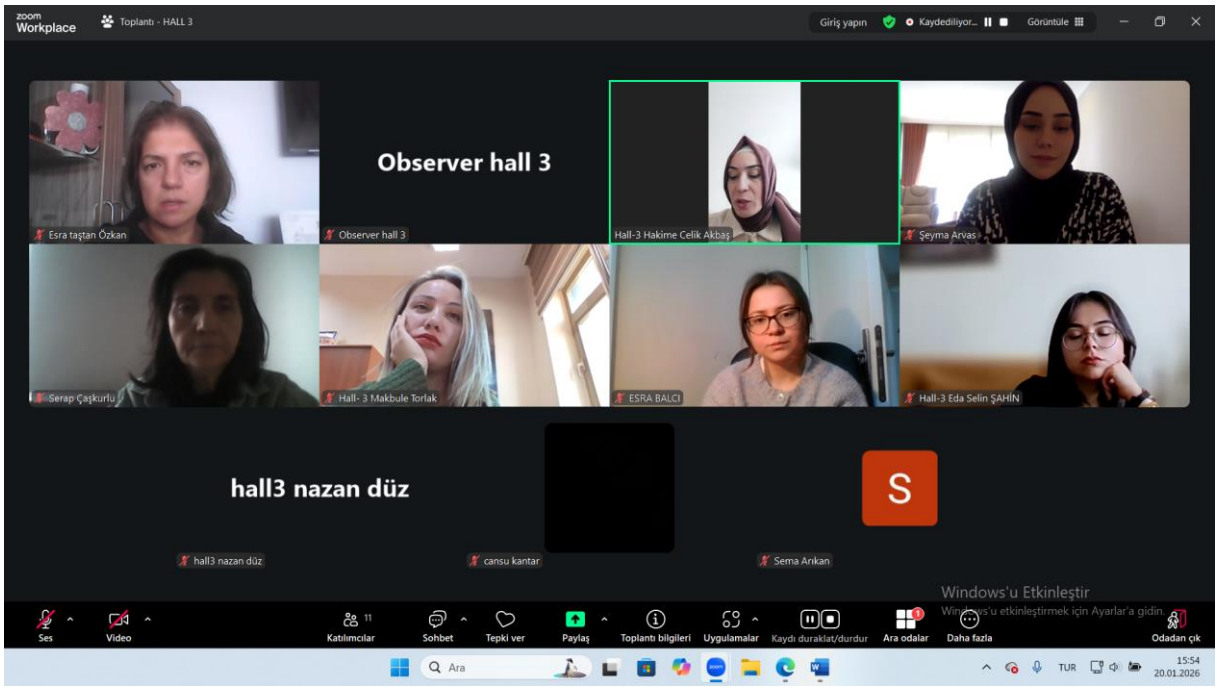

Kaydediliyor...
Görüntüle
Giriş yapın
Observer H-2
Hall-2, Murat ÜÇÜNCÜ
Observer H-2
Hall-2, Orkun Kayam
Hall-2, Onur Kurt
Hall-2 Yazan Soboh
Hall-2 Mustafa Furkan Keskenler
Hall-2, İrfan YILDIRIM
Kerem Pişkin
Kerem Pişkin
A
Özer Pamuk
A
Ahmet KADİRLİOĞLU
Özer Pamuk
Areen Soboh
Ses
Video
Katılımcılar
Sohbet
Ara odalar
Tepki ver
Paylaş
Uygulamalar
Kaydı duraklat/durdur
Beyaz Tahtalar
Toplantı bilgileri
Daha fazla
Odadan çık

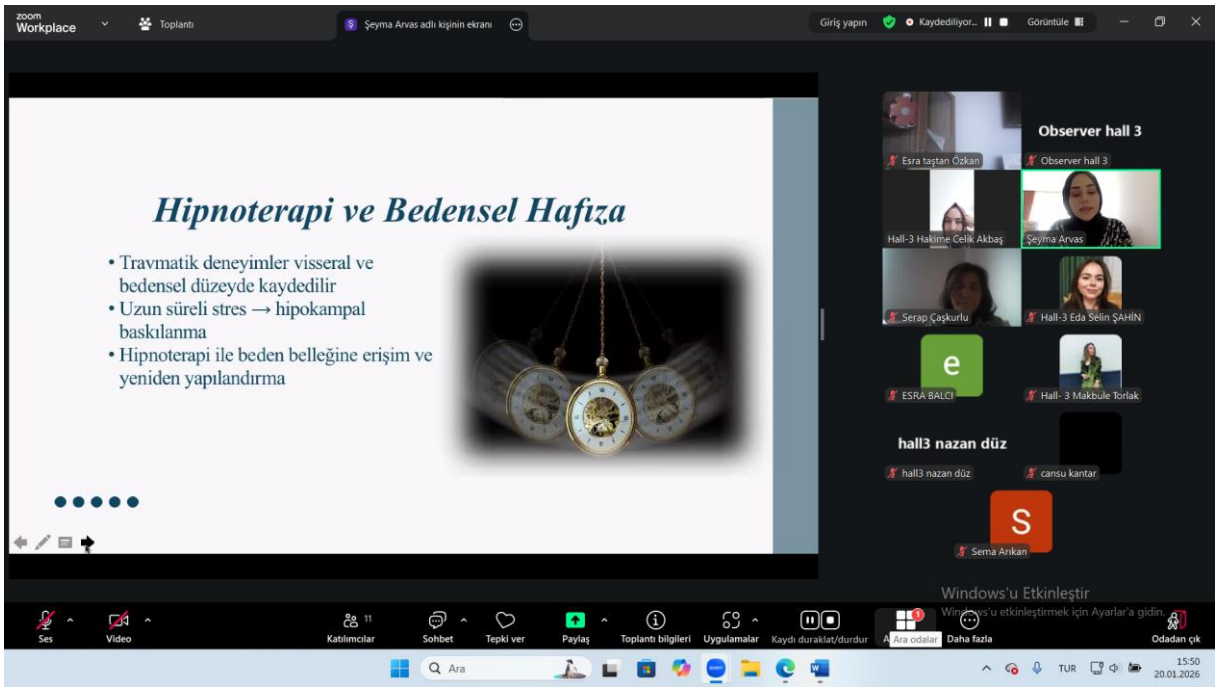

Introduction
International Communications in Heat and Mass Transfer
Performance prediction of plate fin heat exchangers: A CFD and NTU-based approach
Kaichun Yang, Xingjuan Zhang, Han Yang
The article compared the CFD results of straight, corrugated, and serrated fin structures and showed that the highest heat transfer performance was achieved with serrated fins. The serrated structure is recommended by the study as the most suitable fin geometry because it offers the highest j-factor and strongest thermo-hydraulic performance, even if the pressure drop increases.
Fig. 3. Boundary condition settings.
15th International ZEUGMA CONGRESS ON SCIENTIFIC RESEARCH January 19-21, 2026 Gaziantep, Turkiye
3 | 14
Observer hall 3
Enes GÜNER

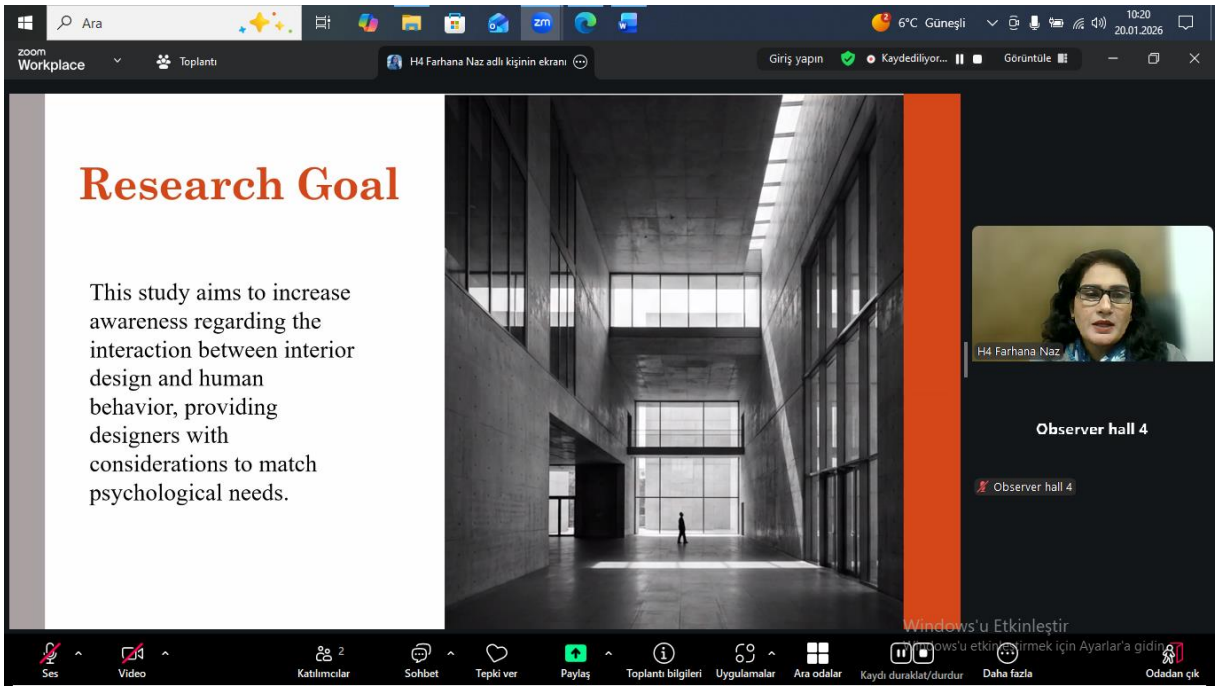

Introduction
Eye hooks - lessen the risks caused by rope slippage (substantial loads!)
closed form subjected to lower stresses compared to hooks
Eye hooks have higher load capacity than hooks
more suitable stress distribution
threading the eye hook and attaching the load is more challenging than with hooks prolonged load attachment and detachment process
Source: DesoLifting website
Sources: Shandong Yifa Casting & Forging website, Crosby website
Observer hall 3
Enes GÜNER

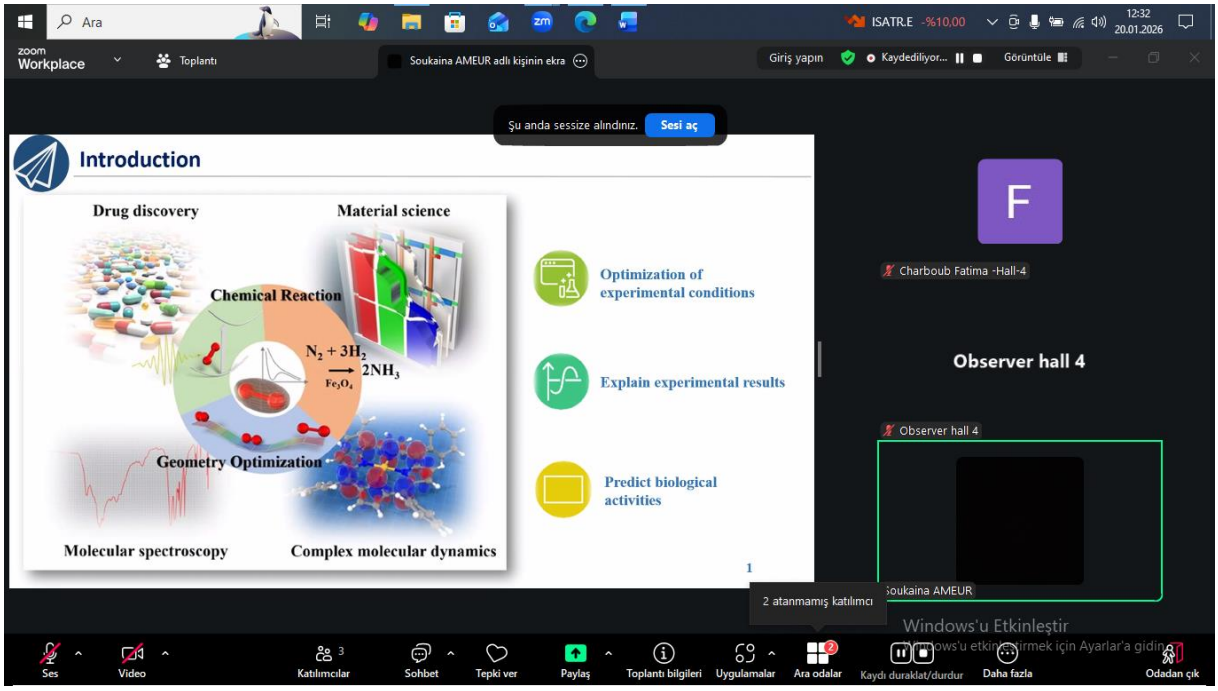

Toplantı - HALL 3
Observer hall 3
Serap D.Ozturk
Observer hall 3
melis yazıcı
Hall 3, menes öksüz
Oğuz KIRCI
Katılımcılar (5)
Observ... (Ortak oturum sahibi, ben)
melis yazıcı
Serap D.Ozturk
Hall 3, menes öksüz
Oğuz KIRCI
2 atanmamış katılımcı
Windows'u Etkinleştir
Ses
Video
Katılımcılar
Sohbet
Tepki ver
Paylaş
Toplantı bilgileri
Uygulamalar
Kaydı duraklat/durdur
Daha fazla
Odadan çık

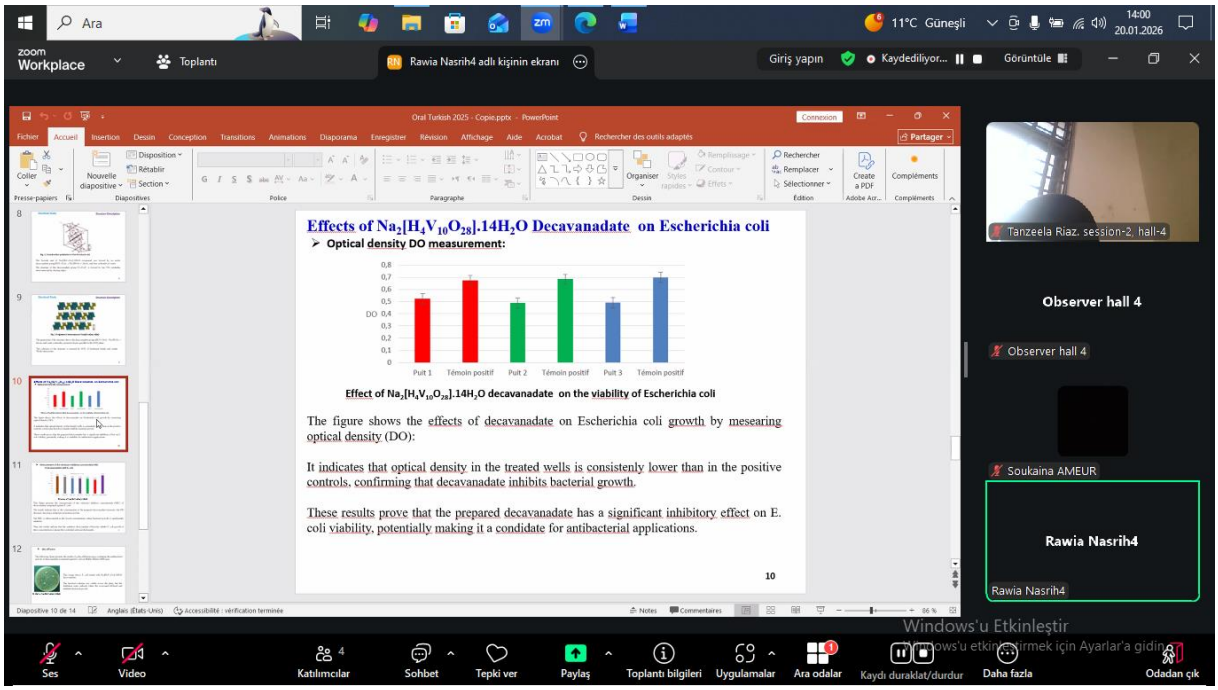

Toplantı - HALL 3
Observer hall 3
Serap D.Ozturk
Observer hall 3
melis yazıcı
Hall 3, menes öksüz
Oğuz KIRCI
Hall-3 - Ferhat Çeçen
Riza Mendilcioglu
Windows'u Etkinleştir
Ses
Video
Katılımcılar
Sohbet
Tepki ver
Paylaş
Toplantı bilgileri
Uygulamalar
Kaydı duraklat/durdur
Ara odalar
Daha fazla
Odadan çık

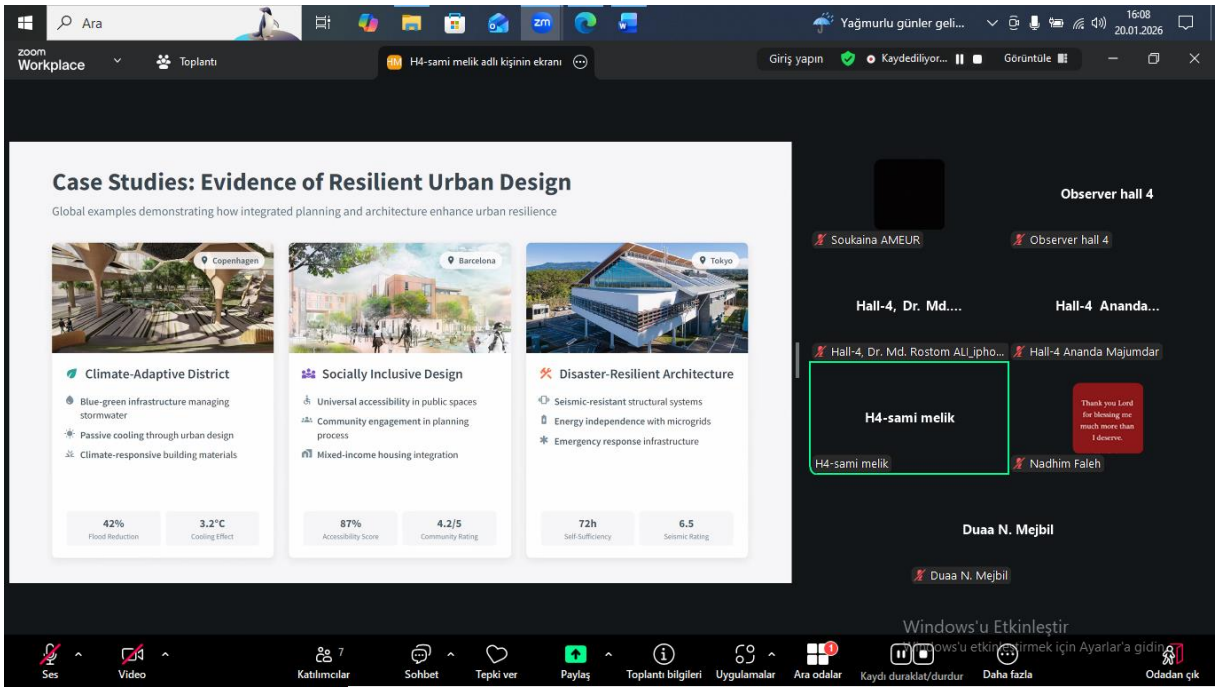

Observer hall 3
Esra taştan Özkan
Observer hall 3
Hall-3 Hakime Celik Akbaş
Şeyma Arvas
Serap Çaşkurlu
Hall- 3 Makbule Torlak
ESRA BALCI
Hall-3 Eda Selin ŞAHİN
hall3 nazan düz
hall3 nazan düz
cansu kantar
Sema Arıkan
Windows'u Etkinleştir

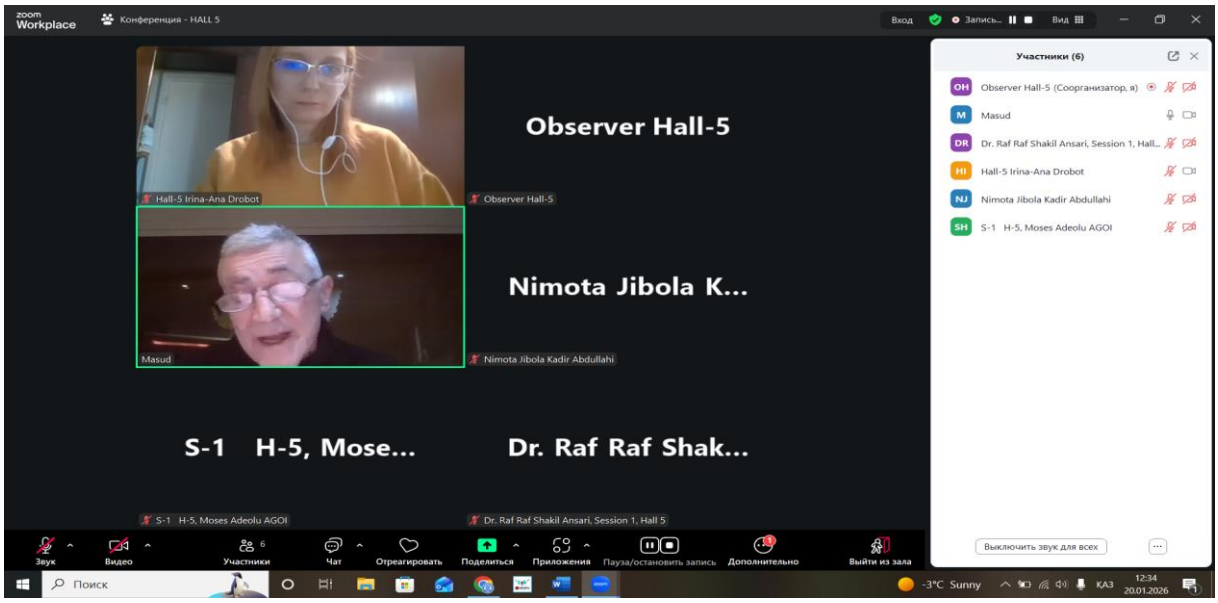

Hipnoterapi ve Bedensel Hafıza
• Travmatik deneyimler visseral ve bedensel düzeyde kaydedilir
• Uzun süreli stres → hipokampal baskılanma
• Hipnoterapi ile beden belleğine erişim ve yeniden yapılandırma
Observer hall 3
Esra taştan Özkan
Observer hall 3
Hall-3 Hakime Celik Akbaş
Şeyma Arvas
Serap Çaşkurlu
Hall-3 Eda Selin ŞAHİN
ESRA BALCI
Hall- 3 Makbule Torlak
hall3 nazan düz
hall3 nazan düz
cansu kantar
Sema Arıkan
Windows'u Etkinleştir

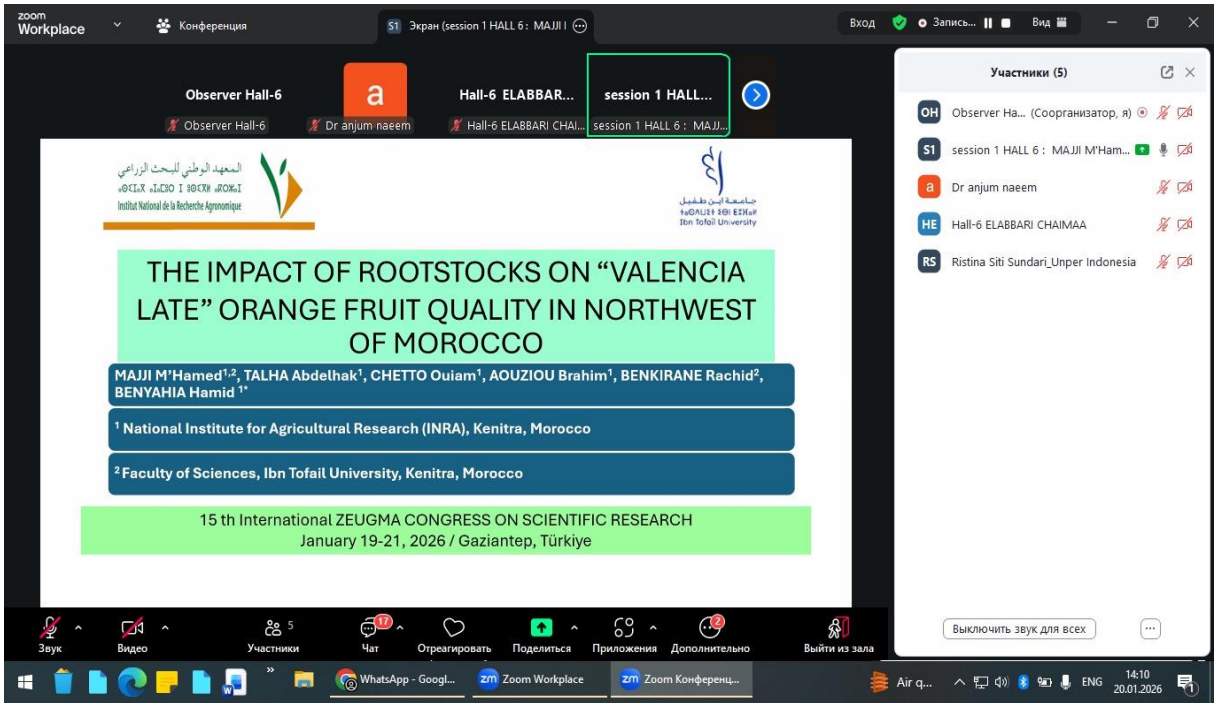

Research Goal
This study aims to increase awareness regarding the interaction between interior design and human behavior, providing designers with considerations to match psychological needs.
H4 Farhana Naz
Observer hall 4
Observer hall 4

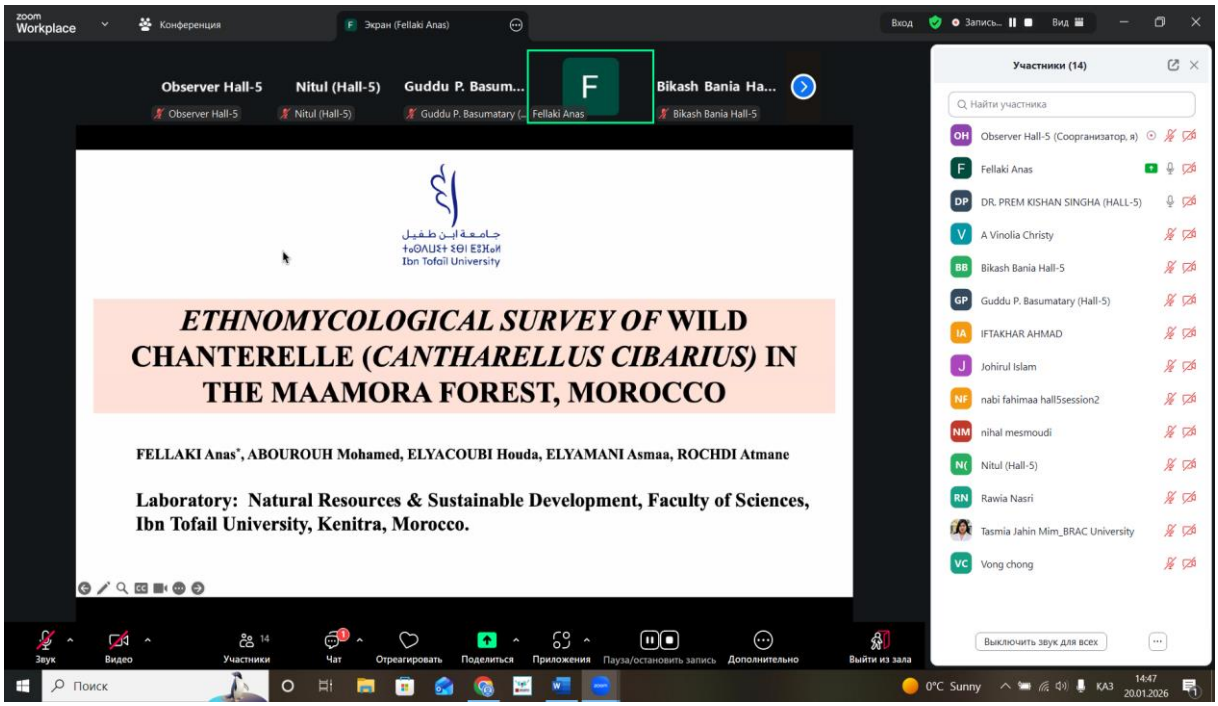

Introduction
Drug discovery
Material science
Chemical Reaction
Geometry Optimization
Molecular spectroscopy
Complex molecular dynamics
Optimization of experimental conditions
Explain experimental results
Predict biological activities
Charboub Fatima -Hall-4
Observer hall 4
Observer hall 4
Soukaina AMEUR

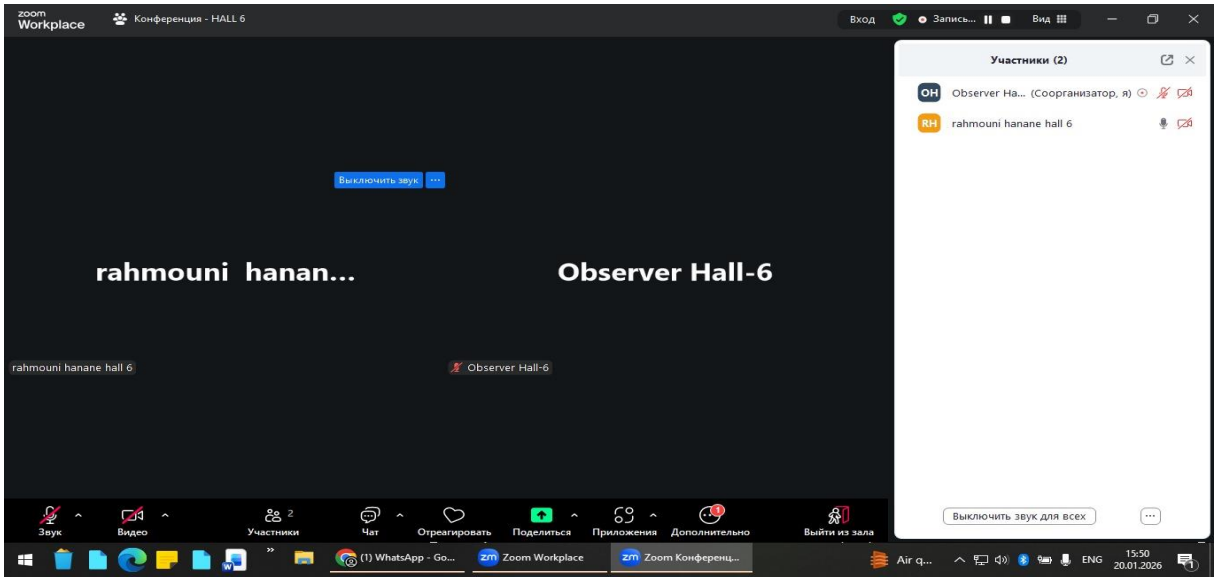

Effects of $Na_2[H_4V_{10}O_{28}].14H_2O$ Decavanadate on Escherichia coli
Optical density DO measurement:
Puit 1
Témoin positif
Puit 2
Témoin positif
Puit 3
Témoin positif
Effect of $Na_2[H_4V_{10}O_{28}].14H_2O$ decavanadate on the viability of Escherichia coli
The figure shows the effects of decavanadate on Escherichia coli growth by mesearing optical density (DO):
It indicates that optical density in the treated wells is consistenly lower than in the positive controls, confirming that decavanadate inhibits bacterial growth.
These results prove that the prepared decavanadate has a significant inhibitory effect on E. coli viability, potentially making it a condidate for antibacterial applications.
10
Tanzeela Riaz, session-2, hall-4
Observer hall 4
Observer hall 4
Soukaina AMEUR
Rawia Nasrih4
Rawia Nasrih4

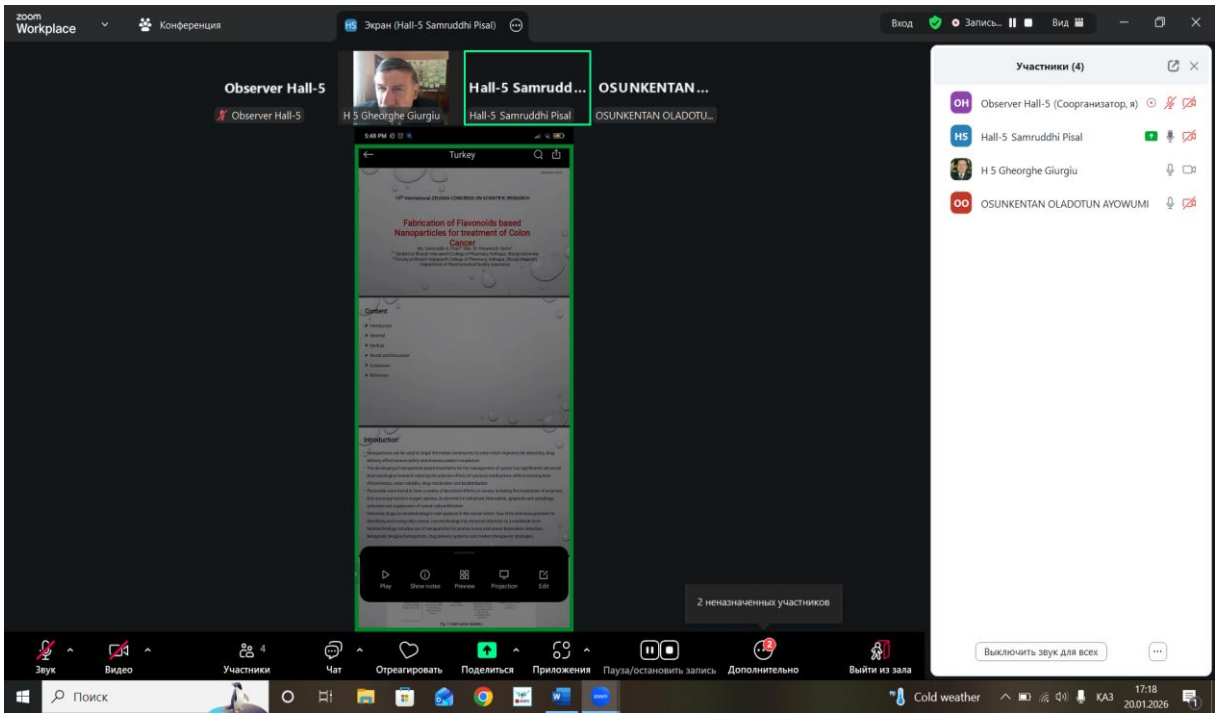

Case Studies: Evidence of Resilient Urban Design
Global examples demonstrating how integrated planning and architecture enhance urban resilience
Copenhagen
Climate-Adaptive District
Blue-green infrastructure managing stormwater
Passive cooling through urban design
Climate-responsive building materials
42%
Flood Reduction
3.2°C
Cooling Effect
Barcelona
Socially Inclusive Design
Universal accessibility in public spaces
Community engagement in planning process
Mixed-income housing integration
87%
Accessibility Score
4.2/5
Community Rating
Tokyo
Disaster-Resilient Architecture
Seismic-resistant structural systems
Energy independence with microgrids
Emergency response infrastructure
72h
Self-Sufficiency
6.5
Seismic Rating
Observer hall 4
Soukaina AMEUR
Observer hall 4
Hall-4, Dr. Md....
Hall-4 Ananda...
Hall-4, Dr. Md. Rostom ALI_ipho...
Hall-4 Ananda Majumdar
H4-sami melik
H4-sami melik
Thank you Lord for blessing me much more than I deserve.
Nadhim Faleh
Duaa N. Mejbil
Duaa N. Mejbil


Observer Hall-5
Nimota Jibola K...
S-1 H-5, Mose...
Dr. Raf Raf Shak...
Участники (6)


THE IMPACT OF ROOTSTOCKS ON "VALENCIA LATE" ORANGE FRUIT QUALITY IN NORTHWEST OF MOROCCO
MAJJI M'Hamed[1,2], TALHA Abdelhak[1], CHETTO Ouiam[1], AOUZIOU Brahim[1], BENKIRANE Rachid[2], BENYAHIA Hamid [1*]
[1] National Institute for Agricultural Research (INRA), Kenitra, Morocco
[2] Faculty of Sciences, Ibn Tofail University, Kenitra, Morocco
15 th International ZEUGMA CONGRESS ON SCIENTIFIC RESEARCH
January 19-21, 2026 / Gaziantep, Türkiye
Участники (5)


Observer Hall-5
Nitul (Hall-5)
Guddu P. Basum...
Fellaki Anas
Bikash Bania Ha...
Ibn Tofail University
ETHNOMYCOLOGICAL SURVEY OF WILD CHANTERELLE (CANTHARELLUS CIBARIUS) IN THE MAAMORA FOREST, MOROCCO
FELLAKI Anas*, ABOUROUH Mohamed, ELYACOUBI Houda, ELYAMANI Asmaa, ROCHDI Atmane
Laboratory: Natural Resources & Sustainable Development, Faculty of Sciences, Ibn Tofail University, Kenitra, Morocco.
Участники (14)


Конференция - HALL 6
rahmouni hanan...
Observer Hall-6
Участники (2)
rahmouni hanane hall 6


Observer Hall-5
Hall-5 Samrudd...
OSUNKENTAN...
Fabrication of Flavonoids based Nanoparticles for treatment of Colon Cancer
Участники (4)
Observer Hall-5 (Соорганизатор, я)
Hall-5 Samruddhi Pisal
H 5 Gheorghe Giurgiu
OSUNKENTAN OLADOTUN AYOWUMI
2 неназначенных участников
Выключить звук для всех

Observer Hall-6
HALL-6, Ahmed EL-BOU...
Hall-6/ Soufiane Ziani
Areen Soboh
Rare Earth Elements in Waterberg Coalfield: Mineralogy, Extraction, and ICP-MS Analysis of Run-of-Mine and Discard Coal
EL-BOUZIDI Ahmed
University of Hassan II - Casablanca, FSTM, Mohammedia, Maroc
Laboratory of Materials, Membranes and Environment
15th International ZEUGMA CONGRESS ON SCIENTIFIC RESEARCH
January 19-21, 2026 Gaziantep, Turkiye.
Участники (4)
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Observer hall-1
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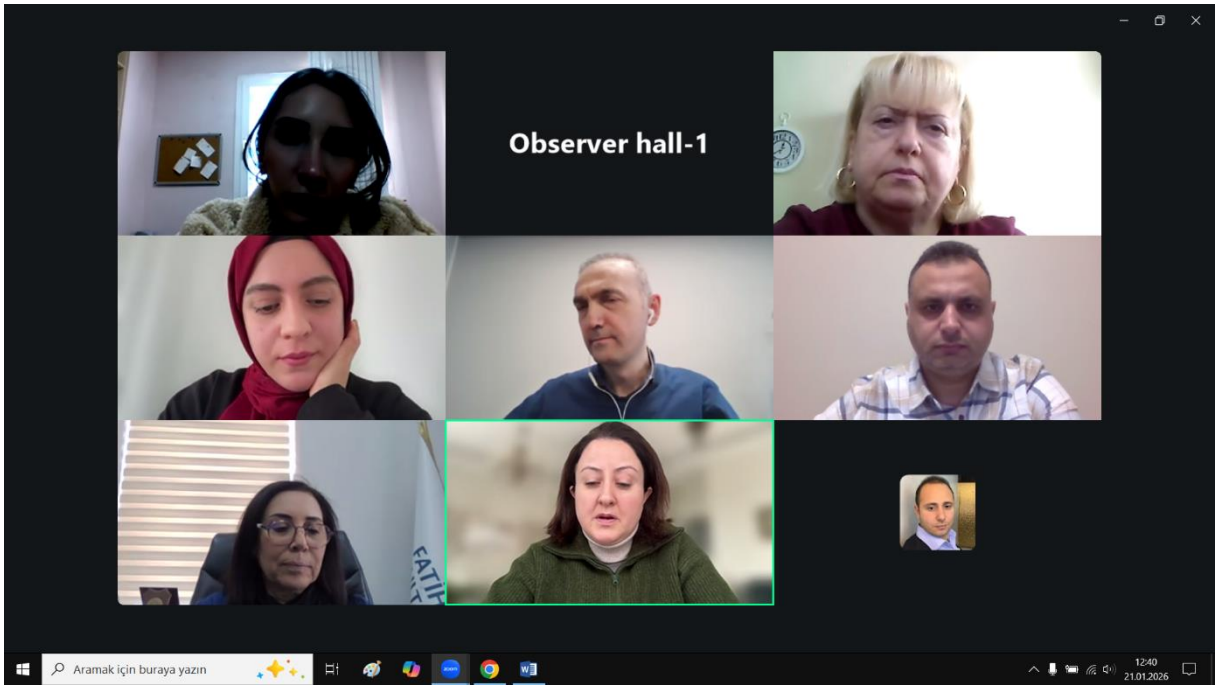
21.01.2026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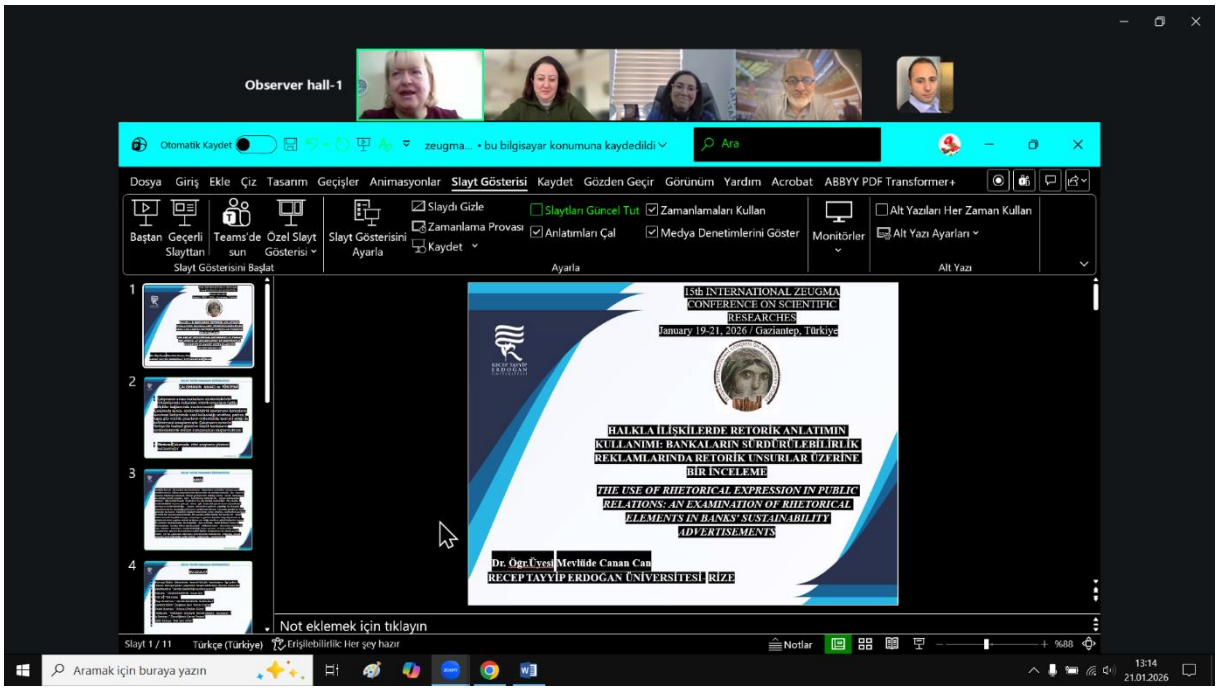
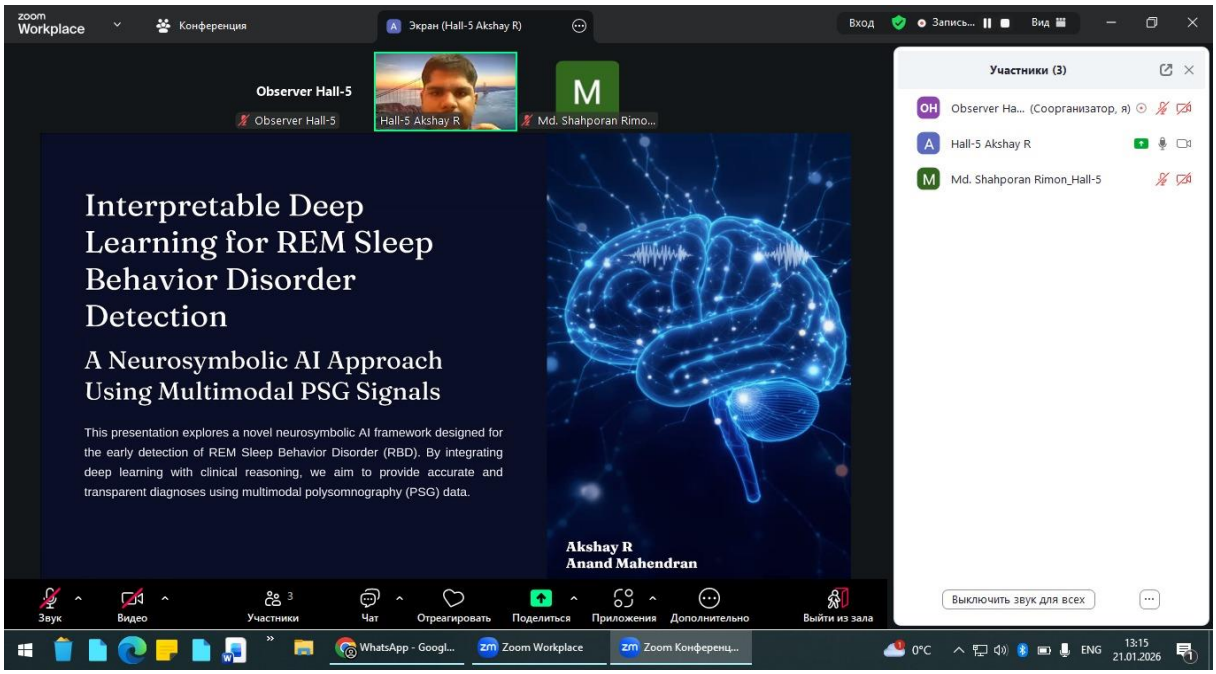
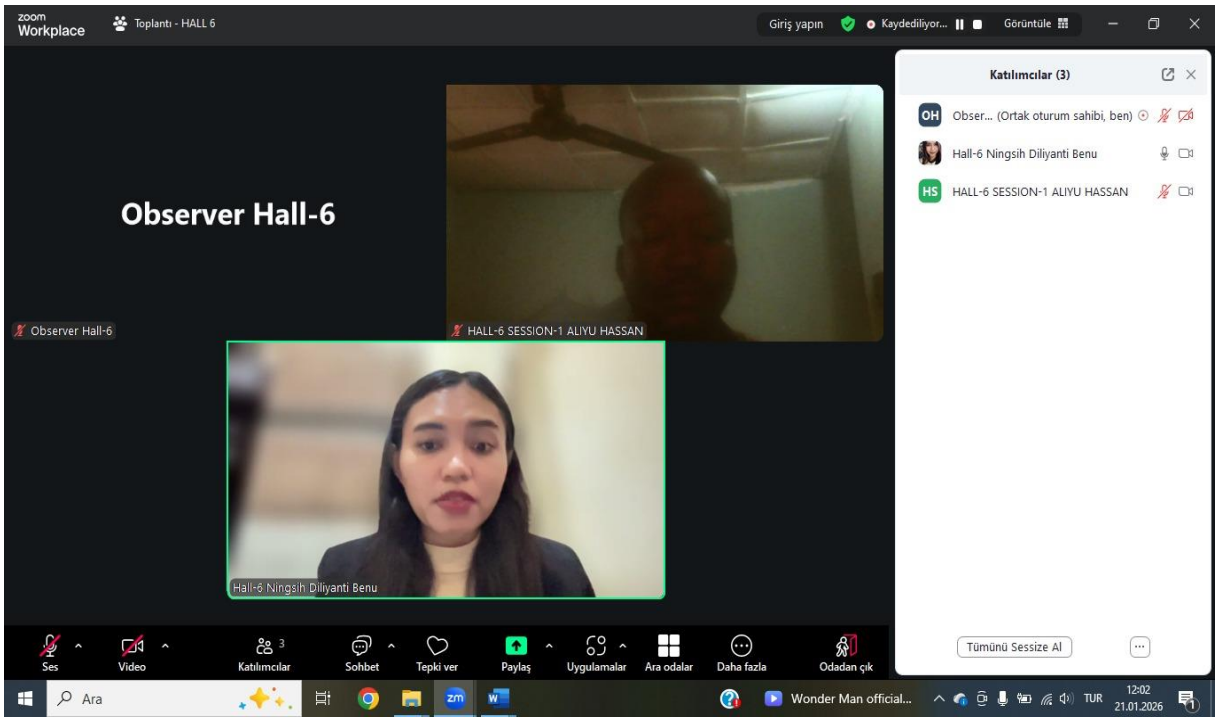
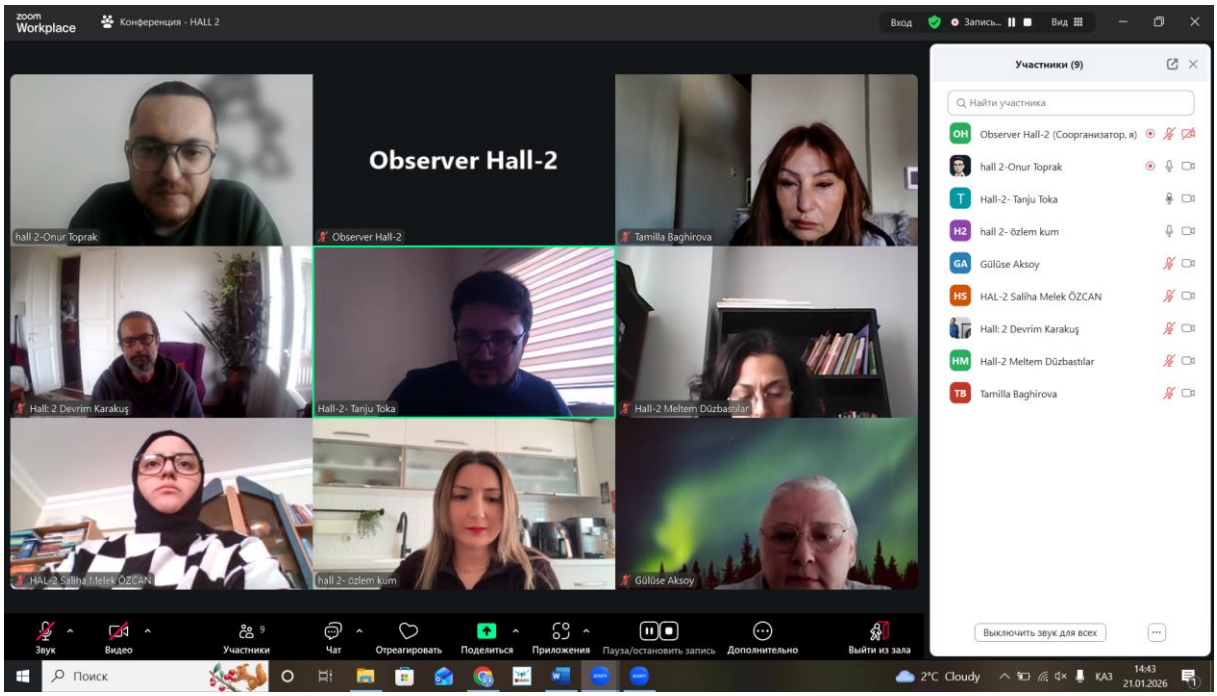
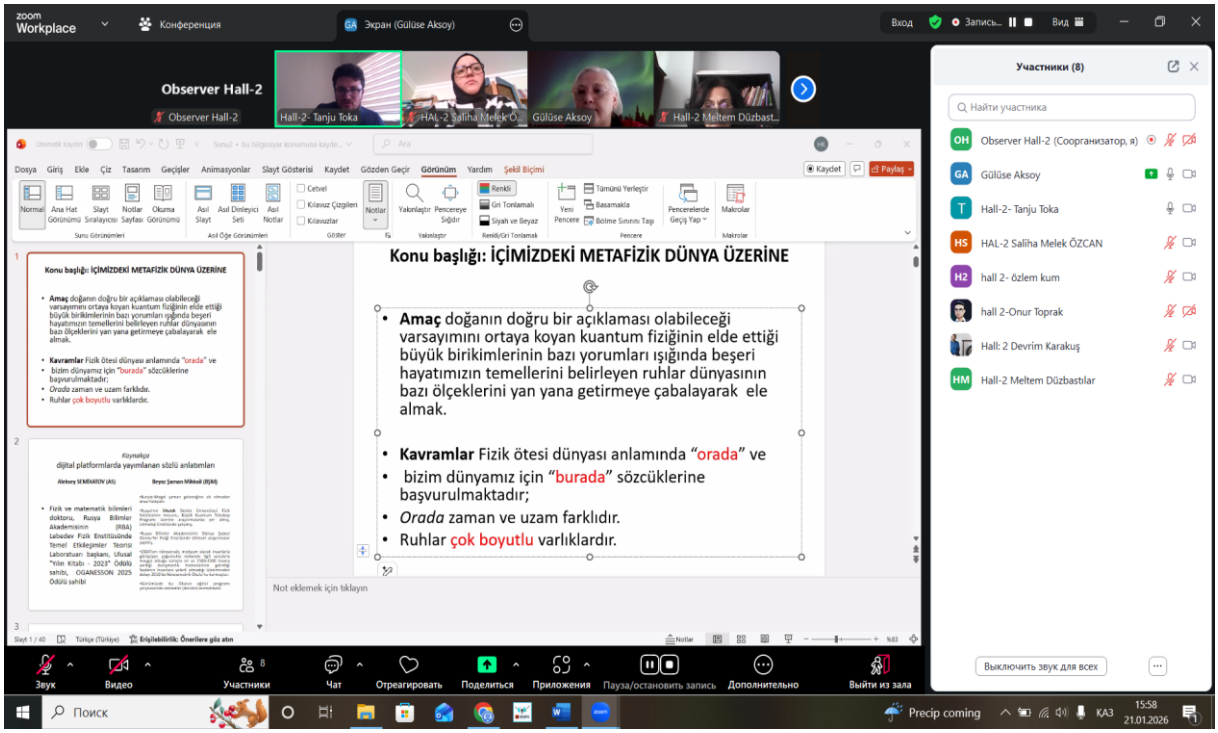

Observer hall-1
15th INTERNATIONAL ZEUGMA CONFERENCE ON SCIENTIFIC RESEARCHES
January 19-21, 2026 / Gaziantep, Türkiye
HALKLA İLİŞKİLERDE RETORİK ANLATIMIN KULLANIMI: BANKALARIN SÜRDÜRÜLEBİLİRLİK REKLAMLARINDA RETORİK UNSURLAR ÜZERİNE BİR İNCELEME
THE USE OF RHETORICAL EXPRESSION IN PUBLIC RELATIONS: AN EXAMINATION OF RHETORICAL ELEMENTS IN BANKS' SUSTAINABILITY ADVERTISEMENTS
Dr. Öğr. Üyesi Mevlüde Canan Can
RECEP TAYYİP ERDOĞAN ÜNİVERSİTESİ, RİZE
Not eklemek için tıklayın

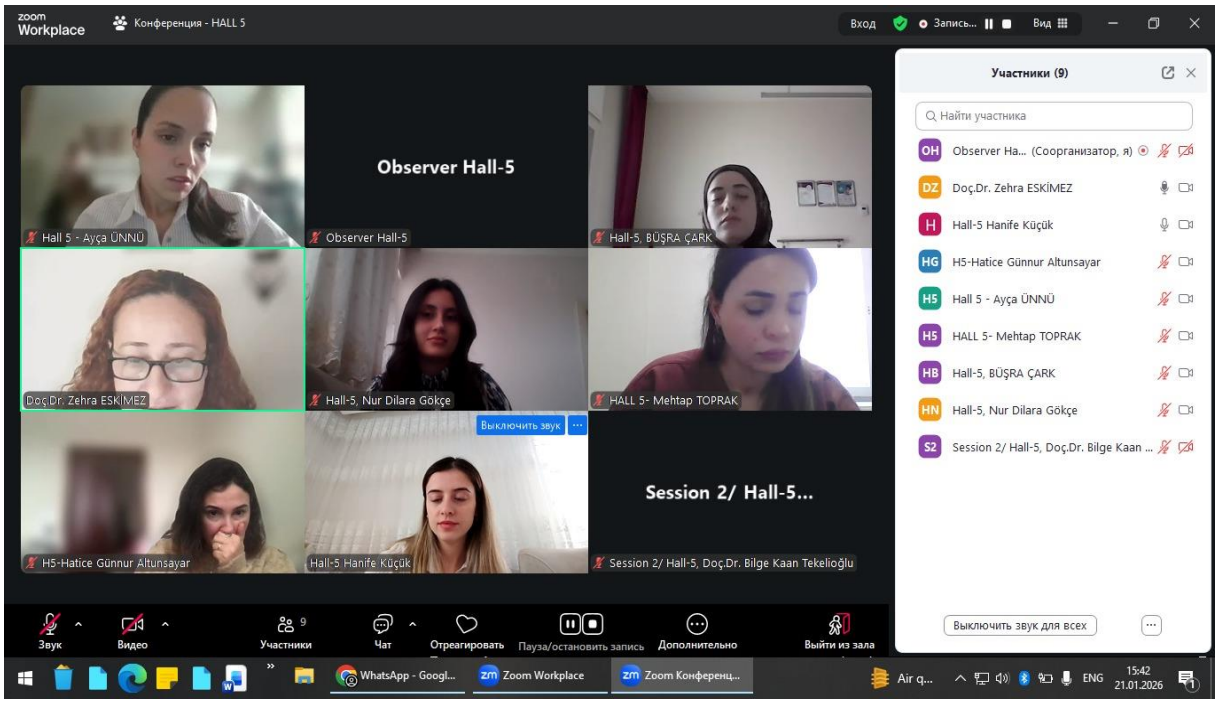
Observer Hall-2
başak yerlikhan
H-2 Gülçin BEKER AKBULUT
adem demir
Участники (4)
Observer Hall-2 (Соорганизатор, я)
adem demir
H-2 Gülçin BEKER AKBULUT
başak yerlikhan


Observer Hall-5
Hall-5 Akshay R
Md. Shahporan Rimo...
Interpretable Deep Learning for REM Sleep Behavior Disorder Detection
A Neurosymbolic AI Approach Using Multimodal PSG Signals
This presentation explores a novel neurosymbolic AI framework designed for the early detection of REM Sleep Behavior Disorder (RBD). By integrating deep learning with clinical reasoning, we aim to provide accurate and transparent diagnoses using multimodal polysomnography (PSG) data.
Akshay R
Anand Mahendran
Участники (3)
Observer Ha... (Соорганизатор, я)
Hall-5 Akshay R
Md. Shahporan Rimon_Hall-5
Выключить звук для всех


Observer Hall-6
Observer Hall-6
HALL-6 SESSION-1 ALIYU HASSAN
Hall-6 Ningsih Diliyanti Benu
Katılımcılar (3)
Obser... (Ortak oturum sahibi, ben)
Hall-6 Ningsih Diliyanti Benu
HALL-6 SESSION-1 ALIYU HASSAN
Tümünü Sessize Al


Observer Hall-2
Участники (9)
Observer Hall-2 (Соорганизатор, я)
hall 2-Onur Toprak
Hall-2- Tanju Toka
hall 2- özlem kum
Gülüse Aksoy
HAL-2 Saliha Melek ÖZCAN
Hall: 2 Devrim Karakuş
Hall-2 Meltem Düzbastılar
Tamilla Baghirova


Участники (8)
Konu başlığı: İÇİMİZDEKİ METAFİZİK DÜNYA ÜZERİNE
• Amaç doğanın doğru bir açıklaması olabileceği varsayımını ortaya koyan kuantum fiziğinin elde ettiği büyük birikimlerinin bazı yorumları ışığında beşeri hayatımızın temellerini belirleyen ruhlar dünyasının bazı ölçeklerini yan yana getirmeye çabalayarak ele almak.
• Kavramlar Fizik ötesi dünyası anlamında "orada" ve
• bizim dünyamız için "burada" sözcüklerine başvurulmaktadır;
• Orada zaman ve uzam farklıdır.
• Ruhlar çok boyutlu varlıklardır.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Hall 5 - Ayça ÜNNÜ
Hall-5, BÜŞRA ÇARK
Doç.Dr. Zehra ESKİMEZ
Hall-5, Nur Dilara Gökçe
HALL 5- Mehtap TOPRAK
H5-Hatice Günnur Altunsayar
Hall-5 Hanife Küçük
Session 2/ Hall-5...
Session 2/ Hall-5, Doç.Dr. Bilge Kaan Tekelioğlu
Участники (9)
Observer Ha... (Соорганизатор, я)
Doç.Dr. Zehra ESKİMEZ
Hall-5 Hanife Küçük
H5-Hatice Günnur Altunsayar
Hall 5 - Ayça ÜNNÜ
HALL 5- Mehtap TOPRAK
Hall-5, BÜŞRA ÇARK
Hall-5, Nur Dilara Gökçe
Session 2/ Hall-5, Doç.Dr. Bilge Kaan ...
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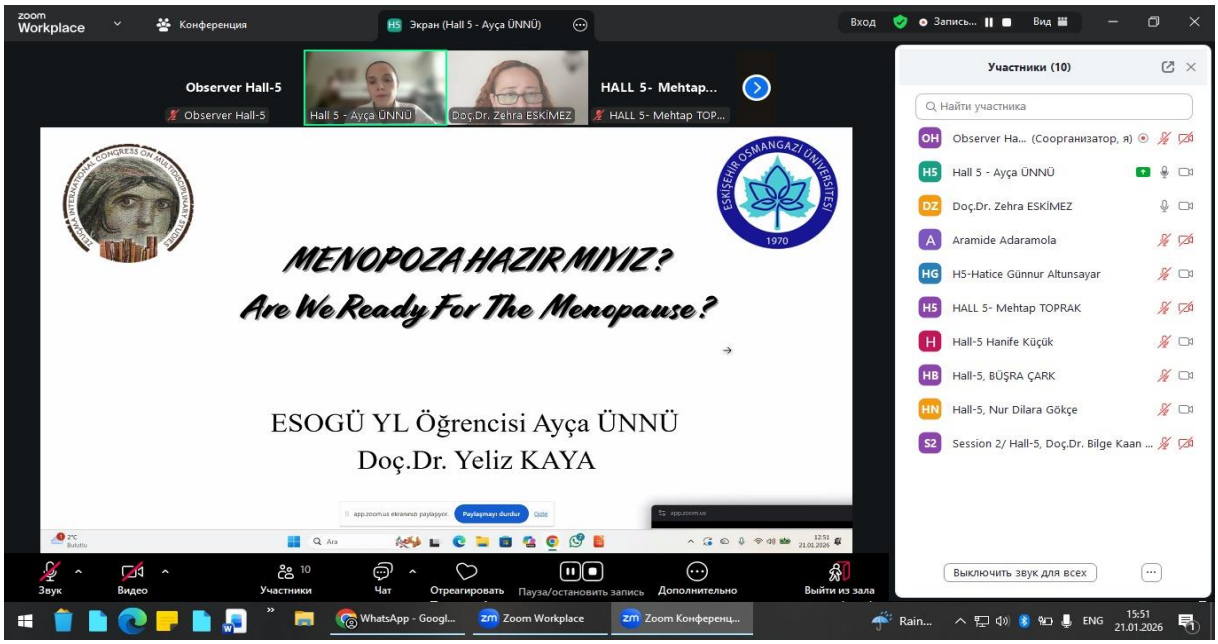
Конференция
Экран (Hall 5 - Ayça ÜNNÜ)
Observer Hall-5
HALL 5- Mehtap...
MENOPOZA HAZIR MIYIZ?
Are We Ready For The Menopause?
ESOGÜ YL Öğrencisi Ayça ÜNNÜ
Doç.Dr. Yeliz KAYA
Участники (10)
Observer Ha... (Соорганизатор, я)
Hall 5 - Ayça ÜNNÜ
Doç.Dr. Zehra ESKİMEZ
Aramide Adaramola
H5-Hatice Günnur Altunsayar
HALL 5- Mehtap TOPRAK
Hall-5 Hanife Küçük
Hall-5, BÜŞRA ÇARK
Hall-5, Nur Dilara Gökçe
Session 2/ Hall-5, Doç.Dr. Bilge Kaan ...
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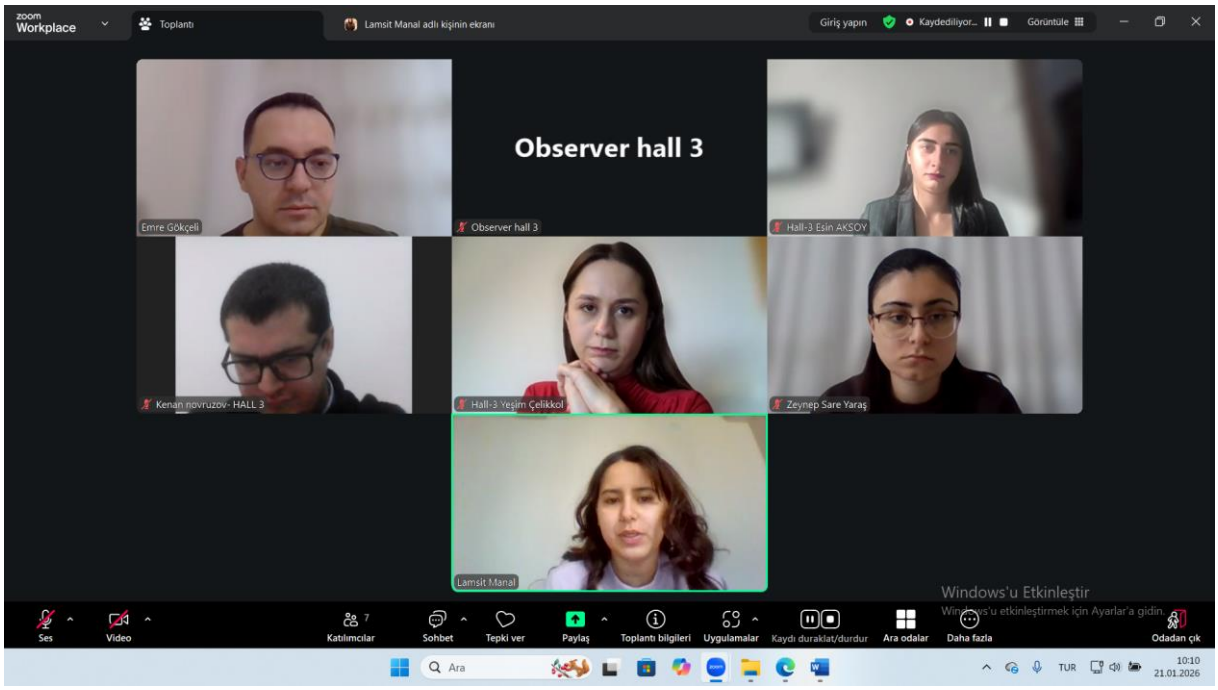
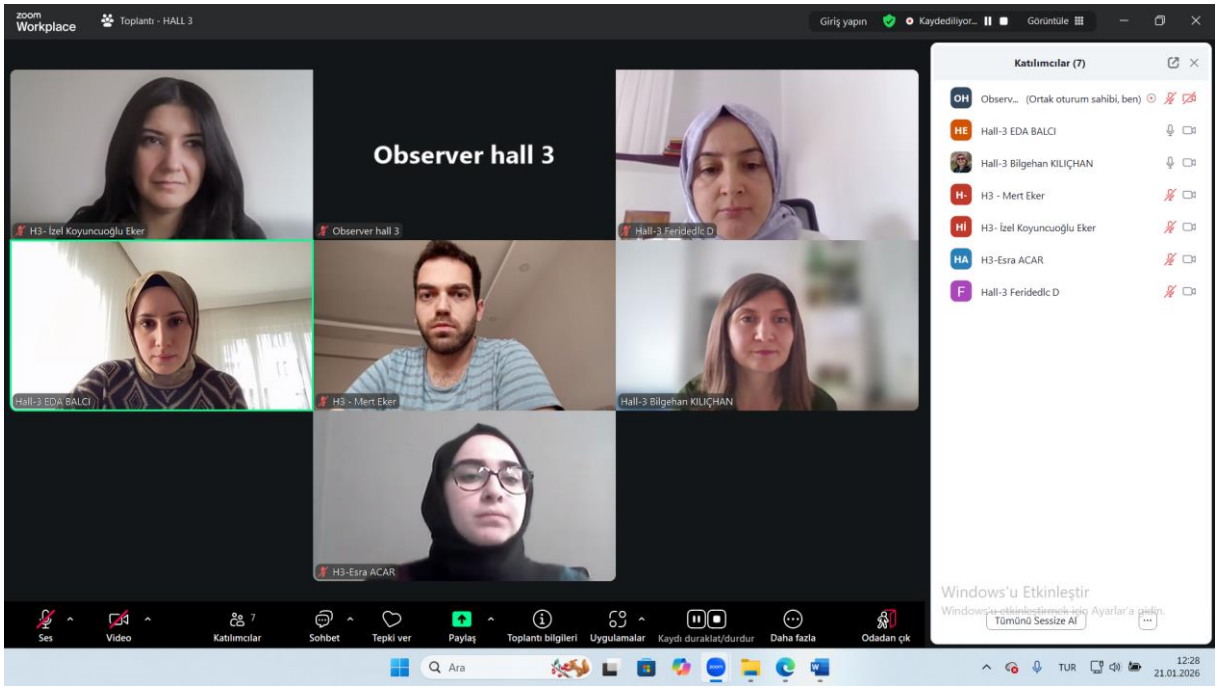

Observer hall 3
Emre Gökçeli
Observer hall 3
Hall-3 Esin AKSOY
Kenan novruzov- HALL 3
Hall-3 Yeşim Çelikkol
Zeynep Sare Yaraş
Lamsit Manal
Windows'u Etkinleştir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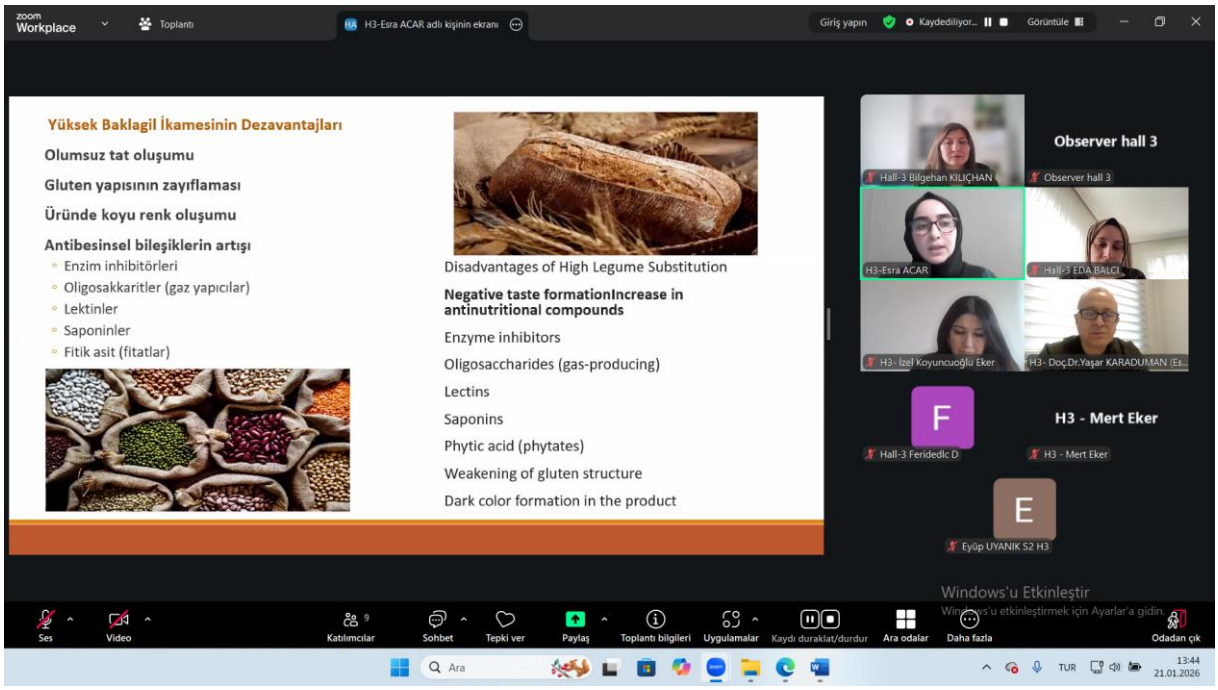
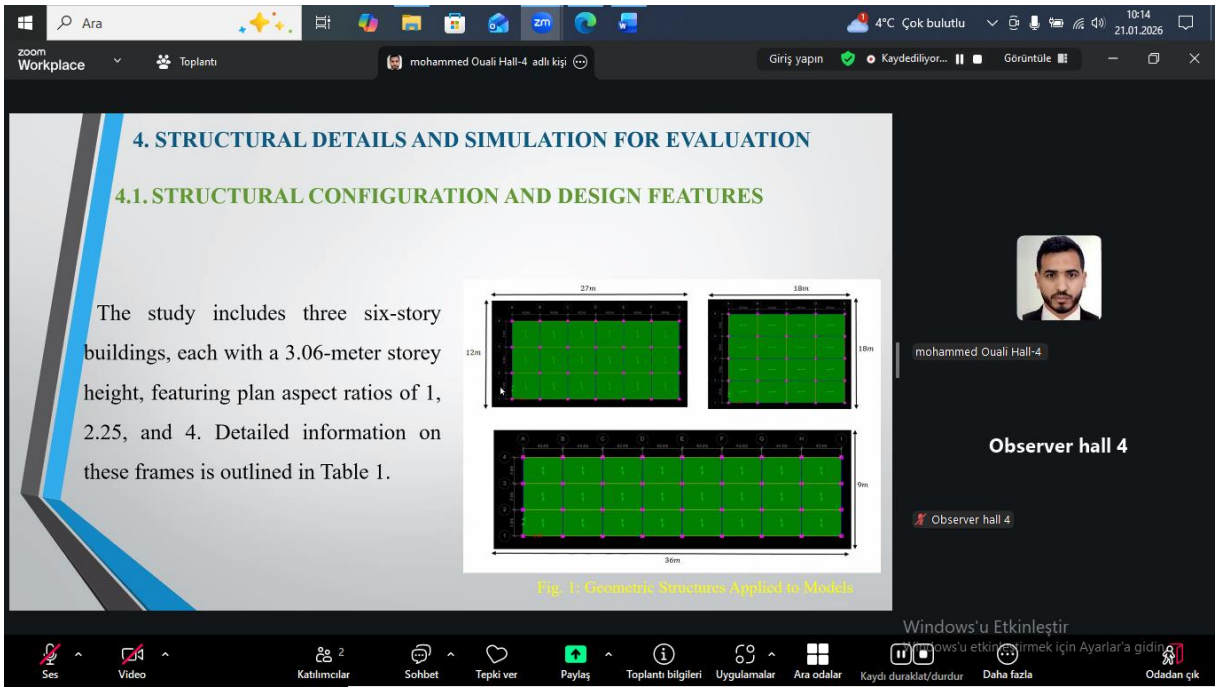
H3- İzel Koyuncuoğlu Eker
Hall-3 Feridedlc D
Hall-3 EDA BALCI
H3 - Mert Eker
Hall-3 Bilgehan KILIÇHAN
H3-Esra ACAR
Katılımcılar (7)
Windows'u Etkinleştir


Yüksek Baklagil İkamesinin Dezavantajları
Olumsuz tat oluşumu
Gluten yapısının zayıflaması
Üründe koyu renk oluşumu
Antibesinsel bileşiklerin artışı
Enzim inhibitörleri
Oligosakkaritler (gaz yapıcılar)
Lektinler
Saponinler
Fitik asit (fitatlar)
Disadvantages of High Legume Substitution
Negative taste formationIncrease in antinutritional compounds
Enzyme inhibitors
Oligosaccharides (gas-producing)
Lectins
Saponins
Phytic acid (phytates)
Weakening of gluten structure
Dark color formation in the product
Observer hall 3
H3 - Mert Eker
Windows'u Etkinleştir


4. STRUCTURAL DETAILS AND SIMULATION FOR EVALUATION
4.1. STRUCTURAL CONFIGURATION AND DESIGN FEATURES
The study includes three six-story buildings, each with a 3.06-meter storey height, featuring plan aspect ratios of 1, 2.25, and 4. Detailed information on these frames is outlined in Table 1.
Fig. 1: Geometric Structures Applied to Models
mohammed Ouali Hall-4
Observer hall 4
Windows'u Etkinleştir

Influence of Yttrium Doping on the Structural, Physical, and Optical Properties of Sol–Gel Silicophosphate Glasses for Enhanced Photonic Applications
El Mahdi Bouabdalli[1,2], Mohamed El Jouad[2], Samira Touhtouh[2], Nathalie Gaumer[3], El Kbir Hlil[4], and Abdelowahed Hajjaji[2]
[1]Laboratory of Computer Science and Interdisciplinary Physics (LIPI),Higher Normal School of Fes (ENS–Fes),Sidi Mohamed Ben Abdellah University,Fez,Morocco.
[2]Laboratory of Engineering Energy (LabSIPE),National School of Applied Sciences,Chouaib Doukkali University,El Jadida 24000,Morocco.
[3]Laboratoire POMA – UMR CNRS 6136, Université d'Angers, 2 bd Lavoisier, 49045 Angers cedex 01, France.
[4]Institut Néel, CNRS et Université Grenoble Alpes, BP 166, 38042, Grenoble, France.
*elmahdi.bouabdalli@usmba.ac.ma
15th International ZEUGMA CONGRESS ON SCIENTIFIC RESEARCH, January 19-21, 2026, Gaziantep / TÜRKiYE
Presented by:
BOUABDALLI El Mahdi
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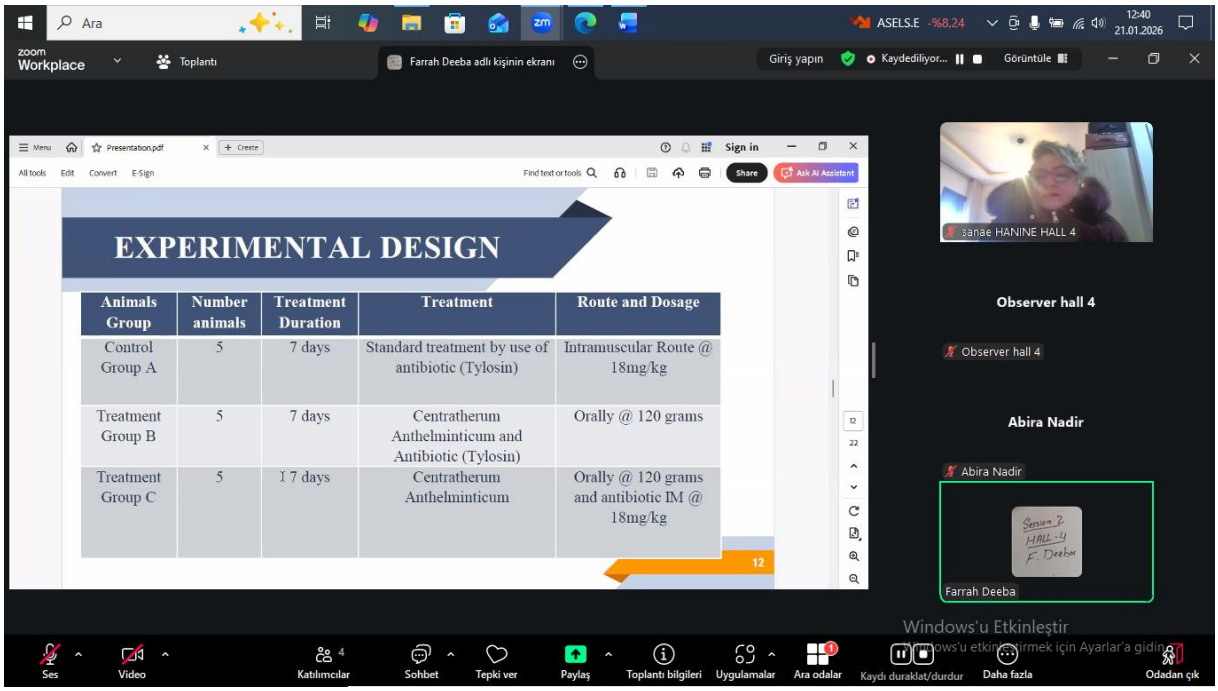
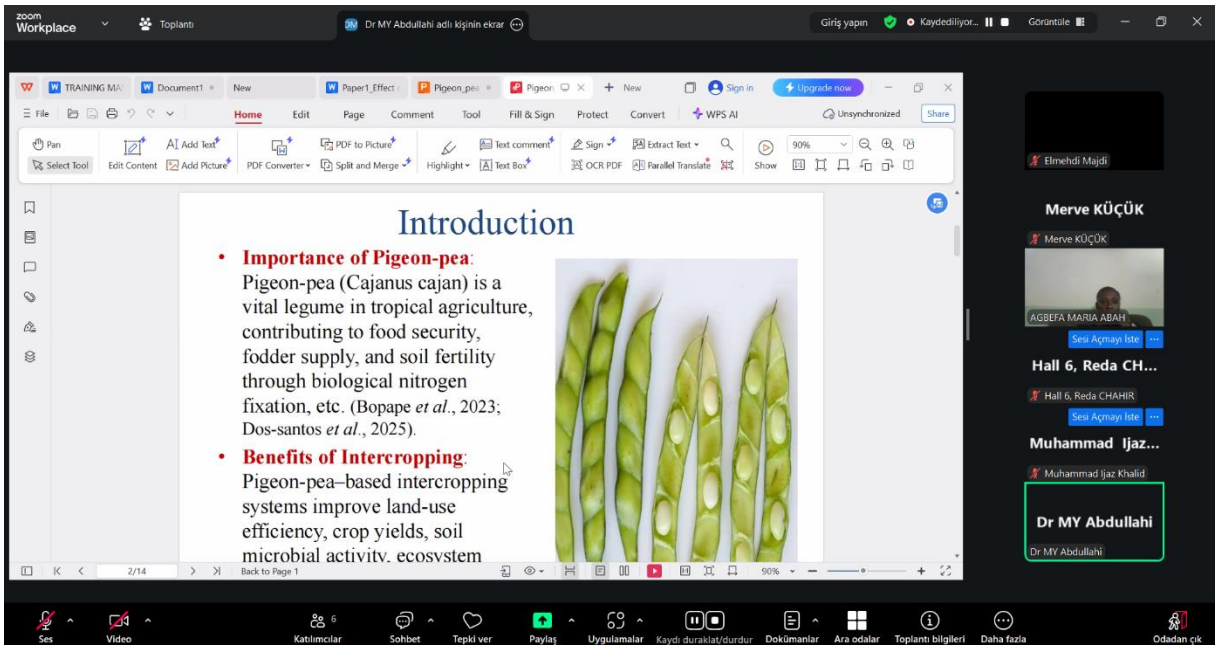
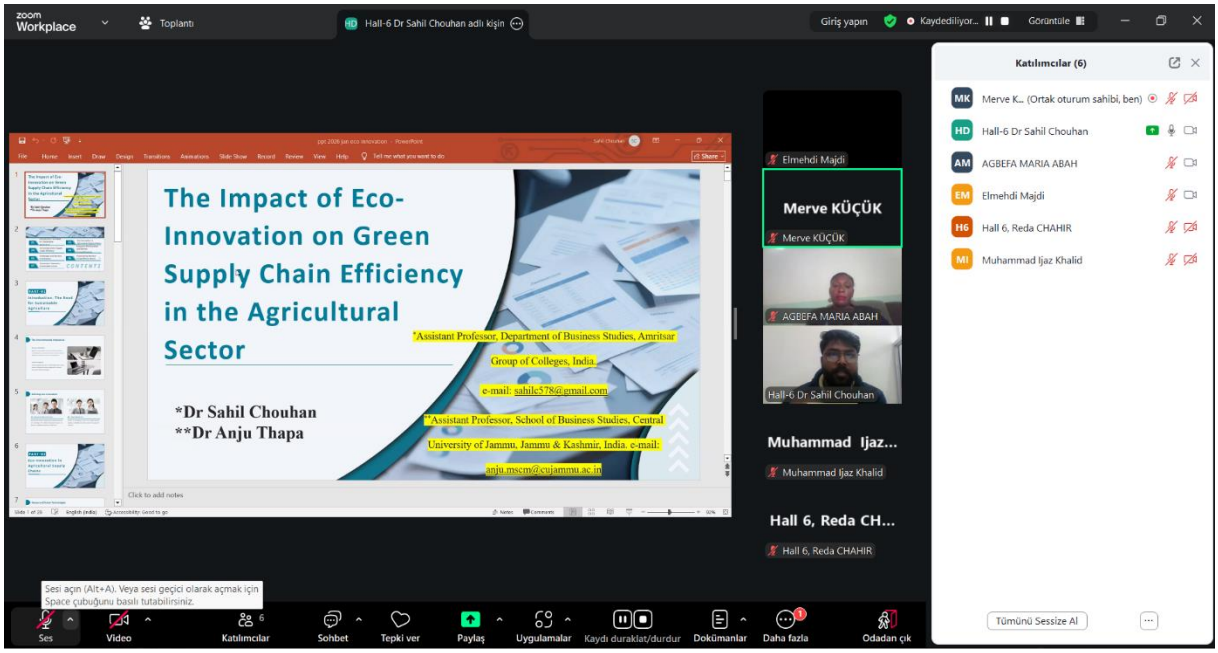
bouabdalli el mahdi
Observer hall 4
Observer hall 4


EXPERIMENTAL DESIGN
Animals Group | Number animals | Treatment Duration | Treatment | Route and Dosage
Control Group A | 5 | 7 days | Standard treatment by use of antibiotic (Tylosin) | Intramuscular Route @ 18mg/kg
Treatment Group B | 5 | 7 days | Centratherum Anthelminticum and Antibiotic (Tylosin) | Orally @ 120 grams
Treatment Group C | 5 | 7 days | Centratherum Anthelminticum | Orally @ 120 grams and antibiotic IM @ 18mg/kg
12
sanae HANINE HALL 4
Observer hall 4
Observer hall 4
Abira Nadir
Abira Nadir
Farrah Deeba


Introduction
Importance of Pigeon-pea:
Pigeon-pea (Cajanus cajan) is a vital legume in tropical agriculture, contributing to food security, fodder supply, and soil fertility through biological nitrogen fixation, etc. (Bopape et al., 2023; Dos-santos et al., 2025).
Benefits of Intercropping:
Pigeon-pea–based intercropping systems improve land-use efficiency, crop yields, soil microbial activity, ecosystem
Merve KÜÇÜK
AGBEFA MARIA ABAH
Hall 6, Reda CH...
Muhammad Ijaz...
Dr MY Abdullahi


The Impact of Eco-Innovation on Green Supply Chain Efficiency in the Agricultural Sector
*Dr Sahil Chouhan
**Dr Anju Thapa
Merve KÜÇÜK
AGBEFA MARIA ABAH
Muhammad Ijaz...
Hall 6, Reda CH...
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15th International
ZEUGMA CONGRESS ON SCIENTIFIC RESEARCH
(THE BOOK OF ABSTRACTS)
January 19-21, 2026 / Gaziantep, Türkiye
www.zeugmakongresi.org/

THE RELATIONSHIP BETWEEN GUT MICROBIOTA AND CHRONIC DISEASES: THE IMPORTANCE OF PATIENT EDUCATION IN NURSING CARE

Lect. Hilal BENZER
Hasan Kalyoncu University, Vocational School – Department of Medical Services and Techniques, Gaziantep, Türkiye
ORCID ID: 0000-0001-8046-6350

Prof. Dr. Özlem OVAYOLU
Gaziantep University, Faculty of Health Sciences – Department of Nursing, Gaziantep, Türkiye
ORCID ID: 0000-0002-7335-4032

ABSTRACT
Recent studies demonstrate that the microbiota—the collective sum of microorganisms inhabiting the human body—particularly the gut microbiota, plays a critical role in maintaining health and the pathogenesis of diseases. The aim of this review is to examine the relationship between gut microbiota and chronic diseases and to emphasize the importance of nursing care and patient education in this process. Disruption of the gut microbiota—often referred to as dysbiosis—is implicated in the pathophysiology of numerous chronic conditions, including type 2 diabetes, obesity, cardiovascular diseases, and inflammatory bowel diseases. It is well-recognized that the use of probiotics and prebiotics, high-fiber diets, and lifestyle modifications can alleviate the symptoms of chronic diseases by enhancing microbiota diversity. However, patients often experience a lack of knowledge in this area and may resort to erroneous practices. As healthcare professionals who maintain the most prolonged contact with patients, nurses hold a pivotal role in the preservation of microbiota health. Nurses should manage the processes of regulating dietary habits, preventing the uninformed use of probiotics, and raising awareness regarding unnecessary antibiotic use, which negatively impacts the microbiota. Patient education enhances treatment adherence, reduces complications, and supports the patient's self-care agency. Consequently, the management of gut microbiota has become an integral part of the multidisciplinary treatment of chronic diseases. Equipping nurses with up-to-date knowledge and enabling them to provide evidence-based care are fundamental elements that will enhance success in chronic disease management.
Keywords: Gut Microbiota, Chronic Diseases, Nursing Care, Patient Education, Probiotics.

BAĞIRSAK MİKROBİYATASI VE KRONİK HASTALIKLAR ARASINDAKİ İLİŞKİ: HEMŞİRELİK BAKIMINDA HASTA EĞİTİMİNİN ÖNEMİ

ÖZET
Son yıllarda yapılan çalışmalar, insan vücudunda yaşayan mikroorganizmaların toplamı olan mikrobiyotanın, özellikle bağırsak mikrobiyotasının, sağlığın korunması ve hastalıkların gelişiminde kritik bir rol oynadığını göstermektedir. Bağırsak mikrobiyotasındaki dengesizlik; tip 2 diyabet, obezite, kardiyovasküler hastalıklar ve inflamatuar bağırsak hastalıkları gibi pek çok kronik hastalığın patofizyolojisinde yer almaktadır. Probiyotik ve prebiyotik kullanımı, lifli beslenme ve yaşam tarzı değişikliklerinin mikrobiyota çeşitliliğini artırarak kronik hastalık semptomlarını hafifletebildiği bilinmektedir. Ancak, hastaların bu konuda bilgi eksikliği yaşadığı ve yanlış uygulamalara yönelebildiği belirlenmiştir. Hemşireler, hastayla en uzun süre temas kuran sağlık profesyonelleri olarak, mikrobiyota sağlığının korunmasında kilit role sahiptir. Hemşireler; hastaların beslenme alışkanlıklarının düzenlenmesi, bilinçsiz probiyotik kullanımının önlenmesi ve mikrobiyotayı olumsuz etkileyen gereksiz antibiyotik kullanımı konusunda farkındalık yaratılması süreçlerini yönetmelidir. Hasta eğitimi; tedaviye uyumu artırmakta, komplikasyonları azaltmakta ve hastanın öz-bakım gücünü desteklemektedir. Bağırsak mikrobiyotasının yönetimi, kronik hastalıkların multidisipliner tedavisinde ayrılmaz bir parça haline gelmiştir.

Hemşirelerin bu güncel bilgilere sahip olması, kanıta dayalı bakım sunmaları ve hastayı bilimsel veriler ışığında eğitmeleri, kronik hastalık yönetiminde başarıyı artıracak temel unsurlardır. Bu derlemenin amacı, bağırsak mikrobiyotası ile kronik hastalıklar arasındaki ilişkiyi incelemek ve bu süreçte hemşirelik bakımının ve hasta eğitiminin önemini vurgulamaktır.

Anahtar Kelimeler: Bağırsak Mikrobiyotası, Kronik Hastalıklar, Hemşirelik Bakımı, Hasta Eğitimi, Probiyotikler.

ENVIRONMENTAL IMPACTS OF PHARMACEUTICAL WASTE IN INTERNAL MEDICINE CLINICS AND GREEN NURSING

Lect. Hilal BENZER
Hasan Kalyoncu University, Vocational School, Department of Medical Services and Techniques, Türkiye
ORCID: 0000-0001-8046-6350

Prof. Dr. Özlem OVAYOLU
Gaziantep University, Faculty of Health Sciences, Department of Nursing, Türkiye
ORCID: 0000-0002-7335-4032

ABSTRACT
The delivery of modern healthcare services results in the generation of substantial quantities of medical waste and significant environmental pollution. Internal medicine clinics are among the primary units where hospital-derived pharmaceutical waste is most extensively generated, owing to chronic disease management, long-term pharmacotherapy, and intensive use of medical consumables. The objective of this review is to analyze medication waste management within internal medicine settings and to elucidate the pivotal roles of nurses in environmental sustainability, supported by evidence-based findings. The concept of 'Green Nursing' is an emerging approach that aims to preserve environmental sustainability while providing nursing care. It is well-recognized that improperly disposed antibiotics exacerbate the risk of antimicrobial resistance, while cytostatic and hormonal drug residues exert endocrine-disrupting effects within aquatic ecosystems. Suboptimal practices by nurses during medication preparation and administration can lead to substantial quantities of pharmaceutical waste. Furthermore, evidence suggests that patients generate significant environmental pollution by disposing of expired medications into sinks or household waste post-discharge; however, nursing education remains insufficient in addressing this issue. Within the scope of Green Nursing, internal medicine nurses should assume a leadership role in monitoring medication inventory management, ensuring the accurate segregation of waste at its source, and integrating 'zero waste' principles into clinical practice. In particular, 'safe medication disposal' education provided to chronic patients under polypharmacy monitoring serves as a primary intervention tool in protecting environmental public health. To establish the resilient healthcare systems of the future, it is of paramount importance that the concept of environmental sustainability becomes an integral part of both nursing curricula and in-service hospital training.
Keywords: Green Nursing, Pharmaceutical Waste, Sustainability, Internal Medicine, Environmental Health.

İÇ HASTALIKLARI KLİNİKLERİNDE İLAÇ ATIKLARININ ÇEVRESEL ETKİLERİ VE YEŞİL HEMŞİRELİK

ÖZET
Modern sağlık hizmetleri sunumu, önemli miktarda tıbbi atık üretimine ve çevresel kirliliğe neden olmaktadır. İç hastalıkları klinikleri; kronik hastalık yönetimi, uzun süreli ilaç tedavileri ve yoğun sarf malzemesi kullanımı nedeniyle hastane kaynaklı farmasötik atıkların en fazla üretildiği birimlerin başında gelmektedir. "Yeşil Hemşirelik" (Green Nursing) kavramı, bakım sunarken çevresel sürdürülebilirliği korumayı hedefleyen yeni bir yaklaşımdır. Yanlış imha edilen antibiyotiklerin antimal direnç riskini artırdığı, sitostatik ve hormonal ilaç atıklarının ise su ekosistemlerinde endokrin bozucu etkiler yarattığı bilinmektedir. Hemşirelerin ilaç hazırlama ve uygulama aşamalarında yaptıkları küçük dikkatsizlikler büyük miktarda farmasötik atığa yol açabilmektedir. Ayrıca, hastaların taburculuk sonrası evde biriken miadı dolmuş ilaçları lavaboya veya çöpe dökerek ciddi bir çevre kirliliği yarattığı, ancak bu konuda hemşirelik eğitimlerinin yetersiz kaldığı düşünülmektedir.

Yeşil hemşirelik kapsamında iç hastalıkları hemşireleri; ilaç stok yönetiminin takibi, atıkların kaynağında doğru ayrıştırılması ve "sıfır atık" ilkelerinin kliniğe entegre edilmesinde liderlik rolü üstlenmelidir. Özellikle polifarmasi (çoklu ilaç kullanımı) izlemi yapılan kronik hastalara verilen "güvenli ilaç imhası" eğitimi, çevresel halk sağlığının korunmasında birincil müdahale aracıdır. Geleceğin dirençli sağlık sistemlerini kurabilmek için, çevresel sürdürülebilirlik kavramının hemşirelik eğitiminin ve hastane içi eğitimlerin ayrılmaz bir parçası olması büyük önem taşımaktadır. Bu derlemenin amacı, iç hastalıkları kliniklerinde ilaç atıklarının yönetimini incelemek ve hemşirelerin çevresel sürdürülebilirlikteki kritik rollerini kanıta dayalı verilerle ortaya koymaktır.
Anahtar Kelimeler: Yeşil Hemşirelik, İlaç Atıkları, Sürdürülebilirlik, İç Hastalıkları, Çevre Sağlığı.

AKADEMİ İLE KLİNİK ARASINDAKİ BOŞLUK: KANITA DAYALI HEMŞİRELİK UYGULAMALARININ KLİNİK PRATİĞE AKTARILMASINDA ENGELLER

Gülsüm GÜLŞEN
Gaziantep University, Faculty of Health Sciences, Department of Internal Medicine Nursing, Türkiye
ORCID: 0000-0002-8432-7857

Prof. Dr. Özlem OVAYOLU
Gaziantep University, Faculty of Health Sciences, Department of Internal Medicine Nursing, Türkiye
ORCID: 0000-0002-7335-4032

ÖZET
Kanıta dayalı uygulamalar; Hemşirelikte alışılmış yöntemlerin yerine araştırma sonuçlarına ve bilimsel bilgiye dayalı olacak şekilde bakım kalitesinin arttırılması açısından modern hemşirelik bakımının temel bileşenlerinden biridir. Ancak güçlü bilimsel kanıtların literatürde mevcut olmasına rağmen klinik pratiğe yeterince yansıtılamadığı ve uygulama–kanıt arasında önemli bir boşluk bulunduğu bildirilmektedir. Bu durum, hemşirelik bakımında kanıta dayalı uygulamaların sürdürülebilirliğini ve etkinliğini sınırlayan önemli bir sorun olmaya devam etmektedir. Bu bilgiler ışığında bu derlemenin amacı, kanıta dayalı hemşirelik uygulamalarının klinik pratiğe aktarılmasında karşılaşılan engelleri literatür doğrultusunda ele almak ve bu engelleri hemşirelik bakımı ve eğitim süreçleri açısından tartışmaktır. Literatürde bildirilen başlıca engeller; bireysel düzeyde bilgi ve beceri eksikliği, araştırma sonuçlarını yorumlama güçlüğü ve değişime direnç; iş yükü, yönetim desteğinin yetersizliği ve kaynak eksikliği; sistem baz alındığında ise yönetimsel ve kanıta dayalı uygulamaları destekleyen politikaların sınırlı olması şeklinde sınıflandırılmaktadır. Hemşirelikte kanıta dayalı uygulamaların klinik pratiğe aktarılmasında, hemşirelerin araştırma okuryazarlığının geliştirilmesi, liderlik desteğinin güçlendirilmesi ve eğitim süreçlerinin yapılandırılması kritik öneme sahiptir. Özellikle eğitim hemşirelerinin, kanıtların klinik uygulamaya uyarlanmasında köprü rolü üstlenmesi; hizmet içi eğitimler, klinik rehberler ve uygulama protokolleri aracılığıyla bu süreci desteklemesi gerekmektedir. Sonuç olarak, kanıta dayalı hemşirelik uygulamalarının klinik pratiğe etkin biçimde aktarılabilmesi, yalnızca bireysel çabalarla değil; akademinin saha ile işbirliği içinde olması ve kurumsal yaklaşımların harmanlanmasıyla mümkündür. Klinik ortamda kanıta dayalı bakım kültürünün geliştirilmesi, hemşirelik bakım kalitesinin artırılmasına ve hasta sonuçlarının iyileştirilmesine önemli katkılar sağlayacaktır.
Anahtar Kelimeler: Kanıta dayalı hemşirelik, klinik uygulama, uygulama engelleri, hemşirelik eğitimi, bakım kalitesi

THE GAP BETWEEN ACADEMIA AND CLINICAL PRACTICE:BARRIERS TO THE TRANSLATION OF EVIDENCE-BASED NURSING PRACTICES INTO CLINICAL PRACTICE

ABSTRACT
Evidence-based nursing practices are one of the fundamental components of modern nursing care in terms of improving the quality of care by replacing traditional nursing methods with care based on research findings and scientific knowledge. However, despite the presence of strong scientific evidence in the literature, it has been reported that this evidence is not sufficiently reflected in clinical practice and that there is a significant gap between practice and evidence. This situation continues to be an important problem that limits the sustainability and effectiveness of evidence-based practices in nursing care. In light of this information, the aim of this review is to address the barriers encountered in the translation of evidence-based nursing practices into clinical practice in line with the literature and to discuss these barriers in terms of nursing care and educational processes.

The main barriers reported in the literature are classified as follows: at the individual level, lack of knowledge and skills, difficulty in interpreting research findings, and resistance to change; workload, insufficient managerial support, and lack of resources; and at the system level, organizational culture and the limited availability of policies that support evidence-based practices. In the translation of evidence-based practices into clinical practice in nursing, the development of nurses' research literacy, the strengthening of leadership support, and the structuring of educational processes are of critical importance. In particular, nurse educators need to assume a bridging role in adapting evidence to clinical practice and support this process through in-service training programs, clinical guidelines, and practice protocols.

In conclusion, the effective translation of evidence-based nursing practices into clinical practice is possible not only through individual efforts but also through collaboration between academia and the clinical field and the integration of institutional approaches. The development of an evidence-based care culture in the clinical setting will make a significant contribution to improving the quality of nursing care and patient outcomes.

Keywords: Evidence-based nursing, clinical practice, barriers to implementation, nursing education, quality of care

TEKİL SEMPTOMDAN BÜTÜNCÜL BAKIMA: PALYATİF BAKIM ALAN SON DÖNEM KANSER HASTALARINDA SEMPTOM KÜMELERİ VE HEMŞİRELİK

Gülsüm GÜLŞEN
Gaziantep University, Faculty of Health Sciences, Department of Internal Medicine Nursing, Türkiye
ORCID: 0000-0002-8432-7857

Prof. Dr. Özlem OVAYOLU
Gaziantep University, Faculty of Health Sciences, Department of Internal Medicine Nursing, Türkiye
ORCID: 0000-0002-7335-4032

ÖZET
Son dönem kanser hastalarının yaşadığı semptom yükü giderek artmakta ve hastalar çoğu zaman birden fazla fiziksel, psikolojik ve duygusal semptomları eş zamanlı olarak deneyimlemektedir. Palyatif bakımda temel amaç; küratif tedaviden ziyade semptom kontrolünü sağlamak, hasta ve ailesinin gereksinimlerine bütüncül bir yaklaşım sergileyerek yaşam kalitesini arttırmaktır. Bu bağlamda, semptomların tekil olarak değerlendirilmesi çoğu zaman yetersiz kalmakta; semptomların birlikte ortaya çıkma örüntülerini tanımlayan "semptom kümeleri" yaklaşımı giderek önem kazanmaktadır.
Bu derlemenin amacı, palyatif bakım alan son dönem kanser hastalarında sık görülen semptom kümelerini literatür doğrultusunda ele almak ve bu yaklaşımın hemşirelik bakımına yansımalarını tartışmaktır. Literatürde son dönem kanser hastalarında en sık bildirilen semptom kümeleri arasında ağrı–yorgunluk–uyku bozukluğu, dispne–anksiyete, bulantı–iştahsızlık–kabızlık ve depresyon–umutsuzluk–emosyonel sıkıntı kümeleri yer almaktadır. Bu semptom kümelerinin hastaların fonksiyonel durumunu, psikososyal iyilik halini ve yaşam kalitesini önemli ölçüde olumsuz etkilediği bildirilmektedir.
Sonuç olarak, palyatif bakım alan son dönem kanser hastalarında semptom kümeleri yaklaşımı, hemşirelik bakımında bütüncül ve insan odaklı bir çerçeve sunmaktadır. Bu yaklaşımın klinik uygulamalarda ve hemşirelik eğitiminde daha görünür hale getirilmesi, palyatif hemşireliğinin görünürlüğünün artmasına, bakım kalitesinin artırılması ve hastanın yaşam kalitesinin desteklenmesine önemli katkılar sağlayacaktır.
Anahtar Kelimeler: Palyatif bakım, son dönem kanser, semptom kümeleri, hemşirelik bakımı, yaşam kalitesi

FROM INDIVIDUAL SYMPTOMS TO HOLISTIC CARE: SYMPTOM CLUSTERS AND NURSING IN END-STAGE CANCER PATIENTS RECEIVING PALLIATIVE

ABSTRACT
The symptom burden experienced by patients with end-stage cancer is progressively increasing, and patients often experience multiple physical, psychological, and emotional symptoms simultaneously. The primary goal of palliative care is not curative treatment but rather symptom control and the enhancement of quality of life through a holistic approach to the needs of the patient and family. In this context, evaluating symptoms individually is often insufficient; therefore, the "symptom clusters" approach, which defines patterns of co-occurring symptoms, has gained increasing importance.
The aim of this review is to address the commonly observed symptom clusters in end-stage cancer patients receiving palliative care in line with the literature and to discuss the implications of this approach for nursing care. The most frequently reported symptom clusters in end-stage cancer patients in the literature include pain–fatigue–sleep disturbance, dyspnea–anxiety, nausea–loss of appetite–constipation, and depression–hopelessness–emotional distress clusters. These symptom clusters have been reported to significantly and adversely affect patients' functional status, psychosocial well-being, and quality of life.

In conclusion, the symptom clusters approach in end-stage cancer patients receiving palliative care provides a holistic and person-centered framework for nursing care. Increasing the visibility of this approach in clinical practice and nursing education will make a significant contribution to enhancing the visibility of palliative nursing, improving the quality of care, and supporting patients' quality of life.
Keywords: Palliative care, end-stage cancer, symptom clusters, nursing care, quality of life

TİP 2 DİYABET HASTALARININ KULLANDIĞI TAMAMLAYICI YÖNTEMLER VE DİYABET TEDAVİSİNE UYUMLARINA ETKİSİ

Lect. Seda İLGÜN
Gaziantep University, Institute of Health Sciences, Department of Internal Medicine Nursing, Türkiye
ORCID: 0000-0003-2204-1359

Prof. Dr. Özlem OVAYOLU
Gaziantep University, Faculty of Health Sciences, Department of Nursing, Division of Internal Medicine Nursing, Türkiye
ORCID: 0000-0002-7335-4032

ÖZET
Tip 2 diyabet, hem morbidite hem de mortalite üzerinde büyük etkiler yaratan en yaygın kronik hastalıklardan biridir. Hastalığın yönetiminde diyet, egzersiz ve ilaç tedavileri önemli bir rol oynamaktadır. Hastalığın yönetimindeki zorluklar ve hastalığın kronik seyirli olması diyabetli bireylerin tamamlayıcı tedavi yöntemlerine ilgi duymasını neden olabilmektedir. Tip 2 diyabet hastalarının önemli bir kısmının en az bir tamamlayıcı yöntem kullandığı, bu yöntemlere başvurma sıklığının %17 ile %72,8 arasında değiştiği ve en sık tıbbi bitkilerin tercih edildiği belirtilmektedir. Bu yöntemlerin stres düzeyini azaltarak ve hastaların kendilerini daha iyi hissetmelerini sağlayarak tedaviye uyumu olumlu yönde etkilediği bildirilmiştir. Ancak, tamamlayıcı yöntemlerin sağlık profesyoneline danışılmadan kullanılması, ilaç tedavisinin aksatılması veya bırakılması gibi durumların tedaviyi olumsuz etkilediği ve kan şekeri kontrolünü zorlaştırdığı da belirtilmiştir. Bu nedenle sağlık profesyonellerinin, hastaların tamamlayıcı yöntem kullanımına ilişkin bilgi sahibi olması, tedaviye uyumun sürdürülmesinde kritik bir rol oynamaktadır. ÖZETle, sağlık profesyonellerinin hastaların tamamlayıcı yöntem kullanımını sorgulaması, bilimsel kanıtlar doğrultusunda danışmanlık vermesi ve hastaları bilinçlendirmesi büyük önem taşımaktadır.
Anahtar kelimeler: Tip 2 Diyabet, Tamamlayıcı yöntemler, Tedaviye uyum.

COMPLEMENTARY THERAPIES USED BY TYPE 2 DIABETES PATIENTS AND THEIR EFFECT ON DIABETES TREATMENT ADHERENCE

ABSTRACT
Type 2 diabetes is one of the most common chronic diseases, having a significant impact on both morbidity and mortality. Diet, exercise, and medication play a crucial role in disease management. The challenges in managing the disease and its chronic course can lead individuals with diabetes to seek complementary treatment methods. It is reported that a significant proportion of patients with type 2 diabetes use at least one complementary treatment method, with the frequency of resorting to these methods ranging from 17% to 72.8%, and medicinal herbs being the most frequently preferred. These methods have been reported to positively affect treatment adherence by reducing stress levels and making patients feel better. However, it has also been noted that the use of complementary methods without consulting a healthcare professional, or interruptions or discontinuation of medication, negatively affects treatment and makes blood sugar control more difficult. Therefore, it is critical for healthcare professionals to be informed about patients' use of complementary methods in order to maintain treatment adherence. In summary, it is of great importance for healthcare professionals to question patients about their use of complementary methods, provide counseling based on scientific evidence, and educate patients.
Key words: Type 2 Diabetes, Complementary methods, Treatment adherence.

İKLİM DEĞİŞİKLİĞİNİN KRONİK HASTALIK YÖNETİMİNE ETKİSİ VE HEMŞİRELİK YAKLAŞIMLARI

Lect. Seda İLGÜN
Gaziantep University, Institute of Health Sciences, Department of Internal Medicine Nursing, Türkiye
ORCID: 0000-0003-2204-1359

Prof. Dr. Özlem OVAYOLU
Gaziantep University, Faculty of Health Sciences, Department of Nursing, Division of Internal Medicine Nursing, Türkiye
ORCID: 0000-0002-7335-4032

ÖZET
İklim değişikliği yalnızca çevresel bir sorun değil, aynı zamanda toplum sağlığı üzerinde giderek artan ve çok yönlü bir tehdit **o**larak kabul edilmektedir. 21. yüzyılın en büyük küresel tehdidi olarak görülen bir halk sağlığı sorunudur. Artan sıcaklıklar, hava kirliliği, ekstrem hava olayları ve ekosistem değişiklikleri, özellikle kronik hastalığı olan bireyler üzerinde ciddi sağlık riskleri oluşturmaktadır. İklim değişikliğinin akut ve kronik etkileri insanlarda kardiyovasküler, solunum, immün ve sinir sistemi gibi birçok sistemi olumsuz etkilemekte olup; kronik hastalığı olanlarda daha ciddi sonuçları olmaktadır. İklim değişikliğinin sebepleri ve olumsuz sonuçlarından olan kronik hastalıkların artışı her geçen gün artmaktadır. Özellikle ileri yaşta ve sağlık açısından kırılgan bireylerde kardiyovasküler hastalıklar, inme, hipertansiyon, böbrek, solunum sistemi rahatsızlıklarına bağlı hastalıkların sık görülmesine yol açmıştır. İklim değişikliği, kronik hastalıkların yönetimini daha karmaşık hale getirmektedir. Hemşireler; hem klinik uygulamada hem de toplumsal savunuculukta bu krizle mücadele etmeli, hastaların değişen çevre koşullarına uyum sağlamasına yardımcı olmalıdır. Hemşireler, bakımın sürekliliğini sağlama, risk gruplarını belirleme, eğitim ve savunuculuk rolleri ile iklim değişikliğine uyum ve etkilerin azaltılmasında kilit bir konumdadır. İklime duyarlı hemşirelik uygulamalarının geliştirilmesi, kronik hastalığı olan bireylerin yaşam kalitesini artıracaktır. Bu derlemenin amacı, iklim değişikliğinin kronik hastalıklar üzerindeki etkilerini incelemek ve hemşirelerin bu süreçteki rol ve sorumluluklarını ortaya koymaktır.
Anahtar Kelimeler: İklim değişikliği, Kronik hastalık yönetimi, Hemşirelik

THE IMPACT OF CLIMATE CHANGE ON CHRONIC DISEASE MANAGEMENT AND NURSING APPROACHES

ABSTRACT
Climate change is not only an environmental issue but is increasingly recognized as a growing and multifaceted threat to public health. It is considered one of the greatest global public health challenges of the 21st century. Rising temperatures, air pollution, extreme weather events, and ecosystem changes pose serious health risks, particularly for individuals with chronic diseases. The acute and chronic effects of climate change adversely affect multiple body systems, including the cardiovascular, respiratory, immune, and nervous systems, leading to more severe outcomes among people with chronic conditions. Both the causes and the negative consequences of climate change are associated with a continuous increase in the prevalence of chronic diseases. This situation has resulted in a higher incidence of cardiovascular diseases, stroke, hypertension, renal disorders, and respiratory diseases, especially among older adults and health-vulnerable populations. Climate change further complicates the management of chronic diseases. Nurses must address this crisis through both clinical practice and community advocacy, supporting patients in adapting to changing environmental conditions. With their roles in ensuring continuity of care, identifying high-risk groups, providing education, and engaging in advocacy, nurses occupy a key position in climate change adaptation and mitigation efforts.

The development of climate-sensitive nursing practices can improve the quality of life of individuals with chronic diseases. The aim of this review is to examine the effects of climate change on chronic diseases and to highlight the roles and responsibilities of nurses in this process.
Keywords: Climate change, Chronic disease management, Nursing

TREATMENT ADHERENCE IN HYPERTENSION: DETERMINANTS AND CURRENT APRROACHES

Mehmet Ali BOZKURT
Gaziantep University, Graduate School of Health Sciences, Department of Nursing, Türkiye
ORCID: 0000-0002-8481-1200

Prof. Dr. Özlem OVAYOLU
Gaziantep University, Faculty of Health Sciences, Department of Nursing, Türkiye
ORCID: 0000-0002-7335-4032

ABSTRACT
Hypertension (HT) is a chronic condition and one of the major modifiable risk factors for morbidity and mortality worldwide. Despite advances in effective pharmacological therapies and lifestyle interventions, failure to achieve optimal blood-pressure control is frequently attributable to poor adherence to treatment.
Adherence to therapy is a multidimensional process shaped by a range of determinants. These include patient-related factors (deficits in self-management skills, forgetfulness), socioeconomic factors (medication costs, limited access to healthcare, inadequate social support), treatment-related factors (polypharmacy, duration of therapy, adverse effects), health-system factors (deficiencies in follow-up systems, limited health literacy), and the symptom burden associated with medications.
Contemporary efforts to improve adherence among patients with HT are shifting toward patient-centred, technology-assisted solutions. Notable strategies include mobile health applications (m-Health), intelligent reminder systems, and self-monitoring models that enable patients to track their own physiological and treatment data. In addition, cognitive-behavioral interventions and motivational interviewing techniques have been shown to positively influence adherence. In conclusion, successful management of hypertension requires not only appropriate treatment protocols but also measures to enhance adherence and actively engage patients in their care. Addressing the factors that impair adherence, further integrating technological innovations into routine care, and adopting a multidisciplinary approach are essential for improving outcomes in HT management.
Keywords: Hypertension, Treatment Adherence, Self-management, Nursing

HİPERTANSİYONDA TEDAVİYE UYUM: ETKİLEYEN FAKTÖRLER VE GÜNCEL YAKLAŞIMLAR

ÖZET
Hipertansiyon (HT), küresel ölçekte morbidite ve mortalitenin önemli değiştirilebilir risk faktörlerinden olan kronik bir sağlık sorunudur. Etkili farmakolojik tedaviler ve yaşam tarzı müdahalelerindeki ilerlemelere rağmen optimal kan basıncı düzeyine ulaşılamamasındaki nedenler arasında düşük tedavi uyumu önemli bir yer tutmaktadır.
Tedaviye uyum birçok farklı nedene bağlı olarak şekillenen çok boyutlu bir süreçtir. Bu nedenler hasta odaklı faktörler (öz-yönetim becerilerindeki yetersizlik, unutkanlık), sosyoekonomik faktörler (ilaç maliyetleri, sağlık hizmetlerine erişim ve sosyal destek yetersizliği), tedaviyle ilişkili faktörler (polifarmasi, tedavinin süresi, yan etkiler), sağlık sistemiyle ilişkili faktörler (takip sistemindeki eksiklikler, sağlık okuryazarlığı) ve ilaç ilişkili semptom yükü nedenli olabilmektedir.
Günümüzde HT hastalarında tedaviye uyum düzeylerini artırmaya yönelik girişimler hastayı merkeze alan ve teknoloji destekli sistemlere doğru dönüşüm geçirmektedir. Bu girişimler arasında mobil sağlık uygulamaları (m-Health), akıllı hatırlatıcılar, hastaların kendi verilerini takip etmesine olanak sağlayan kendi kendine izlem modelleri ön plana çıkmaktadır. Bunlara ek olarak bilişsel davranışçı müdahaleler ve motivasyonel görüşme teknikleri de tedaviye uyum sürecini olumlu yönde etkileyen uygulamalar arasında gösterilmektedir. Sonuç olarak HT yönetiminde başarı, doğru tedavi protokolüne ek olarak

tedaviye uyum sürecinin artırılması ve hastanın tedavi sürecine etkin katılımı ile mümkündür. Tedaviye uyumu etkileyen faktörlerin ortadan kaldırılması, teknolojik gelişmelerin sürece daha fazla entegre edilmesi ve tüm bu süreç boyunca multidisipliner bir yaklaşım benimsenmesi gerekmektedir.

Anahtar kelimeler: Hipertansiyon, Tedaviye Uyum, Öz-yönetim, Hemşirelik

LIFESTYLE MANAGEMENT AND NURSING APPROACHES IN METABOLIC SYNDROME

Mehmet Ali BOZKURT
Gaziantep University, Graduate School of Health Sciences, Department of Nursing, Türkiye
ORCID: 0000-0002-8481-1200

Prof. Dr. Özlem OVAYOLU
Gaziantep University, Faculty of Health Sciences, Department of Nursing, Türkiye
ORCID: 0000-0002-7335-4032

ABSTRACT
Metabolic syndrome is defined as an endocrine disorder characterized by the coexistence of cardiovascular risk factors such as insulin resistance, hypertension, dyslipidemia, and abdominal obesity. As a primary risk factor 14ort he development of type 2 diabetes and cardiovascular diseases, metabolic syndrome has become a global public health concern along with the increase in unhealthy dietary habits and sedentary lifestyles. While lifestyle modifications are central to the treatment process, evidence-based nursing approaches and holistic care strategies play a pivotal role in managing metabolic syndrome, which has a rising prevalence.
Nurses, as integral components of the multidisciplinary team, assume critical roles in long-term follow-up, monitoring physical parameters, and educational processes aimed at supporting behavioral changes. Nursing management focuses on the implementation of individualized nutrition plans, weight control, smoking cessation, stress management, physical activity, and the enhancement of treatment adherence. Furthermore, integrating technological advancements into the process allows 14ort he monitoring of metabolic parameters, facilitating early diagnosis in risk groups and reinforcing self-management skills through continuous communication with patients. In conclusion, the development of nurse-led, structured follow-up and educational programs is imperative to prevent complications and ensure the successful implementation of lifestyle changes in metabolic syndrome.
Keywords: Metabolic Syndrome, Lifestyle Management, Nursing Care, Self-Management.

METABOLİK SENDROMDA YAŞAM TARZI YÖNETİMİ VE HEMŞİRELİK YAKLAŞIMLARI

ÖZET
Metabolik sendrom; insülin direnci, hipertansiyon, dislipidemi ve abdominal obezite gibi kardiyovasküler risk faktörlerinin birlikte görüldüğü endokrin bir bozukluk olarak tanımlanmaktadır. Tip-2 diyabet ve kardiyovasküler hastalıkların gelişiminde temel risk faktörlerinden biri olan metabolik sendrom, sağlıksız beslenme alışkanlıkları ve sedanter yaşam tarzının artmasıyla birlikte küresel bir halk sağlığı sorunu haline gelmiştir. Temel olarak yaşam tarzı değişiklikleri tedavi sürecinde yer almakta ve prevalansı giderek artmakta olan metabolik sendromda kanıta dayalı hemşirelik yaklaşımlarının rolü ve holistik bakım stratejileri önemli bir yer tutmaktadır.
Metabolik sendromun yönetiminde multidisipliner ekibin önemli bir parçası olan hemşireler, uzun süreli izlem süreçlerinde, fiziksel parametrelerin takibinde ve hastanın davranışsal değişimini destekleyecek eğitim sürecinde kritik roller üstlenmektedir. Hemşirelik yönetiminde kişiye özgü beslenme planının uygulanması, kilo kontrolü, sigaranın bırakılması, stres yönetimi, fiziksel aktivite ve tedaviye uyum düzeyinin artırılması odak noktaları oluşturmaktadır. Ayrıca teknolojik gelişmelerin sürece entegrasyonu ile bireylerin metabolik parametrelerinin takibi ile hem risk gruplarının erken tanılanması hem de hasta grubu ile sürekli iletişim sağlanarak öz-yönetim becerileri güçlendirilebilmesi mümkündür. Sonuç olarak, metabolik sendromda komplikasyonların önlenebilmesi ve yaşam tarzı değişikliklerinin uygulanabilmesi için hemşire liderliğinde yapılandırılmış izlem ve eğitim programlarının geliştirilmesi gerekmektedir.
Anahtar kelimeler: Metabolik Sendrom, Yaşam Tarzı Yönetimi, Hemşirelik Bakımı, Öz-yönetim.

ENHANCING THE PERFORMANCE OF CONCRETE WASTE VIA OPTIMIZED GRINDING CONDITIONS

Asst. Prof. Hüseyin İLCAN

Hacettepe University, Faculty of Engineering, Civil Engineering Department, Ankara, Türkiye,
ORCID: 0000-0002-7853-1907

ABSTRACT
This study was conducted to contribute to the mitigation of the globally increasing problem of construction and demolition waste (CDW), which requires sustainable and value-added solutions. Within this scope, the potential use of this waste in cementitious systems was evaluated, and the effects of different grinding methods applied prior to use on the performance of the resulting powder were investigated in detail. In the study, a vertical stirred mill was tested under different operational parameters; three different media filling levels (MFL; 50%, 60%, and 70%) and four grinding durations (5, 10, 20, and 30 minutes) were evaluated. The results clearly indicate that the grinding performance is highly sensitive to both the MFL and the grinding duration. In particular, short-duration grinding at high MFL (%70) effectively reduced the particle size of the concrete waste (CW) and significantly increased the specific surface area, achieving the highest fineness. Conversely, deviations from these optimal conditions—such as low MFL, excessively long grinding times, or over-grinding at high MFL—led to inefficient energy transfer, increased agglomeration tendencies, and consequently a marked reduction in fine material production. Therefore, selecting an appropriate MFL–duration combination for CW is critical not only for particle size reduction but also for the energy efficiency of the grinding process and the reactivity potential of the resulting product. Indeed, the coarse initial particle structure and low initial reactivity of the concrete waste could be significantly improved only under the correct grinding parameters. Furthermore, compressive strength and strength activity index (SAI) results demonstrated that appropriate MFL–duration combinations directly influence not only the fineness but also the ultimate mechanical performance. Notably, CW samples ground at 70% MFL achieved compressive strengths close to the reference mortar at both early and later ages, strongly confirming the decisive role of grinding parameters in enhancing the pozzolanic reactivity of concrete waste powder.
Keywords: Construction and Demolition Waste, Recycled Concrete, Grinding Performance, Sustainable Material Use, Green Materials

BETON ATIĞININ ÖĞÜTME KOŞULLARININ OPTİMİZASYONU İLE PERFORMANSININ ARTIRILMASI

ÖZET
Dünya genelinde giderek büyüyen ve sürdürülebilir, katma değerli çözümler gerektiren inşaat ve yıkıntı atığı (İYA) sorununun giderilmesine katkı sunmak amacıyla bu çalışma yürütülmüştür. Bu kapsamda, söz konusu atığın çimentolu sistemlerde kullanım potansiyeli değerlendirilmiş ve kullanım öncesi uygulanan farklı öğütme yöntemlerinin nihai toz ürün üzerindeki performans etkileri ayrıntılı olarak incelenmiştir. Çalışmada, dik karıştırmalı değirmenin farklı işletim parametreleri test edilmiş; üç farklı medya doluluk oranı (MDO; %50, %60 ve %70) ile dört farklı öğütme süresi (5, 10, 20 ve 30 dakika) değerlendirilmiştir. Elde edilen bulgular, öğütme performansının hem MDO'ya hem de öğütme süresine son derece duyarlı olduğunu açıkça göstermektedir. Özellikle yüksek MDO değerlerinde (%70) gerçekleştirilen kısa süreli öğütme işlemleri, beton atığının (BA) tane boyutunu etkili biçimde küçültmüş, özgül yüzey alanını belirgin biçimde artırmış ve böylece en yüksek incelme verimine ulaşılmasını sağlamıştır. Buna karşılık, bu optimum koşullardan sapılması—örneğin MDO'nun düşük olması, sürenin gereğinden fazla uzatılması veya yüksek MDO'da aşırı süre uygulanması—enerji aktarımının verimsizleşmesine, aglomerasyon eğilimlerinin artmasına ve dolayısıyla ince malzeme üretiminin belirgin şekilde azalmasına neden olmuştur.

Dolayısıyla, BA için uygun MDO–süre kombinasyonunun belirlenmesi yalnızca tane boyutunun azaltılması açısından değil, aynı zamanda öğütme sürecinin enerji etkinliği ve ortaya çıkan ürünün reaktivite potansiyeli açısından da kritik öneme sahiptir. Nitekim beton atığının iri başlangıç tane yapısı ve düşük başlangıç reaktivitesi, ancak doğru öğütme parametreleri altında anlamlı biçimde iyileştirilebilmiştir. Ayrıca basınç dayanımı ve dayanım aktivite indeksi sonuçları, uygun MDO–süre kombinasyonlarının yalnızca incelme performansını değil, nihai mekanik dayanım gelişimini de doğrudan etkilediğini ortaya koymuştur. Özellikle %70 MDO'da öğütülmüş BA numunelerinin hem erken yaşlarda hem de geç yaşlarda referans harca oldukça yakın dayanım değerlerine ulaşmış olması, öğütme parametrelerinin beton atığı tozunun puzolanik reaktivitesini artırmada belirleyici bir rol oynadığını güçlü biçimde doğrulamaktadır.

Anahtar kelimeler: İnşaat ve Yıkıntı Atığı, Beton Atığı, Öğütme Performansı, Sürdürülebilir Malzeme Kullanımı, Yeşil Malzeme

EXPLORING RECYCLED CONCRETE AGGREGATE AS A FUNCTIONAL COMPONENT IN 3D PRINTING

Dr. Merve SÖNMEZ TUĞLUCA
Hacettepe University, Faculty of Engineering, Civil Engineering Department, Ankara, Türkiye
ORCID: 0000-0002-5197-4863

ABSTRACT
The increasing global demand for sustainable construction materials has accelerated interest in integrating recycled concrete aggregate (RCA) into advanced manufacturing methods such as 3-dimensional (3D) concrete printing. Although RCA traditionally introduces challenges related to workability, porosity, and mechanical performance, this study investigates its feasibility in 3D-printable cementitious mixtures. The results show that incorporating RCA tends to increase mixture adhesion and reduce spreading ability, while also influencing open time and setting behaviour. Despite these effects, the adjusted mixtures demonstrated stable extrusion and reliable buildability during 3D printing. Furthermore, strength development trends indicated that RCA-containing mixtures can achieve comparable performance levels to natural aggregate systems when mixture parameters are properly optimized. Minor increases in water-related transport properties and shrinkage were observed, yet these did not impede the overall printability or structural stability of the printed elements.
Overall, the findings reveal that RCA can be successfully used in 3D-printed construction materials, supporting both sustainability goals and resource circularity. The study demonstrates that, even with its inherent limitations, RCA is a viable and promising component in future 3D additive manufacturing applications, provided that mixture design is carefully tailored to accommodate its characteristics.
Keywords: Recycled Concrete Aggregate (RCA), 3-dimensional (3D) Concrete Printing, Sustainable Construction Materials, Mixture Design Optimization

3D BASKIDA İŞLEVSEL BİR BİLEŞEN OLARAK GERİ DÖNÜŞTÜRÜLMÜŞ BETON AGREGASININ ARAŞTIRILMASI

ÖZET
Artan küresel sürdürülebilir yapı malzemesi talebi, geri dönüştürülmüş beton agregasının (GDA) 3-boyutlu (3B) beton baskılama gibi ileri üretim yöntemlerine entegrasyonuna olan ilgiyi hızlandırmıştır. GDA, geleneksel olarak işlenebilirlik, gözeneklilik ve mekanik performans açısından bazı zorluklar oluştursa da bu çalışma, GDA'nın 3B baskıya uygun çimentolu karışımlarda kullanılabilirliğini incelemektedir. Bulgular, GDA kullanımının karışımın yapışkanlığını artırma ve yayılabilirliğini azaltma eğiliminde olduğunu, ayrıca açık çalışma süresi ve priz davranışını etkilediğini göstermektedir. Buna rağmen, ayarlanan karışımlar 3B baskı sırasında kararlı ekstrüzyon ve inşa edilebilirlik performansı sergilemiştir. Ayrıca, dayanım gelişimi eğilimleri, karışım parametreleri uygun şekilde optimize edildiğinde GDA içeren karışımların doğal agrega kullanılan sistemlerle karşılaştırılabilir performans seviyelerine ulaşabileceğini göstermiştir. Suya bağlı taşıma özelliklerinde ve rötrede küçük artışlar gözlemlenmiş olsa da bunlar genel baskı performansını veya basılan elemanların yapısal bütünlüğünü olumsuz etkilememiştir.
Genel olarak, bulgular GDA'nın 3B baskılı yapı malzemelerinde başarıyla kullanılabileceğini hem sürdürülebilirlik hedeflerini hem de kaynak döngüselliğini desteklediğini ortaya koymaktadır. Çalışma, doğasında bulunan sınırlamalara rağmen, uygun şekilde tasarlanmış karışım bileşimi ile GDA'nın gelecekteki 3B eklemeli imalat uygulamaları için uygulanabilir ve umut vadeden bir bileşen olduğunu göstermektedir.
Anahtar kelimeler: Geri Dönüştürülmüş Beton Agregası (GDA), 3-boyutlu (3B) Beton Baskılama, Sürdürülebilir Yapı Malzemeleri, Karışım Tasarım Optimizasyonu

A SECURE SOFTWARE DEVELOPMENT–BASED INTEGRATED HOSPITAL INFORMATION MANAGEMENT SYSTEM COMPATIBLE WITH E-NABIZ AND MEDULA

Mehmet KIZILDAĞ
Adana Alparslan Türkeş Science and Technology University, Vocational School of Information Technologies, Electronics and Automation Department, Adana, Türkiye
ORCID: 0000-0002-9611-6491

ABSTRACT

This study presents the development of a secure software development–oriented, fully integrated Hospital Information Management System (HIMS) designed in accordance with the regulations and technical standards of the Turkish Ministry of Health. The system is compliant with national e-health platforms such as E-Nabız (HealthNet Online), MHRS, and Medula, and aims to provide standardized, digitalized, and securely managed hospital information processes within a unified and modern software architecture.

The development process strictly adhered to Türkiye's Personal Data Protection Law (KVKK No. 6698), ensuring the lawful, transparent, and secure processing of personal and medical data throughout the system. Furthermore, electronic transactions within the platform were designed to comply with the Electronic Signature Law (Law No. 5070), enabling legally valid digital approvals, ensuring non-repudiation, and strengthening data integrity and authentication during medical and administrative operations.

Security requirements were embedded into the entire software development lifecycle in alignment with internationally recognized standards, including ISO/IEC 27001 Information Security Management, ISO/IEC 15504 (SPICE), and ISO/IEC 15408 (Common Criteria). Secure coding principles, encrypted data transmission, role-based access control, strong authentication and authorization mechanisms, secure session management, and comprehensive audit logging were implemented. In addition, the system was engineered to mitigate common vulnerabilities in accordance with the OWASP Top 10 guidelines.

The modular HIMS consolidates essential hospital functions such as patient information management, laboratory operations, appointment scheduling, e-prescription workflows, MSVS (Minimum Data Set) compliance, Renkli Reçete (RBS) integration, and authorized user management. By combining advanced security controls with international health informatics standards (HL7, ICD-10, XML, ATC), and fully compliant data governance structures under KVKK and the 5070 e-signature framework, the system ensures secure interoperability, reduces operational workload, improves data confidentiality, integrity, and availability, and enhances overall efficiency in healthcare service delivery.

Keywords: Secure Software Development, KVKK, Electronic Signature Law No. 5070, HIMS, E-Nabız Integration, Medula, ISO/IEC 27001, Health Informatics, HL7, OWASP, Information Security, MSVS

AN ARTIFICIAL INTELLIGENCE–BASED CONSULTANCY SERVICE–PERSONNEL MATCHING PLATFORM

Mehmet KIZILDAĞ
Adana Alparslan Türkeş Science and Technology University, Vocational School of Information Technologies, Electronics and Automation Department, Adana, Türkiye
ORCID: 0000-0002-9611-6491

ABSTRACT

This study presents the development of an **Artificial Intelligence–based Consultancy Service Matching Platform** aimed at optimizing the assignment of qualified personnel to consultancy service requests. Consultancy services—covering strategic management, R&D, information technologies, human resources, cybersecurity, marketing, and finance—require accurate matching between customer expectations and personnel expertise. Incorrect assignments often lead to customer dissatisfaction, reduced service efficiency, and diminished organizational reputation. The proposed platform addresses this challenge by employing machine learning techniques to improve the effectiveness of service-personnel matching and strengthen the conversion of potential customers into active clients.

The platform utilizes an extensive feature set that includes personnel expertise, experience, education, historical feedback, performance scores, customer sector, service priority, proposed fee, and various operational parameters. A range of machine learning algorithms—**Support Vector Machines (SVM)**, **Multi-Layer Perceptron (MLP)**, **LightGBM**, **Logistic Regression**, and **CatBoost**—are used to generate matching scores. To improve model performance, relevant features are selected using the **mRMR (Minimum Redundancy Maximum Relevance)** method, and hyperparameters are optimized through grid search. Model efficiency is evaluated with established metrics, including **Precision**, **Sensitivity**, **Accuracy**, and **F-score**. A dynamic and multi-model learning structure enables the system to continuously improve as new data becomes available.

A user-friendly interface enables consultancy firms to upload datasets, configure training and testing sets, select machine learning models, optimize hyperparameters, and view performance results. The platform ultimately serves as a **decision support system**, helping organizations assign the most suitable personnel to each consultancy service, reduce mismatches, improve customer satisfaction, and increase long-term service efficiency.

The project offers a significant innovative contribution by introducing an automated and intelligent matching framework specifically tailored to the consultancy sector. The system has strong commercialization potential, allowing consultancy firms to enhance service quality, manage customer relationships more effectively, and gain a competitive advantage in national and international markets.

Keywords: Artificial Intelligence, Machine Learning, Consultancy Services, Service-Personnel Matching, Decision Support System, mRMR, SVM, LightGBM, CatBoost

COMPARATIVE PERFORMANCE ANALYSIS OF DEEP LEARNING MODELS FOR SUPER RESOLUTION UNDER NOISE AND BLUR CONDITIONS

Fatih SAĞLAM
Niğde Ömer Halisdemir University, Faculty of Engineering, Department of Geomatics Engineering, Niğde-Türkiye
ORCID: 0009-0002-5325-5771

Asst. Prof. Dr. Ahmet Emin KARKINLI
Niğde Ömer Halisdemir University, Faculty of Engineering, Department of Geomatics Engineering, Niğde-Türkiye
ORCID: 0000-0001-7216-6251

ABSTRACT
Single-image super-resolution (SISR) models may exhibit notable performance drops when applied to real-world images affected by blur and noise, even if strong performance is obtained on clean benchmarks. It has been anticipated that different deep learning architectures, namely CNNs, Transformers, and GAN-based generative models, may demonstrate different robustness profiles under specific degradations. Therefore, the robustness of EDSR, SwinIR, and Real-ESRGAN was comparatively evaluated under controlled blur and noise conditions, and the architecture that is more suitable for each degradation regime was investigated. Experiments were conducted on the DIV2K validation set using an upscaling factor of x4. Low-resolution inputs were generated from ground-truth images using two-level Gaussian blur (Blur-L1 and Blur-L2) and two-level Gaussian noise (Noise-L1 and Noise-L2) degradations, along with a bicubic baseline condition. Three representative pretrained models were evaluated: EDSR (CNN-based), SwinIR (Transformer-based), and Real-ESRGAN (GAN-based). Performance was assessed using PSNR and SSIM computed on the luminance (Y) channel to measure signal fidelity, and LPIPS to quantify perceptual similarity. Degradation-dependent trade-offs were observed. Under heavy blur (Blur-L2), the highest signal-fidelity performance was achieved by SwinIR with 29.14 dB PSNR, indicating stronger preservation of structural content. Under heavy noise (Noise-L2), substantial performance degradation was observed for SwinIR and EDSR, and PSNR values dropped to 19.60 dB and 19.83 dB, respectively. In contrast, higher robustness was demonstrated by Real-ESRGAN in noisy conditions, reaching 24.54 dB PSNR and the best perceptual score in the Noise-L2 setting (LPIPS: 0.31). The results indicate that no single SISR model is universally optimal across blur and noise degradations. SwinIR is recommended when blur is dominant and structural restoration is prioritized, whereas Real-ESRGAN is recommended under strong noise due to its improved robustness and superior perceptual quality. Overall, the findings suggest that degradation-aware model selection is required for real-world super-resolution applications.
Keywords: Super-Resolution; Single-Image Super-Resolution; Deep Learning; Robustness; Blur; Noise; PSNR; LPIPS.

ÖZET
Tek görüntü süper çözünürlük (SISR) modellerinde, temiz veri kümelerinde yüksek başarı elde edilmesine rağmen, gerçek dünyada sık görülen bulanıklık ve gürültü bozulmaları altında performans kaybı oluşabilmektedir. Farklı mimari yaklaşımların CNN, Transformer ve GAN tabanlı üretici modeller gibi, belirli bozulma türlerine karşı farklı dayanıklılık profilleri gösterebileceği öngörülmüştür. Bu nedenle, EDSR, SwinIR ve Real-ESRGAN modellerinin kontrollü bulanıklık ve gürültü koşulları altında karşılaştırmalı başarımı değerlendirilmiş ve her bozulma rejimi için daha uygun yaklaşımın belirlenmesi amaçlanmıştır. Deneyler, DIV2K doğrulama veri seti üzerinde x4 ölçek büyütme senaryosunda gerçekleştirilmiştir. Düşük çözünürlüklü girişler, yer gerçeği görüntülerinden iki seviyeli Gauss bulanıklığı (Blur-L1 ve Blur-L2) ve iki seviyeli Gauss gürültüsü (Noise-L1 ve Noise-L2) uygulanarak üretilmiş, ayrıca bicubic temel durum kullanılmıştır. Farklı mimarileri temsilen üç önceden

eğitilmiş model değerlendirilmiştir: CNN tabanlı EDSR, Transformer tabanlı SwinIR ve GAN tabanlı Real-ESRGAN. Başarım, sinyal sadakatinin ölçümü için parlaklık (Y) kanalında hesaplanan PSNR ve SSIM ile, algısal kalitenin ölçümü için LPIPS metriği ile değerlendirilmiştir. Bulgular, bozulma türüne bağlı belirgin performans farklılıklarının oluştuğunu göstermiştir. Ağır bulanıklık (Blur-L2) koşulunda en yüksek PSNR değeri SwinIR ile elde edilmiş ve 29.14 dB olarak ölçülmüştür. Ağır gürültü (Noise-L2) koşulunda ise SwinIR ve EDSR için belirgin performans düşüşü gözlenmiş, PSNR değerleri sırasıyla 19.60 dB ve 19.83 dB olarak bulunmuştur. Buna karşın Real-ESRGAN ile gürültü altında daha yüksek dayanıklılık sergilenmiş, Noise-L2 grubunda 24.54 dB PSNR ve en iyi algısal skor (LPIPS: 0.31) elde edilmiştir. Elde edilen sonuçlar, bulanıklık ve gürültü bozulmaları altında tek bir SISR modelinin her koşulda üstün olmadığını göstermiştir. Bulanıklığın baskın olduğu senaryolarda SwinIR ile daha iyi yapısal geri kazanım sağlanırken, güçlü gürültü koşullarında Real-ESRGAN ile daha yüksek dayanıklılık ve daha iyi algısal kalite elde edilmiştir. Bu nedenle, gerçek dünya süper çözünürlük uygulamalarında bozulma karakteristiğine duyarlı model seçiminin gerekli olduğu değerlendirilmiştir.
Anahtar kelimeler: Süper Çözünürlük; Tek Görüntü Süper Çözünürlük; Derin Öğrenme; Dayanıklılık; Bulanıklık; Gürültü; PSNR; LPIPS

MAKİNE İŞ EKİPMANLARININ SÜRELİ KONTROLÜ YAPILMASI ÜZERİNE DEĞERLENDİRME

Fatih DESTUR
Çanakkale Onsekiz Mart University, Graduate School, Department of Occupational Health and Safety, Türkiye
ORCID: 0009-0005-3357-6086

Dr. Seçkin ÖZCAN
Çanakkale Onsekiz Mart University, Graduate School, Department of Occupational Health and Safety, Türkiye
ORCID: 0000-0001-9719-8612

ÖZET
4857 sayılı İş Kanunu ile 6331 sayılı İş Sağlığı ve Güvenliği Kanunu'na paralel olarak hazırlanan İş Ekipmanlarının Kullanımında Sağlık ve Güvenlik Şartları Yönetmeliği, 25 Nisan 2013 tarihli, 28628 sayılı Resmi Gazetede yayımlanarak yürürlüğe girmişti. Bu yazıda, söz konusu yönetmelik genel olarak gözden geçirilecek ve karşılaşılan ve/veya karşılaşma potansiyeli olan sorunlar ile çözüm önerileri tartışmaya açılacaktır.
Anahtar kelimeler: makine iş ekipmanları, ekipmanların süreli kontrolleri

EVALUATION ON THE REGULAR INSPECTION OF MACHINERY AND WORK EQUIPMENT

ABASTRACT
The Regulation on Health and Safety Conditions in the Use of Work Equipment, prepared in parallel with the Labor Law No. 4857 and the Occupational Health and Safety Law No. 6331, was published in the Official Gazette No. 28628 on April 25, 2013, and entered into force exactly twelve years ago. This article will review the aforementioned Regulation in general and discuss the problems encountered and/or potentially encountered, as well as proposed solutions.
Keywords: Machinery and equipment, periodic inspections of equipment.

HISTORICAL CONFLICT/WAR PREDICTION: A MACHINE LEARNING APPROACH

Anıl ÇETİNEL
Sakarya University, Faculty of Computer and Information Sciences, Department of Information Systems Engineering, Türkiye
ORCID: 0009-0001-7795-5599

Asst. Prof. Dr. Esin Ayşe ZAİMOĞLU
Sakarya University, Faculty of Computer and Information Sciences, Department of Information Systems Engineering, Türkiye
ORCID: 0000-0001-9688-9868

Prof. Dr. İsmail Hakkı CEDİMOĞLU
Sakarya University, Faculty of Computer and Information Sciences, Department of Information Systems Engineering, Türkiye
ORCID: 0000-0003-3844-9295

ABSTRACT
This study proposes a machine learning–based approach to predict the probability of conflict occurrence at the country-year level by integrating historical conflict records with economic indicators and governance quality measures. Conflict data obtained from the Uppsala Conflict Data Program (UCDP) were combined with the Worldwide Governance Indicators (WGI) published by the World Bank, along with selected macroeconomic variables. The resulting dataset spans the period from 1996 to 2023 and comprises 7,633 observations. Several classification algorithms were evaluated comparatively, including Logistic Regression, Random Forest, Gradient Boosting, Support Vector Machines, K-Nearest Neighbors, and Naive Bayes. Model performance was assessed using accuracy, precision, recall, F1-score, and ROC-AUC metrics. The results indicate that the Random Forest model outperforms the other approaches, achieving an F1-score of 85.20% and a ROC-AUC value of 0.9875. Temporal validation further demonstrates robust performance when trained on past data and tested on subsequent years. Overall, the findings suggest that machine learning–based methods can support conflict forecasting and contribute to the development of early warning systems and preventive policy strategies.
Keywords: Machine Learning, Conflict Prediction, Governance Indicators, War Analysis, Early Warning

TARİHSEL ÇATIŞMA/SAVAŞ TAHMİNİ: MAKİNE ÖĞRENMESİ YAKLAŞIMI

ÖZET
Bu çalışma, tarihsel çatışma ve savaş kayıtlarını ülkelerin ekonomik göstergeleri ve yönetişim kalitesiyle birleştirerek ülke-yıl düzeyinde çatışma ortaya çıkma olasılığının makine öğrenmesi yöntemleriyle tahmin edilmesine yönelik bir yaklaşım önermektedir. Çalışmada, Uppsala Conflict Data Programı (UCDP) tarafından sağlanan çatışma verileri, Dünya Bankası tarafından yayımlanan Worldwide Governance Indicators (WGI) ve seçilmiş makroekonomik göstergeler entegre edilmiştir. Bu kapsamda 1996–2023 dönemini kapsayan ve 7.633 gözlemden oluşan bir veri seti oluşturulmuştur. Lojistik Regresyon, Rastgele Orman (Random Forest), Gradient Boosting, Destek Vektör Makineleri (Support Vector Machines), K-En Yakın Komşu (K-Nearest Neighbors) ve Naive Bayes algoritmaları karşılaştırmalı olarak değerlendirilmiştir. Model performansı doğruluk, kesinlik, duyarlılık, F1-skoru ve ROC-AUC ölçütleri kullanılarak analiz edilmiştir. Bulgular, özellikle Rastgele Orman yaklaşımının F1-skoru (%85,20) ve ROC-AUC (0,9875) değerleriyle diğer yöntemlere kıyasla daha yüksek performans sunduğunu göstermektedir. Zaman temelli doğrulama sonuçları, önerilen yaklaşımın geçmiş dönem verileriyle eğitildiğinde sonraki yıllardaki çatışmaları da benzer başarı düzeyiyle öngörebildiğini ortaya koymaktadır.

Ayrıca bölgesel analizler, çatışma riskinin belirli coğrafyalarda yoğunlaştığını göstermektedir. Elde edilen bulgular, makine öğrenmesi temelli yaklaşımların erken uyarı sistemleri ve politika tasarımı açısından önemli bir potansiyele sahip olduğunu göstermektedir.
Anahtar kelimeler: Makine Öğrenmesi, Çatışma Tahmini, Yönetişim Göstergeleri, Savaş Analizi, Erken Uyarı

DEEP LEARNING FOR IDENTIFYING MENTAL HEALTH DISORDERS THROUGH SOCIAL MEDIA ANALYSIS

Mohamed SOLIMAN
ORCID ID: 0009-0003-0564-0269
Altınbaş University, ECE Department, Türkiye

ABSTRACT
This thesis proposes an automated screening tool that converts parental observations of children's digital media behavior into early indicators of psychological risk for ages 0–12, addressing accessibility and timeliness gaps in pediatric mental health screening. A 50-item parent survey spans four domains: usage patterns, psychological and emotional responses, content characteristics, and online social interactions, while items 11–20 define symptom-based labels for supervised learning. A Multilayer Perceptron, chosen for tabular suitability and efficient non-linear pattern capture, is trained after data cleaning and ordinal encoding and evaluated with accuracy, precision, recall, F1 and confusion matrices, prioritizing recall to reduce missed at-risk cases. Findings show coherent cross-domain signal; combinations of higher engagement, negative affect, sleep disturbance, and online social difficulties align with elevated risk, consistent with dose-response and content-specific evidence in youth mental health. Intended as a first-line screener for clinics and schools, the tool complements clinical assessment and highlights privacy and equity safeguards for minors. Limitations include caregiver-report bias, threshold choice, convenience sampling, and cross-sectional design; future work targets clinical validation, diverse cohorts, device telemetry, multi-informant inputs, and longitudinal or ensemble models.
Keywords: pediatric mental health; screen time; parental observations; deep learning; MLP; early screening.

ÖZET
Bu tez, 0–12 yaş arası çocukların dijital medya kullanımına ilişkin ebeveyn gözlemlerini erken psikolojik risk göstergelerine dönüştüren otomatik bir tarama aracı önermekte; pediatrik ruh sağlığı taramalarında erişilebilirlik ve zamanında müdahale eksikliklerini ele almaktadır. Ebeveynlere yönelik 50 maddelik anket dört alanı kapsamaktadır: kullanım örüntüleri, psikolojik ve duygusal tepkiler, içerik özellikleri ve çevrim içi sosyal etkileşimler. Denetimli öğrenme için semptom temelli etiketler 11–20. maddeler üzerinden tanımlanmıştır. Tablo verilerine uygunluğu ve doğrusal olmayan örüntüleri etkin biçimde yakalayabilmesi nedeniyle seçilen Çok Katmanlı Algılayıcı (Multilayer Perceptron), veri temizleme ve sıralı (ordinal) kodlama sonrasında eğitilmiş; doğruluk, kesinlik, duyarlılık (recall), F1 skoru ve karışıklık matrisi ile değerlendirilmiştir. Riskli vakaların gözden kaçırılmasını azaltmak amacıyla değerlendirmede özellikle duyarlılık ölçütü önceliklendirilmiştir. Bulgular, alanlar arası tutarlı bir sinyal yapısına işaret etmektedir; artan etkileşim düzeyi, olumsuz duygulanım, uyku bozuklukları ve çevrim içi sosyal güçlüklerin birlikte görülmesi, gençlerin ruh sağlığına ilişkin doz–yanıt ve içeriğe özgü kanıtlarla uyumlu biçimde yükselmiş riskle ilişkilidir. Klinikler ve okullar için birinci basamak tarama aracı olarak tasarlanan sistem, klinik değerlendirmeyi tamamlayıcı niteliktedir ve reşit olmayanlara yönelik gizlilik ile eşitlik güvencelerini vurgulamaktadır. Çalışmanın sınırlılıkları arasında bakım veren bildirimine dayalı yanlılık, eşik değer seçimi, kolayda örnekleme ve kesitsel tasarım yer almaktadır. Gelecek çalışmalar; klinik doğrulama, daha çeşitli örneklemler, cihaz telemetrisi, çoklu bilgilendirici girdiler ile boylamsal ya da ansambl (ensemble) modelleri hedeflemektedir.
Anahtar Kelimeler: pediatrik ruh sağlığı; ekran süresi; ebeveyn gözlemleri; derin öğrenme; MLP; erken tarama.

IMPROVING THE PERFORMANCE OF A THREE-MACHINE FLOW-SHOP USING A MULTI-CRITERIA AND GENETIC ALGORITHM APPROACH

Aida Oumarou Ousseini CISSE
Altınbaş University
ORCID : 0009-0008-1445-6160

Fatih YIGIT
Altinbas University
ORCID: 0000-0002-7919-544X

ABSTRACT
This study aims to improve the performance of a three-machine flow-shop optimization system by reducing total weighted tardiness using a multi-criteria decision-making (MCDM) approach. Total weighted tardiness is an important performance measure because it considers both the delay of each job and its level of importance in the production plan. This is especially relevant for industrial environments where companies face strict delivery deadlines, different job priorities, and strong competition.
In this study, the Analytic Hierarchy Process (AHP) is used to organize and evaluate multiple decision criteria involved in the optimization problem. AHP allows decision-makers to compare criteria in a structured way and to assign importance weights to each one. By using these weights, the proposed approach reflects real production priorities more clearly than traditional single-objective models.
The proposed multi-criteria model is compared with a conventional single-objective approach that focuses only on minimizing tardiness. The comparison shows that considering several criteria at the same time leads to more flexible and realistic optimization solutions, especially in practical production situations.
In addition, the study reviews commonly used performance measures in flow-shop optimization and discusses their limits when used alone. To improve solution quality and computation time, a hybrid method that combines AHP with genetic algorithms is also proposed. Genetic algorithms are used to efficiently search for good optimization solutions and to handle the complexity of the flow-shop problem.
Finally, the proposed hybrid approach is tested using practical industrial examples related to three-machine flow-shop systems. The results show that the method improves production flow, reduces delays, and supports better decision-making in complex optimization environments.
Keywords: Scheduling, Multi-Criteria Decision Making, Analytic-Hierarchy Process, Metaheuristics, Genetic Algorithm

ÖZET
Bu çalışma, toplam ağırlıklı gecikmeyi azaltmak amacıyla çok kriterli karar verme (ÇKKV) yaklaşımı kullanılarak üç makineli akış atölyesi optimizasyon sisteminin performansını iyileştirmeyi amaçlamaktadır. Toplam ağırlıklı gecikme ölçütü, üretim sistemlerinde işlerin tamamlanma gecikmeleri ile bu işlerin üretim planı içerisindeki göreli önemlerini aynı anda dikkate alması açısından önemli bir performans göstergesidir. Bu durum, sıkı teslim tarihleri, farklı iş öncelikleri ve artan rekabet baskısı altında faaliyet gösteren endüstriler için özellikle kritiktir.
Akış atölyesi optimizasyon probleminde yer alan çoklu ve birbiriyle çelişebilen hedefleri yapılandırmak ve değerlendirmek amacıyla Analitik Hiyerarşi Süreci (AHP) kullanılmıştır. AHP yöntemi, problemi hiyerarşik bir yapıya ayırarak karar kriterlerinin ikili karşılaştırmalar yoluyla göreli önem ağırlıklarının belirlenmesini sağlamaktadır. Böylece önerilen yaklaşım, yönetsel tercihleri geleneksel tek hedefli modellere kıyasla daha gerçekçi bir şekilde yansıtmaktadır.
Çalışmada, önerilen çok kriterli optimizasyon modeli ile geleneksel tek hedefli bir yaklaşım karşılaştırılarak çok kriterli yapının sağladığı avantajlar ortaya konulmuştur.

Karşılaştırmalı analiz sonuçları, çok kriterli yaklaşımın pratik üretim ortamlarında daha esnek ve uygulanabilir çözümler sunduğunu göstermektedir.
Ayrıca araştırmada, akış atölyesi optimizasyonunda yaygın olarak kullanılan performans ölçütleri incelenmiş ve bu ölçütlerin tek başına kullanımının sınırlılıkları tartışılmıştır. Çözüm kalitesini ve hesaplama verimliliğini artırmak amacıyla AHP ile genetik algoritmaları birleştiren hibrit bir yöntem önerilmiştir. Genetik algoritmalar, çözüm uzayının etkin bir şekilde taranmasını ve kabul edilebilir sürelerde yakın optimal çözümlerin elde edilmesini sağlamaktadır.
Son olarak, önerilen hibrit yaklaşım üç makineli akış atölyesi sistemlerine ait endüstriyel örnekler ile test edilmiştir. Elde edilen bulgular, üretim akışının iyileştirildiğini, gecikmelerin azaltıldığını ve karmaşık optimizasyon problemlerinde daha etkili karar desteği sağlandığını doğrulamaktadır.
Anahtar Kelimeler: Planlama, Çok Kriterli Karar Verme, Analitik Hiyerarşi Süreci, Meta Sezgisel Yöntemler, Genetik Algoritma

THE EFFECT OF CHANNEL GEOMETRY ON HEAT TRANSFER PERFORMANCE IN PLATE-FIN HEAT EXCHANGERS

Research Assistant Aykut KARAKOR
Manisa Celal Bayar University, Faculty of Engineering and Natural Sciences, Department of Mechanical Engineering, Manisa-Türkiye
ORCID: 0009-0008-3768-7076

Prof. Dr. Fatih SELİMEFENDİGİL
Manisa Celal Bayar University, Faculty of Engineering and Natural Sciences, Department of Mechanical Engineering, Manisa-Türkiye
ORCID: 0000-0002-5453-2091

ABSTRACT
Plate-fin heat exchangers are widely preferred in compact and highly efficient thermal systems due to their large heat transfer surface area and their ability to enhance convective effects by disrupting the flow structure. In this study, the thermal and hydrodynamic behaviors of straight and sinusoidal corrugated channel geometries in plate-fin heat exchangers were comparatively investigated using computational fluid dynamics. Numerical analyses were performed under steady-state and laminar flow conditions. The Reynolds number varied between 600 and 1400; the average Nusselt number and pressure drop values were calculated for both channel geometries. The channel geometry was defined under specific dimensional parameters, and the corrugated channel structure was created using a sinusoidal curve. Heat transfer was modeled by applying a constant temperature boundary condition to the upper and lower surfaces of the channel; the fluid inlet temperature was kept constant. The results obtained show that the corrugated channel geometry provides higher heat transfer performance compared to the straight channel, but this causes an increase in pressure drop. This study aims to contribute to future design and optimization studies by revealing the effect of channel geometry on the thermal and hydrodynamic performance of plate-fin heat exchangers.
Keywords: Plate-fin heat exchanges, Corrugated channel, Computational fluid dynamics, Heat transfer

EXPERIMENTAL INVESTIGATION OF CRYOGENIC MACHINING AS AN ALTERNATIVE TO CONVENTIONAL METHODS FOR POROUS TUNGSTEN COMPONENTS

Ahmet Can BİLGEN
Istanbul Technical University, Faculty of Mechanical Engineering, Istanbul, Turkey
ORCID: ID/ 0000-0002-7083-8648

Asst. Prof. Dr. Adem CANDAŞ
Istanbul Technical University, Faculty of Mechanical Engineering, Istanbul, Turkey
ORCID NO: 0000-0002-9951-9122

Prof. Dr. Cevat Erdem İMRAK
Istanbul Technical University, Faculty of Mechanical Engineering, Istanbul, Turkey
ORCID NO: 0000-0003-4428-0158

ABSTRACT
Porous tungsten is a critical material in distributor cathode manufacturing due to its high melting point, thermal stability, and controlled porosity, which are essential for efficient electron emission. However, conventional machining of porous tungsten is associated with significant challenges, most notably the unintended smearing and clogging of surface pores, which adversely affect functional performance. To overcome this issue, backfilling with plastic infiltrates is commonly employed, although this approach increases processing time and complexity and may compromise surface integrity. This study investigates whether cryogenic machining processing is an appropriate alternative to the conventional backfilling technique used to prevent pore smearing during the machining of porous tungsten. The primary objective is to demonstrate that the cryogenic machining technique provides distinct advantages over the conventional approach, including reduced processing time, improved surface integrity, and prolonged tool life owing to the cooling mechanism employed in cryogenic processing. The research involves machining porous tungsten specimens manufactured via powder metallurgy under cryogenic conditions with varying parameters. Following machining, the emission surfaces are analysed using scanning electron microscopy (SEM) and profilometry to quantify pore density and surface roughness. The measured pore density and surface roughness of the emitter cathodes are compared with reference values obtained from experimental studies to determine the optimal machining parameters. In addition, the cutting tool tip is analysed using a stereo microscope after cryogenic machining to evaluate tool wear and longevity. The experimental outcomes aim to establish a basis for improving both the fracture behaviour of porous tungsten and the processing parameters associated with cryogenic machining. This work was supported by Scientific Research Projects Department of Istanbul Technical University. Project Number: MDK-2025-47759.
Keywords: Porous Tungsten, Cathode, Cryogenic Machining, Powder Metallurgy

ÖZET
Gözenekli tungsten, yüksek ergime sıcaklığı, termal kararlılığı ve kontrollü porozite özellikleri sayesinde verimli elektron emisyonu için kritik öneme sahip olup, distribütör katot üretiminde yaygın olarak kullanılan bir malzemedir. Bununla birlikte, gözenekli tungstenin geleneksel yöntemlerle talaşlı imalat ile işlenmesi sırasında, yüzey gözeneklerinin istenmeyen şekilde sıvanması ve tıkanması gibi önemli sorunlar ortaya çıkmakta, bu durum malzeme performansını olumsuz etkilemektedir. Bu problemi önlemek için plastik infiltratlarla geri dolgu (backfilling) yöntemi kullanılmakta; ancak bu yaklaşım işlem süresini ve imalat karmaşıklığını artırmakta ve yüzey bütünlüğünü olumsuz yönde etkileyebilmektedir. Bu kapsamda bu çalışma, gözenekli tungstenin işlenmesi sırasında gözenek sıvanmasını önlemek amacıyla kullanılan geri dolgu tekniğine alternatif olarak, kriyojenik işleme yönteminin uygunluğunu araştırmaktadır.

Çalışmanın temel hipotezinde, kriyojenik işlemenin sağladığı etkin soğutma mekanizması sayesinde; işlem süresinin azaltılması, yüzey bütünlüğünün iyileştirilmesi ve takım ömrünün uzatılması gibi başlıklarda geleneksel yönteme kıyasla belirgin avantajlar bulunduğu fikridir. Çalışma kapsamında, toz metalurjisi yöntemiyle üretilmiş gözenekli tungsten numuneler, farklı parametreler altında kriyojenik koşullarda işlenmiştir. İşleme sonrasında, emisyon yüzeyleri taramalı elektron mikroskobu (SEM) ve profilometre kullanılarak incelenmiş; gözenek yoğunluğu ve yüzey pürüzlülüğü nicel olarak belirlenmiştir. Elde edilen gözenek yoğunluğu ve yüzey pürüzlülüğü değerleri, en uygun işleme parametrelerinin belirlenmesi amacıyla literatürde yer alan deneysel referans değerlerle karşılaştırılmıştır. Ayrıca, kriyojenik işleme sonrasında kesici takım ucu stereo mikroskop ile incelenerek takım aşınması ve takım ömrü üzerindeki etkiler değerlendirilmiştir. Bu çalışmadan elde edilen deneysel bulguların, gözenekli tungstenin kırılma davranışının iyileştirilmesine ve kriyojenik işleme yöntemine ait işlem parametrelerinin geliştirilmesine yönelik bilimsel bir temel oluşturması hedeflenmektedir. Bu çalışma İstanbul Teknik Üniversitesi Bilimsel Araştırma Projeleri Koordinasyon Birimince Desteklenmiştir. Proje Numarası: MDK-2025-47759.

Anahtar kelimeler: Gözenekli Tungsten, Katot, Kriyojenik İşleme, Toz Metalurjisi

DETERMINATION OF MOMENT DISTRIBUTION IN A HYPERSTATIC SOLID TRIANGULAR EYE HOOK USING THE APPROXIMATE METHOD

Melike ÇETİNKAYA
Istanbul Technical University, Faculty of Mechanical Engineering, Istanbul, Turkey
ORCID NO: 0009-0009-5294-9123

Asst. Prof. Dr. Adem CANDAŞ
Istanbul Technical University, Faculty of Mechanical Engineering, Istanbul, Turkey
ORCID NO: 0000-0002-9951-9122

Prof. Dr. Cevat Erdem İMRAK
Istanbul Technical University, Faculty of Mechanical Engineering, Istanbul, Turkey
ORCID NO: 0000-0003-4428-0158

ABSTRACT
Solid triangular eye hooks, which are one of the essential lifting gears utilised in cranes and lifting equipment for transportation, elevation, securing, and fastening of loads, are designed to ensure safe load transfer under both static and dynamic loading conditions. Due to the repetitive loading and unloading operations, the strength of the parts is an essential design parameter in the design process. Eye hooks are favoured to lessen the risks caused by rope slippage, particularly under substantial loads. They are subjected to a complex stress distribution compared to hooks used under the same load due to their closed form. Moreover, threading the sling rope through the hook's eye and attaching the load is more challenging than with hooks, resulting in a prolonged load attachment and detachment process. Hinged triangular eye hooks can be solved analytically. However, the analytical solution of eye hooks is approximated because of their threefold static indeterminacy. In 1926, in his precise work, Unold proposed the approximate calculation approach in the journal *Der Praktische Maschinenkonstrukteur, which* is used to construct the analytical solution, which includes the moment distribution and stress calculations for the solid triangular eye hooks. The analytical calculations of eye hooks using the proposed approach yield results that are very close to the bending moment distribution in practice. In this study, the moment distribution calculations are revisited and calculated in accordance with the instructions in the analytical solution presented by Unold. In Unold's study, the sectional stress distributions obtained from ten cross-sections were replicated to evaluate the analytical method. In future work, validation of the analysis using the finite element method is planned. This work was supported by Scientific Research Projects Department of Istanbul Technical University. Project Number: MYLB-2025-47834.
Keywords: Solid Triangular Eye Hook, Approximate Calculation Method, Moment Distribution.

HİPERSTATİK KAPALI HAMUTUN YAKLAŞIK HESAP METODU İLE MOMENT DAĞILIMININ BELİRLENMESİ

ÖZET
Vinç ve diğer kaldırma ekipmanlarında yüklerin taşınması, kaldırılması, bağlanması ve sabitlenmesi amacıyla kullanılan temel yük tutma elemanlarından olan hamutlar (solid triangular eye hooks) hem statik hem de dinamik yük koşulları altında güvenli yük transferini sağlamak üzere kullanılan elemanlardır. Özellikle vinç gibi yapılarda; tekrarlı yükleme ve boşaltma işlemine maruz kaldıklarından, yük tutma elemanının tasarımı önem taşımaktadır. Hamutlar, özellikle ağır yüklerde halatların dışarı sıçramasından kaynaklanan tehlikeleri ortadan kaldırmak için tercih edilmektedir ve kapalı formları sayesinde aynı yükte kullanılan kancalara nazaran daha düşük zorlanmalara maruz kalmaktadırlar. Hamutlar kapalı formda olduğundan, sapan halatını hamut boşluğundan geçirmek ve yükün hamuta asılması kancaya göre daha zordur ve yük bağlama-çözme işlemi daha uzun sürmektedir.

Statik yapıda olan mafsallı hamutların analitik çözümü yapılabilmektedir ancak hiperstatik yapısı sebebiyle karmaşık mukavemet hesapları gerektiren kapalı hamutlar üç katlı statik belirsizliğe sahip olduğundan analitik çözüm yaklaşık olarak yapılmaktadır. Unold 1926'da kapalı hamuta ait moment dağılımı ve mukavemet hesaplamalarını içeren analitik çözümü Der Praktische Maschinenkonstrukteur dergisinde verilen yaklaşık hesap metodu ile sunmuştur. Kapalı hamutun analitik hesabı için önerilen bu metot ile uygulamadaki eğilme momenti dağılımına çok yakın sonuçlar alınabilmektedir. Bu çalışmada, hiperstatik kapalı hamuta ait analitik çözümdeki yönlendirmeler doğrultusunda moment dağılımı elde edilerek tablolaştırılmıştır. Unold'un çalışmasında 10 kesit ile yapılan kesit gerilme dağılımları çoğaltılarak analitik metodun değerlendirilmesi yapılmıştır. Gelecek çalışmalarda sonlu elemanlar metodu ile analizin doğrulanması planlanmaktadır. Bu çalışma İstanbul Teknik Üniversitesi Bilimsel Araştırma Projeleri Koordinasyon Birimince Desteklenmiştir. Proje Numarası: MYLB-2025-47834.

Anahtar kelimeler: Kapalı Hamut, Yaklaşık Hesap Metodu, Moment Dağılımı.

DESIGN-ORIENTED DEVELOPMENT OF A MODULAR HEAVY-DUTY TRANSFER CHASSIS FOR BUS MANUFACTURING LINES

Abdulkadir DUMAN
Anadolu ISUZU, R&D Center, Kocaeli, Turkey,
ORCİD: ID/0000-0002-2792-4946

Celalettin BAYKARA
Sakarya University of Applied Sciences, Faculty of Technology, Mechanical Engineering Department, Sakarya, Turkey,
ORCİD: ID/0000-0003-3403-6020

ABSTRACT

This study presents a design-oriented engineering framework for the development of a modular heavy-duty transfer chassis intended for internal logistics operations in bus and midibus manufacturing facilities. Unlike conventional rail-based or fixed-dimension transport systems, the proposed chassis architecture emphasizes adaptability to variable vehicle geometries, enhanced maneuverability in confined factory spaces, and compatibility with digital manufacturing environments.

The design process integrates manufacturability-driven considerations with structural reasoning to address common industrial challenges such as limited steering capability, unidirectional towing, and size-specific clamping mechanisms. A modular carrier layout combined with bidirectional towing and synchronized steering concepts is introduced to improve operational flexibility across different production stages.

Rather than focusing on detailed numerical results, this contribution highlights the methodological pathway linking industrial requirements, design decision-making, and structural validation principles. The presented framework demonstrates how design-for-manufacturing logic, risk-aware structural reasoning, and digital integration concepts can be jointly employed to support the development of next-generation in-plant transport systems.

The study aims to provide practitioners and researchers with a transferable design perspective for heavy-duty transport platforms, bridging the gap between conceptual engineering design and real-world industrial implementation.

Keywords: Heavy-duty transfer chassis, Industrial transport systems, Design methodology, Manufacturability-driven design, Modular chassis, Factory logistics

ROBOTİK YÜRÜME YARDIMCI CİHAZLAR İÇİN YANA DEVRİLME ÖNLEYİCİ STATİK DESTEK MEKANİZMASI TASARIMI VE UYGULAMASI

Tolga TUTKAN
Ondokuz Mayıs Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği,
Samsun-Türkiye
ORCID: 0009-0004-4493-2800

ÖZET
Gelişen ve artan dünya nüfusu, kontrolsüz büyümenin eşiğindedir. Artan nüfus eğrisi ve doğum oranlarındaki azalma; yaşlı ve fizibilite sorunlarıyla karşı karşıya kalan popülasyonun sayısında artışı da beraberinde getirmektedir. Bu fizibilite sorunları bireylerde kuvvet kaybı, kas erimesi, uzuvlarda fonksiyon kısıtlanması, kırık ve çıkık durumlarında geciken iyileşme süreci gibi negatif etkileri ortaya çıkarmıştır. Bu durum gelişen ihtiyaçlar sonucunda robotik yürüme yardımcı cihazların kullanımını artmasına ve özellikle düşme risk potansiyeli taşıyan hastalar için statik destek mekanizmalarına olan araştırmaları artırmıştır. Bu çalışma kapsamında robotik yürüme yardımcı sistemlerde otomatik kontrol füzyonuna sahip statik destek mekanizması önerilmiştir. Tasarım aşamaları ve çalışma prensibi açıklanan mekanizma nihayi tasarımın ardından üretilerek uygulamaya hazır hale getirilmiştir. Mekanizma ani gelişen düşme durumlarından öne yüklenme ve yana yüklenme senaryolarında sınanarak çalışmanın gerçek zamanlı testlerle tetiklenme zamanı ve algılama füzyonu ile güvenilirliği ortaya konmuştur. Mekanizma öncesi ve sonrasında oluşan taban destek alanı (BoS) artırımı ile bireyin yürüme güvenliği artırılmıştır. Mekanizma tasarım ve çalışma hakları 2023 01619 numaralı tescil hakları ile çalışma patentlenmiştir.
Anahtar Kelimeler: Mekanizma, Statik, Robotik, Tasarım, Uygulama, Devrilme.

DESIGN AND IMPLEMENTATION OF A STATIC SUPPORT MECHANISM TO PREVENT LATERAL TIPPING FOR ROBOTIC GAIT ASSISTIVE DEVICES

ABSTRACT
The growing and increasing world population is on the verge of uncontrolled growth. The increasing population curve and declining birth rates are leading to an increase in the number of people facing aging and feasibility issues. These feasibility issues have negative effects on individuals, such as loss of strength, muscle wasting, limited limb function, and delayed healing in cases of fractures and dislocations. This situation has increased the use of robotic walking assistive devices as a result of evolving needs and has increased research into static support mechanisms, especially for patients with a potential risk of falling. Within the scope of this study, a static support mechanism with automatic control fusion in robotic walking assistive systems has been proposed. The mechanism, whose design stages and working principle are explained, was manufactured after the final design and made ready for application. The mechanism was tested in forward and lateral loading scenarios during sudden falls, and its reliability was demonstrated through real-time testing of the trigger time and perception fusion. The individual's walking safety has been increased by the increase in the base of support (BoS) area before and after the mechanism. The mechanism design and operation rights have been patented under registration number 2023 01619.
Keywords: Mechanism, Static, Robotics, Design, Application, Tipping Over.

MECHANICAL CHARACTERIZATION OF GLASS FIBER–REINFORCED PA6 PARTS MANUFACTURED USING A COLD RUNNER SYSTEM

Enes GÜNER
Sakarya Applied University, Graduate Education Institute, Sakarya-Turkey
ORCID NO: 0009-0009-6519-2190

Prof. Dr. Ahmet DEMİRER
Sakarya University of Applied Sciences, Department of Mechanical Engineering, Sakarya- Turkey,
ORCID NO: 0000-0003-1252-9203

ABSTRACT
In this study, the mechanical performance of polyamide 6 (PA6) injection-molded parts produced using a cold runner system (CRS) was experimentally investigated. Three different material types were examined: unreinforced PA6, 15 wt.% glass fiber–reinforced PA6, and 30 wt.% glass fiber–reinforced PA6. Test specimens were manufactured by injection molding under controlled processing conditions at different melt temperatures.
The mechanical properties of the produced parts were evaluated through tensile testing and Izod notched impact testing in accordance with relevant international standards. Tensile tests were conducted to determine tensile strength, elastic modulus, and elongation at break, providing insight into the stiffness–ductility relationship of the materials. Izod impact tests were performed to assess impact resistance and fracture behavior under dynamic loading conditions.
The results indicate that increasing glass fiber content significantly enhances tensile strength and elastic modulus, while leading to a pronounced reduction in elongation at break and impact resistance. Unreinforced PA6 exhibited superior ductility and higher impact energy absorption compared to fiber-reinforced materials, whereas 30 wt.% glass fiber–reinforced PA6 demonstrated the highest stiffness and tensile strength. Within the investigated processing temperature range, the influence of melt temperature on mechanical performance was limited compared to the effect of glass fiber content.
Overall, the findings highlight the dominant role of glass fiber reinforcement on the mechanical performance of PA6 parts produced using a cold runner system and provide useful guidance for material selection and process optimization in injection molding applications.
Keywords: PA6, Cold Runner System, Mechanical Properties, Izod Impact Test, Glass Fiber Reinforcement

NORMAL YOLLUK SISTEMİ İLE ÜRETİLEN CAM ELYAF TAKVİYELİ PA6 PARÇALARININ MEKANİK PERFORMANSININ DEĞERLENDİRİLMESİ

ÖZET
Bu çalışmada, normal yolluk sistemi (NYS) kullanılarak enjeksiyon kalıplama yöntemiyle üretilen PA6 esaslı parçaların mekanik özellikleri deneysel olarak incelenmiştir. Çalışma kapsamında takviyesiz PA6, %15 cam elyaf takviyeli PA6 ve %30 cam elyaf takviyeli PA6 olmak üzere üç farklı malzeme türü ele alınmıştır. Numuneler, farklı enjeksiyon eriyik sıcaklıklarında üretilmiş ve üretim sıcaklığının mekanik performans üzerindeki etkisi değerlendirilmiştir. Mekanik karakterizasyon amacıyla çekme gerilmesi, elastisite modülü, kopma uzaması (% uzama) ve Izod darbe dayanımı testleri uygulanmıştır. Elde edilen sonuçlar, cam elyaf takviye oranının artmasıyla birlikte çekme gerilmesi ve elastisite modülünün belirgin şekilde arttığını, buna karşılık kopma uzaması ve Izod darbe dayanımı değerlerinin azaldığını göstermiştir. Takviyesiz PA6 numuneler yüksek süneklik ve darbe enerjisi absorpsiyonu sergilerken, %30 cam elyaf takviyeli PA6 numuneler en yüksek rijitlik ve taşıma kapasitesine ulaşmıştır. Enjeksiyon sıcaklığının mekanik özellikler üzerindeki etkisinin sınırlı olduğu, mekanik davranış üzerinde esas belirleyici faktörün cam elyaf takviye oranı olduğu tespit edilmiştir.

Bu çalışma, normal yolluk sistemi ile üretilen PA6 esaslı parçaların mekanik performansının malzeme türüne bağlı değişimini ortaya koyarak, endüstriyel uygulamalar için malzeme seçimi ve proses optimizasyonuna katkı sağlamaktadır.

Anahtar Kelimeler: PA6, Normal (Soğuk) Yolluk Sistemi, Mekanik Özellikler, Izod Darbe Testi, Cam Elyaf Takviyesi

SOLUTION OF DYNAMIC SUPPLIER SELECTION PROBLEM WITH ANNEALING SIMULATION ALGORITHM

Nargila MAMMADOVA
Bursa Technical University, Faculty of Engineering and Natural Sciences, Industrial Engineering Department, Bursa, Turkey,
ORCİD: ID/ 0009-0008-6179-9609

Asst. Prof. Dr. Hilal YILMAZ
Bursa Technical University, Faculty of Engineering and Natural Sciences, Industrial Engineering Department, Bursa, Turkey,
ORCİD: ID/ 0000-0001-8125-6814

ABSTRACT
In today's competitive and uncertain market conditions, enterprises need to make supply chain decisions in a more flexible and efficient manner. In this context, the supplier selection problem becomes a dynamic decision-making problem due to the variability of demand quantities, costs, and supplier capacities across periods. The ability of firms to procure products from different suppliers in different periods increases the complexity of the decision-making process and expands the solution space. This situation may cause classical optimization methods to be insufficient for large-scale and non-linear problems. In this study, the dynamic supplier selection problem is addressed, and the Simulated Annealing (SA) algorithm is employed as the solution method. SA, inspired by the metallurgical annealing process, is a metaheuristic optimization technique aimed at reaching the global optimum without being trapped in local optima. The algorithm's ability to accept worse solutions with a certain probability provides a significant advantage for multi-period and dynamic supplier selection problems. In the proposed problem, supplier selection and order quantities are determined jointly for each period with the objective of minimizing total procurement costs.The algorithm is based on a structure in which demand quantities vary across periods and procurement from different suppliers is possible in each period. The SA algorithm is run under different initial temperatures and cooling rates to analyze solution performance. Additionally, a parameter sensitivity analysis is conducted to evaluate the stability of the algorithm.The results show that the SA algorithm can produce consistent and high-quality solutions within reasonable computation times for dynamic supplier selection problems. The findings indicate that the method provides an effective and applicable solution approach for multi-period and dynamic supplier selection problems.
Keywords: Simulated Annealing, Dynamic Supplier Selection, Multi-Period Decision Making, Metaheuristic Optimization

DİNAMİK TEDARİKÇİ SEÇİMİ PROBLEMİNİN TAVLAMA BENZETİMİ ALGORİTMASI İLE ÇÖZÜMÜ

ÖZET
Günümüz rekabetçi ve belirsiz piyasa koşullarında işletmelerin tedarik zinciri kararlarını daha esnek ve etkin bir şekilde alması gerekmektedir. Bu bağlamda tedarikçi seçimi problemi, talep miktarlarının, maliyetlerin ve tedarikçi kapasitelerinin dönemler boyunca değişkenlik göstermesi nedeniyle dinamik bir karar verme problemine dönüşmektedir. İşletmelerin farklı dönemlerde farklı tedarikçilerden ürün temin edebilmesi, karar sürecinin karmaşıklığını artırmakta ve çözüm uzayını genişletmektedir. Bu durum, klasik optimizasyon yöntemlerinin büyük ölçekli ve doğrusal olmayan problemlerde yetersiz kalmasına neden olabilmektedir. Bu çalışmada dinamik tedarikçi seçimi problemi ele alınmış ve çözüm yöntemi olarak Tavlama Benzetimi (TB) algoritması kullanılmıştır. TB, metalürjik tavlama sürecinden esinlenen ve yerel optimumlara takılmadan küresel optimuma ulaşmayı hedefleyen bir meta-sezgisel optimizasyon yöntemidir.

Algoritmanın daha kötü çözümleri belirli bir olasılıkla kabul edebilme özelliği, çok dönemli ve dinamik yapıya sahip tedarikçi seçim problemleri için önemli bir avantaj sağlamaktadır. Ele alınan problemde, her dönem için tedarikçi seçimi ve sipariş miktarları birlikte belirlenerek toplam tedarik maliyetinin minimize edilmesi amaçlanmıştır. TB algoritması, talep miktarlarının dönemler itibarıyla değiştiği ve her dönemde farklı tedarikçilerden ürün temininin mümkün olduğu bir yapı üzerine kurulmuştur. Farklı başlangıç sıcaklıkları ve soğutma oranları altında çalıştırılarak çözüm performansı analiz edilmiştir. Ayrıca algoritmanın kararlılığını değerlendirmek amacıyla parametre duyarlılık analizi gerçekleştirilmiştir. Elde edilen sonuçlar, TB'nin dinamik tedarikçi seçimi problemlerinde makul hesaplama süresi içerisinde tutarlı ve kaliteli çözümler üretebildiğini göstermektedir. Bulgular, yöntemin çok dönemli ve dinamik tedarikçi seçim problemleri için etkili ve uygulanabilir bir çözüm yaklaşımı sunduğunu ortaya koymaktadır.
Anahtar kelimeler: Tavlama Benzetimi, Dinamik Tedarikçi Seçimi, Çok Dönemli Karar Verme, Meta-Sezgisel Optimizasyon

IMPROVEMENT OF MECHANICAL AND CORROSION PROPERTIES OF NITI SHAPE MEMORY ALLOYS WITH AG ALLOY

Onur TEZCAN
Çanakkale Onsekiz Mart University, Faculty of Engineering, Department of Materials Science and Engineering, Türkiye
ORCID: 0009-0001-2951-182X

Prof. Dr. Hülya DEMİRÖREN
Çanakkale Onsekiz Mart University, Faculty of Engineering, Department of Materials Science and Engineering, Türkiye
ORCID: 0000-0001-5213-6151

Prof. Dr. Soner BUYTOZ
Fırat University, Faculty of Technology, Department of Metallurgy and Materials Engineering, Türkiye
ORCID: 0000-0003-1509-8648

ABSTRACT
The loss of function in tissues and organs due to various pathological or traumatic factors has significantly increased the demand for advanced biomaterials. In this context, nickel–titanium (NiTi) alloys, which are intermetallic compounds consisting of approximately equiatomic ratios of nickel and titanium, attract considerable attention. When produced with a porous morphology, these alloys exhibit high potential for biomedical applications. The low density, shape-memory behavior, superelasticity, and mechanical properties of NiTi alloys—closely matching those of human cortical bone—make them strong candidates for implant technologies.
In this master's thesis, the primary objective is to develop a novel NiTi-based biomaterial with enhanced mechanical, thermal, and biological performance by alloying the base NiTi composition with varying amounts of silver (Ag). Nickel, titanium, and silver metal powders were mixed in predetermined ratios, and alloying was performed using a vacuum arc-melting system. Following surface preparation procedures after arc melting, the produced samples underwent a comprehensive characterization process. Microstructural analyses were conducted using scanning electron microscopy (SEM), while phase transformations and thermal behavior were evaluated by differential scanning calorimetry (DSC). The elastic working range and mechanical response of the materials were examined via compression testing, and corrosion resistance—an essential indicator of biocompatibility—was assessed through electrochemical corrosion experiments.
Keywords: Ni, Ti, Ag, Corrosion, Biomaterial, Arc Melting

ÖZET
Doku ve organların çeşitli patolojik veya travmatik etkenler nedeniyle fonksiyonlarını yitirmesi, biyomalzeme gereksinimini önemli ölçüde artırmaktadır. Bu bağlamda nikel–titanyum (NiTi) alaşımları, iki elementin eşit veya eşite yakın atomik oranlarda yer aldığı metalik ara bileşikler olarak dikkat çekmekte ve özellikle gözenekli morfolojide üretildiklerinde biyomedikal uygulamalar açısından yüksek potansiyel sergilemektedir. NiTi alaşımlarının düşük yoğunlukları, şekil bellek ve süperelastik davranışları ile mekanik özelliklerinin insan kortikal kemiğine yakınlığı, bu malzemeyi implant teknolojileri için güçlü bir aday hâline getirmektedir.
Bu yüksek lisans çalışmasında, NiTi esaslı alaşımın farklı oranlarda gümüş (Ag) elementi ile alaşımlandırılması yoluyla geliştirilmiş mekanik, termal ve biyolojik performansa sahip yeni bir biyomalzeme elde edilmesi amaçlanmıştır. Çalışmada nikel, titanyum ve gümüş metal tozları belirlenen oranlarda karıştırılmış; ardından alaşımlandırma işlemi vakum altında çalışan ark ergitme sistemi kullanılarak gerçekleştirilmiştir.

Ark ergitme sonrası uygulanan yüzey hazırlama işlemlerini takiben numuneler kapsamlı bir karakterizasyon sürecine tabi tutulmuştur. Mikroyapısal incelemeler taramalı elektron mikroskobu (SEM) ile yürütülmüş; faz dönüşümleri ve termal davranış diferansiyel taramalı kalorimetre (DSC) analizi ile değerlendirilmiştir. Malzemenin elastik çalışma aralığı ve mekanik yanıtı basma testleri ile belirlenmiş; biyouyumluluk performansının önemli göstergelerinden biri olan korozyon direnci ise elektrokimyasal korozyon deneyleri ile analiz edilmiştir.
Anahtar kelimeler: Ni, Ti, Ag, Korozyon, Biyomalzeme, Ark Ergitme

ARCHITECTURE AS COLLECTIVE MEMORY: HUMANITIES INSIGHTS INTO MONUMENTS AND MEMORIALS

Melik SAMI
Department of Architecture, Mohamed Khider Biskra University, Algeria
LACOMOFA Biskra Laboratory, Algeria

Sara KHELIL
Department of Architecture, Mohamed Khider Biskra University, Algeria

Tallal Abdel Karim BOUZIR
Department of Architecture, Mohamed Khider Biskra University, Algeria

ABSTRACT
The connection between architecture and collective memory is a vital area of investigation in the humanities which provides a perspective on how societies memorize, preserve and negotiate their pasts through the constructed environment. Monuments and memorials are beyond materiality and work as a living vessel of memory and cultural identity, as the interaction between space, form and symbolism makes it easier not only to mourn but also to reflect. Basing itself on some of the earliest scholarship by Maurice Halbwachs, Aleida Assmann and Pierre Nora, this paper places memorial architecture as an agent and mediator of the conflicted historical narratives, which demonstrates how structures mediate and store collective trauma, resilience and identity. See the 9/11 Memorial in New York with its reflecting pools to encourage reflection, or the Holocaust Memorial in Berlin with its disjunction stelae requiring visitors to confront historical trauma, as examples of how architectural language can bring forth strong emotional reactions and continue to hold intergenerational dialogue. Equally, arguments over the removal of the Bronze Soldier in Tallinn demonstrate the political aspects of remembrance and how monuments may become a source of conflict over the negotiation of national identity. The article merges theoretical perspectives of memory research with interdisciplinary theoretical perspectives of cultural policy, trauma theory, and digital humanities, such as new practices of digital memorial architecture that archive and recycle memory through the virtual realm and makes collective memory extend into the digital era. The case studies of the Chattri Indian Memorial and archeological activities at the WWII sites in Berlin serve to further emphasize the idea that the memorials serve not merely as commemorative objects, but also as venues of ritual, tourism and critical interaction with history. Finally, the findings suggest that monuments cannot be considered as inert objects but as dynamic cultural texts that redefine the contradictions between remembering and forgetting, and determine how the societies address and redefine their own pasts. The need to create practices through design that help to recognize complexity, engage in dialogue, and build resilience targets the awareness of complexities and the importance of cultural memory through the use of monuments and memorials as tools of collective memory and critical thinking, as highlighted in this study.
Keywords: Collective Memory; Memorial Architecture; Symbolism in Architecture; Humanities and Architecture; Cultural Identity.

ARCHITECTURE, PHILOSOPHY, AND THE HUMAN CONDITION IN THE BUILT ENVIRONMENT

Melik SAMI
Department of Architecture, Mohamed Khider Biskra University, Algeria
LACOMOFA Biskra Laboratory, Algeria

Sara KHELIL
Department of Architecture, Mohamed Khider Biskra University, Algeria

Tallal Abdel Karim BOUZIR
Department of Architecture, Mohamed Khider Biskra University, Algeria

ABSTRACT
This paper explores the multifaceted nature of the relationship between architecture and philosophy that influence the human condition in the built environment with a focus on how design affects human experience, interpersonal relationships, and affective well-being. Through qualitative methodologies which include case studies, interviews, and surveys this study has been able to show that architectural aspects have a strong impact on the perceptions of individuals and their experiences in different environments. The most important results show that carefully designed architecture not only vastly improves the emotional experience but also promotes social connectivity to specific spaces as well as therapeutic spaces, especially in healthcare institutions. The importance of such findings consists in the fact they can be used to design healthcare settings implying that architecture might be the key to fostering healing and improving patient outcomes. This research shows that interdisciplinary solutions that incorporate philosophy into buildings architecture are necessary by proving that a balanced approach can be achieved by considering the physical realm and the emotional well-being. Finally, the study suggests a more sophisticated interpretation of the influence of the built environment on human experience and urges stakeholders in the healthcare industry to emphasize design strategies including psychological and emotional well-being as a component of patient care. The extended implications are to highlight the necessity of the collaboration between the architects, medical community, and the policymakers and to make spaces not only practical but also supportive of the overarching well-being, thus making healthcare architecture a crucial part of well-being.
Keywords: Philosophy of Architecture; Human Condition; Phenomenology in Architecture; Human-Centered Design; Cultural Identity.

RELIGIOUS TOURISM AND SACRED ARCHITECTURE: GLOBAL PATTERNS AND DESIGN CHALLENGES

Melik SAMI
Department of Architecture, Mohamed Khider Biskra University, Algeria
LACOMOFA Biskra Laboratory, Algeria

Sara KHELIL
Department of Architecture, Mohamed Khider Biskra University, Algeria

Tallal Abdel Karim BOUZIR
Department of Architecture, Mohamed Khider Biskra University, Algeria

ABSTRACT
This paper explores how museum and cultural venue architecture has an impact on tourism dynamics and local development with particular attention to how architectural design, visitor interaction, and local economic growth can be connected. Through the adopted mixed-methods approach involving qualitative case-studies, quantitative visitor surveys, and economic impact analysis, the study concludes that innovative architectural designs can greatly contribute to the overall visitor experiences and has the potential to create more foot-traffic, longer visitation durations, and more spending in the adjacent environment. The major discoveries suggest that the sites with innovative architectural designs not only have greater visitor numbers but also the sense of local identity and community pride, which trigger the economic rejuvenation. The relevance of the findings to the sphere of healthcare is that enriched settings grounded in culture may enhance the well-being of residents and tourists, which implies that the architectural design may play a wider role in improving the social and health outcomes. Moreover, the research highlights the need of embedding cultural asset development in urban plans by the city planners and policymakers, which ultimately has an effect on the sustainable development of the local economies. The study makes a contribution to the discussion of the importance of architecture in the cultivation of not only cultural participation but also the health of the population, and promoting a comprehensive planning methodology to acknowledge the interrelatedness of these spheres.
Keywords: Religious Tourism; Sacred Architecture; Tourism Development; Global Design Patterns; Cultural Heritage.

THE ARCHITECTURE OF MUSEUMS AND CULTURAL VENUES: TOURISM AND LOCAL DEVELOPMENT

Melik SAMI
Department of Architecture, Mohamed Khider Biskra University, Algeria
LACOMOFA Biskra Laboratory, Algeria

Sara KHELIL
Department of Architecture, Mohamed Khider Biskra University, Algeria

Tallal Abdel Karim BOUZIR
Department of Architecture, Mohamed Khider Biskra University, Algeria

ABSTRACT
This paper explores how museum and cultural venue architecture has an impact on tourism dynamics and local development with particular attention to how architectural design, visitor interaction, and local economic growth can be connected. Through the adopted mixed-methods approach involving qualitative case-studies, quantitative visitor surveys, and economic impact analysis, the study concludes that innovative architectural designs can greatly contribute to the overall visitor experiences and has the potential to create more foot-traffic, longer visitation durations, and more spending in the adjacent environment. The major discoveries suggest that the sites with innovative architectural designs not only have greater visitor numbers but also the sense of local identity and community pride, which trigger the economic rejuvenation. The relevance of the findings to the sphere of healthcare is that enriched settings grounded in culture may enhance the well-being of residents and tourists, which implies that the architectural design may play a wider role in improving the social and health outcomes. Moreover, the research highlights the need of embedding cultural asset development in urban plans by the city planners and policymakers, which ultimately has an effect on the sustainable development of the local economies. The study makes a contribution to the discussion of the importance of architecture in the cultivation of not only cultural participation but also the health of the population, and promoting a comprehensive planning methodology to acknowledge the interrelatedness of these spheres.
Keywords: Museum Architecture; Tourism Development; Local Economic Growth; Cultural Heritage; Architectural Design.

ARCHITECTURAL AESTHETICS AND FUNCTIONAL PLANNING: TOWARD HARMONIZED DESIGN

Melik SAMI
Department of Architecture, Mohamed Khider Biskra University, Algeria
LACOMOFA Biskra Laboratory, Algeria

Sara KHELIL
Department of Architecture, Mohamed Khider Biskra University, Algeria

Tallal Abdel Karim BOUZIR
Department of Architecture, Mohamed Khider Biskra University, Algeria

ABSTRACT
This paper explores the imperative unity between architectural aesthetics and functional planning to develop an integrated design methodology to meet the major problem of breaking down between the aesthetic aspects and functional performance in architectural practice. The study utilizes qualitative and quantitative research design utilizing the available design case studies, in-depth interviews with architects, and surveys of user experience to determine the best practices and to reveal possible contradictions in existing practices. The results indicate that a harmonious combination of the aesthetic aspect and usability factors do not only improve the overall user experience but also optimize the patient outcomes and the efficiency of operations in medical settings. In particular, the investigation highlights the major design strategies that can help reconcile aesthetic appeal and functionality and says that architectural spaces that achieve this balance can result in better healing conditions, higher satisfaction levels in patients, and higher staff efficiency. The implications of the findings are not limited to the scope of the individual healthcare facilities, but it appears that the architectural practices in support of the synergistic design philosophy has passed a paradigm of transformation. The study adds to the current literature on the subject by emphasizing the importance of interdisciplinary cooperation in the design of buildings and offers a paradigm that healthcare designers may follow to create an environment that is not only aesthetically pleasing but also functional in its capacity to contribute to the future of healthcare architecture and the role it has in the overall care of the patient.
Keywords: Architectural Aesthetics; Functional Planning; Harmonized Design; Human-Centered Architecture; Architecture and User Experience.

GLOBALIZATION AND ARCHITECTURE: RETHINKING PLANNING AND DESIGN IN A CHANGING WORLD

Melik SAMI
Department of Architecture, Mohamed Khider Biskra University, Algeria
LACOMOFA Biskra Laboratory, Algeria

Sara KHELIL
Department of Architecture, Mohamed Khider Biskra University, Algeria

Tallal Abdel Karim BOUZIR
Department of Architecture, Mohamed Khider Biskra University, Algeria

ABSTRACT
This paper discusses the effects of globalization in architectural planning and design that concerns the effects of cultural homogenization on various local architectural identities and sustainability. The research findings through the qualitative methodology incorporation of case studies of various architectural projects; interviews with architects and planners and the analysis of socio-economic tendencies formed by global forces determine the main patterns in the combination of global design norms with local environments. Locally, the results show a disturbing reporting of declining local identities in architecture with the globalized impact of global standards and aesthetics. This homogenization is a threat not only to the distinctiveness of local built environments but also to its ecological sustainability, thereby creating repercussions to the health of the general population due to the possibility of deterioration of community spaces. The interest of these revelations explains why architects and planners should champion the need to not only embrace globalization but also embrace local cultures to enhance the relevance of the local cultures and the introduction of sustainable design practices. Moreover, this paper indicates that a reconsideration of planning approaches is necessary to resolve the problems of environmental health and social equity, which will eventually be added to the discussion of how architecture can react to global pressures and at the same time improve the quality of life of people living in the community. The larger impacts of this study are in the urban planning and health arena, which denotes that promoting architectural diversity is essential in the development of resilient environments that support the well-being of the individual and the community in the fast globalizing world.
Keywords: Globalization; Sustainable Development; Planning Paradigms; Architecture and Society; Cultural Identity.

INTERIOR ARCHITECTURE AND HUMAN WELLBEING: PSYCHOLOGICAL IMPACTS OF ENVIRONMENTAL DESIGN FACTORS

Farhana NAZ
Asst. Prof., Lahore College for Women University, Faculty of Arts and Social Sciences, Department of Interior Design, Pakistan
ORCID: 0009-0000-9495-5489

ABSTRACT

The built environment plays a critical role in shaping human psychology, behavior, health, and overall well-being. This research examines how interior architectural elements influence users' psychological comfort, identity, safety, functionality, and emotional responses within indoor spaces. Drawing upon environmental psychology and behavior-based design theory, the study highlights the complex interaction between individuals and their physical surroundings, emphasizing that interior spaces are not neutral but actively shape human perception and experience.

The research synthesizes literature on indoor environmental stressors—including thermal conditions, lighting, acoustics, air quality, materials, and spatial configuration—and their short- and long-term psychological and physiological effects. Key interior architectural considerations related to safety, accessibility, flexibility, and identity are examined to demonstrate how design decisions can enhance or undermine users' sense of control, comfort, and belonging. Particular attention is given to the role of functionality and flexibility in accommodating changing user needs across different life stages, as well as the importance of cultural and social identity in shaping emotional attachment to space.

Through an integrative review of architectural theory and behavioral research, the study establishes design principles that promote psychological well-being, environmental comfort, and sustainable human-centered interiors. The findings underscore the responsibility of architects and interior designers to incorporate health-conscious, inclusive, and adaptive design strategies that respond to users' physical, emotional, and cultural needs. Ultimately, the research contributes to a deeper understanding of how interior architecture can function as a platform for human flourishing by supporting safety, identity, comfort, and meaningful everyday activities.

Keywords: Behavioral response, environmental psychology, human well-being, interior architecture, psychological comfort, spatial identity, user-centered design

RESILIENT URBAN MORPHOLOGIES: INTEGRATING PLANNING THEORIES WITH ARCHITECTURAL DESIGN

Melik SAMI
Department of Architecture, Mohamed Khider Biskra University, Algeria
LACOMOFA Biskra Laboratory, Algeria

Sara KHELIL
Department of Architecture, Mohamed Khider Biskra University, Algeria

Tallal Abdel Karim BOUZIR
Department of Architecture, Mohamed Khider Biskra University, Algeria

ABSTRACT
This research paper explores the nexus between the theories of planning and architectural design and develop resilience in urban morphologies to overcome the challenges of the environment and society. The lack of integrative frameworks that can bring these fields together is the main research issue as it makes it difficult to create flexible urban environments. The study uses qualitative and quantitative methodology to examine the current urban design practices, planning policies, and resilience performance in a range of urban locations. Some of the most significant results demonstrate that the cities that have adopted holistic short- and long-term planning and design not only enhance resiliency but also improve the overall health outcomes by creating surrounding conditions that would support physical exercise, social life, and overall health. Additionally, urban resiliency in healthcare is important due to the contribution made by the incorporation of the principle of sustainable design to minimize health disparities among urban residents. The importance of these results is that the results can inform policymakers and practitioners to develop consistent urban approaches that put health and resilience at the center of their focus, thus transforming urban landscapes to become more adept to address future challenges. Finally, this study recommends a paradiguma shift in urban planning and designing architecture because it argues that interdisciplinary collaborations are necessary to facilitate healthier and more robust urban landscapes capable of responding to the existing and looming socio-environmental demands.

Keywords: Resilient Urban Morphology; Urban Planning Theories; Integrated Design Approaches; Sustainable City Design; Spatial Planning

CROWDSOURCED CIVIC LSSUE REPORTING AND RESOLUTION SYSTEM

Deepa H
Undergraduate Student (2nd Year), R.M.K. Engineering College, Department of Computer Science and Business Systems, India

Harini S
Undergraduate Student (2nd Year), R.M.K. Engineering College, Department of Computer Science and Business Systems, India

Jefnishya J R
Undergraduate Student (2nd Year), R.M.K. Engineering College, Department of Computer Science and Business Systems, India

Keerthana K
Undergraduate Student (2nd Year), R.M.K. Engineering College, Department of Computer Science and Business Systems, India

ABSTRACT
Rapid urbanization has increased the complexity of managing civic issues such as potholes, waste accumulation, water leakage, broken streetlights, and public safety hazards. Traditional complaint redressal mechanisms are often slow, centralized, and lack transparency, leading to delayed resolutions and reduced citizen trust. A Crowdsourced Civic Issue Reporting and Resolution System addresses these challenges by leveraging digital platforms to enable active citizen participation in urban governance. The proposed system allows citizens to report local civic issues in real time using mobile or web-based applications by uploading descriptions, images, and geolocation data. These reports are aggregated on a centralized platform accessible to relevant municipal departments for efficient monitoring and action. Crowdsourcing enhances data accuracy and coverage by utilizing collective citizen input, while features such as issue categorization, priority tagging, and status tracking improve response efficiency. Transparency is strengthened through real-time updates, public dashboards, and feedback mechanisms that allow citizens to monitor resolution progress. The system also integrates analytics and visualization tools to identify issue hotspots, recurring problems, and departmental performance, supporting data-driven decision-making. Additionally, the use of emerging technologies such as Artificial Intelligence and Machine Learning can assist in automatic issue classification, severity assessment, and resolution prediction.
Overall, the Crowdsourced Civic Issue Reporting and Resolution System promotes participatory governance, improves service delivery, and fosters collaboration between citizens and authorities. By bridging the communication gap and ensuring accountability, the system contributes to smarter, more responsive, and sustainable urban management.
Keywords: Crowdsourcing, Civic Issues, Smart Cities, Citizen Participation, E-Governance, Urban Management, Issue Reporting, Transparency.

EVALUATING THE IMPACT OF CODING BOOTCAMPS ON INSTITUTIONAL LEARNING OUTCOMES

Oluwakemi Racheal OSHINOWO
Lagos State University of Education, Nigeria
ORCID: 0000-0003-0568-6446

Moses Adeolu AGOI
Lagos State University of Education, Nigeria
ORCID: 0000-0002-8910-2876

Rasheed Olatunde AJETUNMOBI
Lagos State University of Education, Nigeria

Oluwanifemi Opeyemi AGOI
Obafemi Awolowo University, Nigeria

ABSTRACT
In recent years, coding bootcamps have become a prominent global educational innovation, characterized by their intensive structure, short duration, and strong emphasis on practical, job-oriented skills. These programs are specifically designed to respond to the growing misalignment between traditional academic curricula and the rapidly changing competency requirements of the computing and software development sectors. Conventional higher education pathways often struggle to adapt quickly to technological advancements, prompting universities and colleges to explore alternative and complementary instructional models. As a result, coding bootcamps are increasingly being incorporated into institutional learning ecosystems, either as independent training initiatives or as integrated components within existing academic programs. This study critically evaluates the influence of coding bootcamps on institutional learning outcomes, focusing on multiple dimensions, including student skill development, academic achievement, employability prospects, curriculum adaptability, and teaching effectiveness. To achieve this objective, the study adopts a systematic review approach, synthesizing empirical research published between 2022 and 2025. The reviewed studies employ diverse methodological designs, including quasi-experimental investigations, large-scale survey analyses, and institutional case studies, providing a comprehensive evidence base for assessing bootcamp effectiveness. The evaluation draws on key statistical indicators reported across the literature, such as normalized learning gains (N-Gain), course completion and retention rates, post-training employment outcomes, and employer satisfaction levels. Collectively, the findings suggest that institutions that implement coding bootcamp methodologies tend to achieve higher levels of practical skill mastery among learners, stronger alignment between academic instruction and labour-market expectations, and improved graduate employment outcomes when compared with traditional instructional approaches. Despite these positive outcomes, the literature also highlights several ongoing challenges. Issues related to quality assurance, equitable access for diverse learner populations, consistency in instructional delivery, and the long-term sustainability of accelerated training models remain significant concerns for institutions. Overall, the study concludes that coding bootcamps can play a transformative role in enhancing institutional learning outcomes when they are carefully aligned with academic standards, delivered by qualified and experienced instructors, and embedded within robust institutional governance and quality assurance frameworks.
Keyword: Coding Bootcamps, Employability, Institutional Learning Outcomes, Programming Education.

BRIDGING THE DIGITAL AND VOCATIONAL SKILLS GAP FOR STREET CHILDREN: EVIDENCE FROM THE CYBERCATCH PROJECT IN NIGERIA

Nimota Jibola Kadir ABDULLAHI
Department of Educational Management, Faculty of Education, University of Ilorin, Nigeria

Muinat Bolanle BELLO
Department of Social Science Education, Faculty of Education, University of Ilorin, Nigeria

Mulikat L. A. MUSTAPHA
Department of Educational Guidance and Counselling, Faculty of Education, University of Ilorin, Nigeria

Nafisat A. ADEDOKUN-SHITTU
Department of Educational Technology, Faculty of Education, University of Ilorin, Nigeria

Prof. L. A. YAHAYA
Department of Educational Guidance and Counselling, Faculty of Education, University of Ilorin, Nigeria

Hafsat A. AMEEN
Department of Medical Biochemistry, University of Ilorin, Nigeria

Halimat A. ABDULRAHIM
University of Ilorin, Nigeria

ABSTRACT
Street children are often among the most overlooked members of society, frequently missing out on formal education and the vital skills that could enhance their life prospects. The Cybercatch Project in Kwara State, Nigeria, is a four-week initiative aimed at bridging this gap by offering digital literacy, life skills, entrepreneurship awareness, and vocational training in areas like shoe-making, soap-making, and perfume production. This study assesses how the program impacts learners' digital skills, practical abilities, and self-confidence. By employing a mixed-methods approach, data were gathered through pre- and post-training assessments, observations of vocational activities, semi-structured interviews, and focus group discussions with both participants and facilitators. The results show notable improvements in learners' digital literacy, teamwork, problem-solving skills, and entrepreneurial awareness. The hands-on vocational activities not only enhanced practical skills but also promoted economic empowerment. Participants expressed a boost in self-efficacy, motivation, and a more positive outlook on future opportunities. The study highlights the effectiveness of integrating digital, life, and vocational skills in a low-literacy, non-formal education environment, presenting a model that can be adapted and expanded in similar situations. The research sheds light on how experiential, inclusive, and practical training methods can significantly transform the educational and socio-economic paths of vulnerable youth.
Keywords: CyberCatch, Street children, Skill gaps, Nigeria

A DELIBERATE HUMOR: THE MASKS OF THE OPPRESSED TRUTH

Mas'ud HAMDAN
University of Haifa, Faculty of Humanities, Departments of Arabic Language and Literature and Theatre Performance, Israel

ABSTRACT
The mask has been recognized as an essential accessory for both ritualistic and artist purposes. Its qualities, which highlight the fictional over the real, contributed to its artistic use, which has been common, since the beginning of theatre. The mask had established types for tragedy, satirical plays, and comedy, where the caricatured-grotesque character was emphasized. The era of the "corona mask", social distancing, and restrictions of freedom of speech, bring forth various connotations. One of them is the mask of "madness" in Arab culture. This is not a material mask that covers the nose and mouth to protect against a mysterious virus, but a mask-like figure through which one can express the forbidden, and protest against "political" and institutional "viruses" in a familiar, humoristic, carnivalesque atmosphere that brings people together. The figure of the "fool-wise" in ancient Arab culture is a clear representation of the dialectic of "truth and falsehood". In the face of the silence of common sense and its obedience, this figure is forced to wear the mask of a fool in order to express her truth. Through the voice of madness that emerges as an authentic protest from the throat of an inconsequential, marginal, funny and ridiculous actor, the "fool-wise" ensures protection against any harm, while finding a way to convey his message in a play titled "reality of Tyranny". This article discusses this figure and the nature of the mask it wears, its various reflections in ancient Arab culture, and its development in the Arab popular comedy and satirical theatre in the twentieth century.
Keywords: Carnival, Clown, Comedy, Humor, karakoz, Laughter, Mask, The Tragic Fool, Zanni

A SMALL TAP IN THE BIG REALM OF THE SERIO-COMICAL

Mas'ud HAMDAN
University of Haifa, Faculty of Humanities, Departments of Arabic Language and Literature and Theatre Performance, Israel

ABSTRACT
This paper focuses on the esthetic interaction between **absurd, comedy, satire and tragedy**, in the Syrian film ***The Report*** (*Al-Taqrir*, 1986) written by the late Muhammad Al-Maghut (scriptwriter, 1934-2006) & directed by Durayd Lahham (director, 1934-). The distinctive way in which the filmmakers combine these features has a significant role in directing the audience from the absurd to the catharsis of sublime emotions.
Carnivalesque humor within the **Satire** genre adopted by this film, play a major part in highlighting the paradoxical and "the ridiculous" absurdity in social and political life in Syria during the seventies and eighties of the twentieth century. By the **satirical** sharpening of the gap between what is desirable and what is found, filmmakers try to convince us to reject out of hand low standards and corrupted norms.
'Azmi Baik, the principled anti-hero in this film, matches one of the most prominent carnivalesque characters as Bakhtin describes it when he refers to the polyphonic Novels of Fyodor Dostoevski. Especially, the total fusion of the character between personal life and worldview. By adopting this kind of character, filmmakers, make us facing things that we consider as moral truths. In reaching this point, arbitrary power and aggression, start seeming "Shakespeareally" shrinking in front of our eyes. Hence, carnivalesque humor, even if progressively and indirectly, has as a temporary **comic** release; an "emancipatory", "liberatory" and also perhaps occasionally a "revolutionary" function. However, because release is momentary, the absurd still "raises its head" approximately in every corner. Therefore, in order to liberate us from the **absurd**, filmmakers lead us to an uplifting path where in the last scene we arrive at the **tragic** catharsis once we reveal the horrifying consequences of the harsh confrontation between an innocent carnivalesque hero and a suspicious reality.
No doubt that this satiric film functions as a clear, direct and powerful condemnation of a corrupted regime. Yet, it is also a barefaced confession regarding the impotence of the struggle against injustice as long as it is only a lost combat of an isolated, decent, eccentric intellectual.
Keywords: Absurd, Bakhtin, Carnivalesque, Satire, Tragicomic

THE DISCOURSE OF POWER AND TRUTH IN POETIC WORKS (LITERATURE AND ART): AN INTRODUCTION

Mas'ud HAMDAN
University of Haifa, Faculty of Humanities, Departments of Arabic Language and Literature and Theatre Performance, Israel

ABSTRACT
Friedrich Nietzsche argued that truth is nothing but "a mobile army of metaphors and metonyms" and that knowledge is one of the forms of "the will to power." Following Nietzsche, Foucault (pragmatist philosopher as Nietzsche) created his archaeology out of this specific point. Truth is what is considered true if reinforced by the discourse of power. For Rorty, another pragmatist philosopher, truth is high esteem, approval, and "social commendation." That is, truth is a social construct that lacks any obligation or necessity that might be inherent in the nature of things.
Therefore, it can be concluded that whomever does not exercise power, does not possess the truth either. However, examining power relations as a comprehensive network that encompasses all aspects of human activity, leads the pragmatist to strip the ethical distinction between the oppressor and the oppressed of its meaning. This is because every individual's will, is subsumed under the will to power.
Although initially, we follow Rorty's model—which replaces objectivity with two methods, 'ironism' versus solidarity, i.e., adopting concepts and values through the creation of the self by individual freedom of choice, we still in this paper insist on challenging the pragmatic method through discussing the following question:
What about the truth (reflected in poetic works) that is, in its essence, an absolute rejection of the will to power?
Keywords: Nietzsche, Foucault, Rorty, truth, power, pragmatic method.

PHILOSOPHICAL QUESTIONS IN THE SHORT STORY *THE NEXT BEST THING* BY GRAHAM SWIFT

Lect., PhD Irina-Ana DROBOT
Technical University of Civil Engineering Bucharest, Faculty of Engineering in Foreign Languages, Department of Foreign Languages and Communication, Romania
ORCID: 0000-0002-2556-6233

ABSTRACT
The purpose of this paper is to analyse the short story *The Next Best Thing* from the short stories volume *Twelve Post-War Tales* by Graham Swift, published in 2025. This short story has, at its centre, the philosophical question of the meaning of life in relation to the war in Germany from 1959. The short story focuses on the experience of official Hans Büchner who is asked by Pvt. Joseph Caan, a soldier of 19 years old, to let him know what happened to his family during the war. This request prompts the official to reflect on his own family and the way he had lost them during the war. The short story is about grief work and loss, but also about prompting those who fought in the war about the meaning of life, a common philosophical question during moments of psychological crises. Hans Büchner reflects on what those asking to know about what happened to their family would actually want, whether they want the remains of their physical bodies or simply wish for a closure, or an ending to their life stories. The war is a theme which has been dealt with by Swift in his previous works, for example in the novels *The Sweetshop Owner*, *Out of This World*, *Shuttlecock*, and T*he Light of Day*. Wars are contexts when the stability of everyday life disappears and when various questions and traumas come to the surface. The methodological framework is made up of literary studies, psychology, philosophy and psychoanalysis.
Keywords: Trauma, Psychology, Grief Work, Mourning, Conflict

AI-ASSISTED INFORMATION EVALUATION AND STUDENTS' ABILITY TO DETECT MISINFORMATION IN SECONDARY SCHOOLS OF CROSS RIVER STATE, NIGERIA

Solomon Onen ABAM
Federal College of Education (Technical), School of Education Sciences, Nigeria

Ismail Olaniyi MURAINA
Lagos State University of Education, College of Information and Technology Education, Nigeria

Moses Adeolu AGOI
Lagos State University of Education, College of Information and Technology Education, Nigeria

Bashir Oyeniran AYINDE
Lagos State University, African Center of Excellence for Innovation and Transformative STEM Education, Nigeria

Wasiu Olatunde OLADAPO
Lagos State University of Education, College of Information and Technology Education, Nigeria

ABSTRACT
The rapid expansion of digital information ecosystems has intensified the challenge of misinformation among secondary school students, particularly in an era where Artificial Intelligence (AI) plays a growing role in information access and evaluation. This study investigates the impact of AI-assisted information evaluation systems on students' ability to detect misinformation across global, African, Nigerian, and Cross River State contexts. Guided by five research questions and five hypotheses, the study employed a quasi-experimental design involving secondary school students exposed to AI-supported information evaluation tools and a control group using traditional evaluation strategies. Two validated instruments the Misinformation Detection Test (MDT) and the Students' Perception of AI-Assisted Information Evaluation Questionnaire (SP-AIQ) were administered. Data collected were analyzed using descriptive statistics, independent samples t-test, ANOVA, and regression analysis. Findings revealed that students exposed to AI-assisted evaluation demonstrated significantly higher misinformation detection scores compared to those taught with conventional methods. Results also showed a strong positive relationship between perceived usefulness, trust in AI, and students' misinformation detection ability. Furthermore, demographic factors such as gender, school type, and location exhibited no significant influence on AI-supported performance outcomes. These findings align with global evidence indicating that AI-powered evaluation tools strengthen critical thinking, digital literacy, and fact-verification competencies. The study concludes that integrating AI-assisted information evaluation tools into secondary school instruction enhances students' resilience against misinformation, especially in digitally vulnerable communities. It recommends teacher capacity building, AI-literacy curriculum updates, and policy support for responsible AI use in schools.
Keywords: AI-assisted learning, Misinformation detection, Digital literacy, Information evaluation, Artificial intelligence in education

READING CASTE AND COUNTER-HISTORY IN *PHULE* (2025)

Assist. Prof. Dr. Raf Raf Shakil Ansari
Sharda University

ABSTRACT
This paper critically examines the film *Phule* (2025) as a cinematic project of counter-historiography, drawing upon Jyotirao Phule's anti-caste humanism**,** B. R. Ambedkar's theory of graded inequality, and insights from Dalit and Subaltern Studies to challenge Brahminical nationalism and the Hindu hierarchical social order. Departing from conventional biographical readings, the study argues that *Phule* reconstructs Indian social history from the margins by foregrounding caste oppression, radical reform, and the ethical demand for equality. Grounded in Ambedkar's distinction between political democracy and social democracy, the analysis demonstrates how the film exposes the limits of nationalist narratives that celebrate social reform while systematically erasing anti-caste struggles led by figures such as Jyotirao Phule and Savitribai Phule. By representing education as a site of ideological struggle and emancipation, the film aligns with Phule's critique of scriptural authority and caste-based privilege, revealing caste not as a peripheral social issue but as the structural foundation of Hindu society. The paper aims to examine how the film interrogates hierarchical power relations and critiques reformist compromises that seek to preserve caste under the guise of progress. It reads *Phule* as resistance cinema that desacralizes religious authority and disrupts dominant historical memory. *Phule* rejects savarna nationalist historiography and reclaims counter-historical narratives of anti-caste struggle. Ultimately, the paper contends that the film recuperates Phule's radical vision of social democracy, asserting that nationalism without caste annihilation remains ethically hollow, politically exclusionary, and historically incomplete.

Keywords: Brahminical Nationalism, Caste, Counter-History, Equality, Hindu Hierarchy, Anti-Caste Cinema, Social Reform

SOCIAL MEDIA IN THE MOROCCAN CLASSROOM: HOW PERCEIVED USEFULNESS SHAPES TEACHER ATTITUDES

Fouad BOUGHANZAI
SETIME Laboratory, Faculty of Science, Ibn Tofail University, Morocco

Rochdi DAIBI
Laboratory of Biology and Health, Faculty of Sciences, Ibn Tofail University, Morocco

Youssef OUHASSAN
SETIME Laboratory, Faculty of Science, Ibn Tofail University, Morocco

Rania MAJDOUBI
SETIME Laboratory, Faculty of Science, Ibn Tofail University, Morocco

Abdelkader HADJOUDJA
SETIME Laboratory, Faculty of Science, Ibn Tofail University, Morocco

ABSTRACT
As Morocco implements its digital transformation strategy for education, understanding the psychological determinants of technology adoption among educators is vital. While social media platforms offer innovative pedagogical possibilities, their integration is contingent upon teachers' professional attitudes.
Utilizing the Technology Acceptance Model (TAM) and Variance-based Structural Equation Modeling (PLS-SEM), this study investigates the impact of Perceived Usefulness (PU) on Teachers' Attitudes (AT) toward social media adoption in the Moroccan educational context.
A quantitative study was conducted with 49 Moroccan teachers. The model's predictive power and significance were tested using the ADANCO software with a 5,000-sample bootstrap procedure. The measurement model showed high reliability (PU $\rho A = 0.844$; AT $\rho A = 0.835$) and established convergent validity (AVE > 0.50).
The structural model reveals that Perceived Usefulness is a highly significant predictor of Teacher Attitudes. The direct effect of PU on AT yielded a path coefficient of $\beta = 0.803$. The bootstrap inference confirmed the robustness of this relationship with a t-value of 6.1858 and a p-value of 0.0000 ($p < 0.001$). The 95% percentile bootstrap confidence interval [0.5399, 1.0500] does not include zero. The model explains 64.5% of the variance in attitudes ($R^2 = 0.645$), with a very large effect size (Cohen's $f^2 = 1.82$).
The results clearly indicate that Moroccan teachers' attitudes are primarily shaped by their perceptions of the instructional value of social media in classroom practice. Accordingly, institutional policies should emphasize showcasing the pedagogical return on investment of these technologies. The proposed framework offers a solid foundation for guiding large-scale ICT integration.
Keywords: Social Media, Perceived Usefulness, Teachers' Attitude, TAM, PLS-SEM, Educational Technology

WHY FARMERS HESITATE: ADOPTION CONSTRAINTS OF AGROFORESTRY SYSTEMS IN THE INDIAN SUNDARBANS

Samim BISWAS
Regional Research Station (Coastal Saline Zone), Bidhan Chandra Krishi Viswavidyalaya, India
ORCID: 0009-0005-0633-7127

ABSTRACT

Context: Agroforestry systems offer significant potential for enhancing farm productivity, livelihood security, and climate resilience in the ecologically fragile Indian Sundarbans. Despite these benefits, farmers in this region hesitate to adopt agroforestry practices due to several technical, social, and institutional constraints.

Objective: The study aimed to assess the adoption constraints and farmers' perceptions regarding agroforestry systems in the Indian Sundarbans and to identify the major factors influencing their adoption.

Methodology: The study was conducted in four blocks of South 24 Parganas district of West Bengal. A total of 100 respondents, 25 each from blocks: Gosaba, Kakdwip, Sagar, Namkhana, were selected randomly using a multistage random sampling technique. Data were collected through individual interviews and focus group facilitations. Statistics such as range, mean, standard deviation, chi-square test, and correlation analysis were applied for data analysis.

Results: Most of the respondents (57%) were middle-aged, 71% had primary or lower levels of education, indicating a low literacy rate, and 83% belonged to the marginal farmer category with less than 1 ha of landholding. A majority of the respondents (61%) had a very low level of knowledge about agroforestry practices. Lack of technical knowledge regarding agroforestry practices and absence of support from local authorities were identified as the most significant problems. Social and behavioural factors, such as resistance to change from traditional practices, low community support, also played an important role. Institutional and policy-related barriers, including weak extension services and insufficient government support or incentives, further constrained adoption. Farmers' knowledge of agroforestry, exposure to training, and farm size were positively and significantly correlated with the adoption of agroforestry systems.

Conclusion: The study clearly indicates the potential of agroforestry systems to increase productivity and improve the livelihoods of rural households in the Indian Sundarbans under rapidly changing climatic conditions. The findings emphasize the need for strong extension services, targeted training programs, and supportive policy interventions to promote wider adoption of agroforestry systems in the region.

Keywords: Agroforestry adoption, Farmers' perceptions, Indian Sundarbans, Coastal saline agriculture, Rural livelihoods

THE FEASIBILITY OF WHITE OYSTER MUSHROOM FARMING USING COMMERCIAL AND HOME-PRODUCED SEEDLINGS.

Ristina Siti SUNDARI
Agribusiness Study Program, Faculty of Agriculture, Universitas Perjuangan Tasikmalaya, Indonesia
ORCID: 0000-0002-5310-8520

Ahmad YAZID
Agribusiness Study Program, Faculty of Agriculture, Universitas Perjuangan Tasikmalaya, Indonesia

D Yadi HERYADI
Agribusiness Study Program, Faculty of Agriculture, Universitas Siliwangi, Indonesia

Adnan ARSHAD
State Key Laboratory of Agroecosystems, Lanzhou University, China
ORCID: 0000-0002-8755-5281

Farhan AHMAD
UNWPF-FRD, Food for Assets (FFA) – Cash Based Transfers (CBT) Project, Pakistan
ORCID: 0000-0002-4248-0714

ABSTRACT
White oyster mushrooms (Pleurotus ostreatus) are now more familiar and widely cultivated, and they do not require a large space. Oyster mushroom agribusiness can be a primary livelihood for small, medium, or large-scale businesses. The popularity of oyster mushrooms as a delicious and nutritious food is increasing in line with population growth, per capita income, and consumption patterns that encourage a healthy lifestyle. Oyster mushroom farmers typically use commercial seeds; however, in this study, farmers utilized homemade seeds (made from corn, sawdust, and lime) to compare production yields and the feasibility of the two methods. The total costs for three seasons, or nine months, using commercial and homemade seeds were Rp 9,417,000 and Rp 1,000, respectively. 7,599,000, using homemade seeds is more economical, at Rp 1,818,000, compared to commercial seeds. The harvest is still higher for homemade seeds, 959 Kg, and commercial seeds, 932 Kg. Commercial oyster mushroom seeds yield an income of Rp 13,161,000 per three seasons, while the use of homemade seeds yields Rp 13,581,000, resulting in a difference of Rp 420,000. These results are said to be profitable, indicating that these two methods are financially feasible, as the R/C Ratio obtained is more than 1, specifically 1.39 for commercial seeds and 1.78 for homemade seeds.

THE IMPACT OF ROOTSTOCKS ON "VALENCIA LATE" ORANGE FRUIT QUALITY IN NORTHWEST OF MOROCCO

M'hamed MAJJI
Unit Research of Plant Breeding and Germplasm Conservation, National Institute for Agricultural Research (INRA), Morocco
Laboratory of Botany, Biotechnology, and Plant Protection, Faculty of Sciences, Ibn Tofail University, Morocco

Abdelhak TALHA
Unit Research of Plant Breeding and Germplasm Conservation, National Institute for Agricultural Research (INRA), Morocco

Brahim AOUZIOU
Unit Research of Plant Breeding and Germplasm Conservation, National Institute for Agricultural Research (INRA), Morocco

Ouiam CHETTO
Unit Research of Plant Breeding and Germplasm Conservation, National Institute for Agricultural Research (INRA), Morocco

Rachid BENKIRANE
Laboratory of Botany, Biotechnology, and Plant Protection, Faculty of Sciences, Ibn Tofail University, Morocco

Hamid BENYAHIA
Unit Research of Plant Breeding and Germplasm Conservation, National Institute for Agricultural Research (INRA), Morocco

ABSTRACT
The production and quality of citrus fruits are strongly influenced by the compatibility between the scion and the rootstock. In order to identify suitable rootstock–scion combinations that can improve citrus productivity at the local level, this study evaluated the effect of different rootstocks on fruit quality in *Valencia Late* oranges. A field experiment was conducted to assess several quality parameters, including titratable acidity, soluble solids (°Brix), fruit size, vitamin C content, juice percentage, and average fruit weight. For each plant and each replication, ten fruits were sampled and analyzed. The results showed that rootstock had a significant effect on all measured parameters. Citrange Troyer C35 produced the largest fruits, with an average weight of about 246 grams and a caliber of 83 millimeters. In contrast, Sunki mandarin resulted in smaller fruits, with an average weight of 141 grams and a caliber of 66 millimeters. The highest juice content, reaching 57%, along with the highest soluble solids and titratable acidity, was observed in fruits grafted onto Sunki mandarin × *Poncirus trifoliata* B2. Regarding nutritional quality, the highest vitamin C content was recorded for Sour Orange and Citrange Troyer C35. Overall, our findings demonstrate that rootstock choice influences the balance between yield and fruit quality. Sunki mandarin × *Poncirus trifoliata* B2 appears to be more suitable for juice production, while Citrange Troyer C35 enhances nutritional value. These results provide practical guidance for Moroccan citrus growers in selecting rootstocks according to market demands, whether for fresh consumption or processing.
Keywords: Citrus rootstock, juice yield, fruit weight, physicochemical quality, Morocco

OPTIMIZING SULFUR MANAGEMENT FOR CANOLA (BRASSICA NAPUS L.) PRODUCTIVITY IN ALKALINE SOILS OF FAISALABAD

Kainat MEHMOOD
Department of Agronomy, University of Agriculture, Pakistan

Haroon Zaman KHAN
Department of Agronomy, University of Agriculture, Pakistan

Anjum NAEEM
Department of Agronomy, University of Agriculture, Pakistan

Eisha HABIB
Department of Agronomy, University of Agriculture, Pakistan

Asif IQBAL
Department of Agronomy, University of Agriculture, Pakistan

Muhammad SHAHBAZ
Department of Agronomy, University of Agriculture, Pakistan

Muhammad ABUZAR
Department of Botany, University of Agriculture, Pakistan

ABSTRACT
Alkaline soils of Faisalabad often have low sulfur availability due to high pH and calcium carbonate content, which reduces sulfur solubility. Similarly on the other hand, Sulphur is essential for oil synthesis, chlorophyll formation, and nitrogen metabolism in canola. So, study of canola varieties under the different sulfur rates lead to cost-effective sulfur management strategies to maximize canola productivity. Therefore, in order to resolve the above mentioned issues, a pot experiment was conducted at agronomic farm, University of Agriculture, Faisalabad in winter season 2024-25. Three Canola varieties (TM Canola, Sandal Canola, and Super Canola) were tested under five sulfur treatments (0, 10, 30, 60, and 90 ppm) using calcium sulfate as a sulfur source. Parameters measured included phenological traits, yield components, and quality attributes through a completely randomized factorial design. Results showed sulfur application significantly improved canola performance. The 90 ppm treatment accelerated flowering by 5.33 days and increased silique count from 154.56 to 211.22 per plant. Seed yield reached 2.64 t ha^{-1} and biological yield 7.84 t ha^{-1} at maximum sulfur rates. Oil content improved from 35.40% to 40.40%, while protein increased from 17.87% to 19.24%. TM Canola consistently outperformed other varieties across all parameters, showing superior adaptation to alkaline conditions. The study confirms sulfur's vital role in canola production and demonstrates substantial productivity gains through proper nutrient management. Results recommend 90 ppm sulfur application for optimal yield and quality in alkaline soils, with TM Canola as the preferred variety for such conditions. Least Significant Difference test (LSD) was used to check the treatments mean at 5% probability level.
Kee Word's = Canola, Alkaline Soil, Sulfur, Oil, Protein

DESIGN OF BASIN IRRIGATION SYSTEM FOR PEPPER IN GONAR GANYE, TUDUN WADA, ZARIA

Sani Yakubu KHALIFA
Department of Water Resources and Environmental Engineering, Ahmadu Bello University, Nigeria
ORCID: 0000-0002-2036-4835

Usman Idris ABUBAKAR
Department of Water Resources and Environmental Engineering, Ahmadu Bello University, Nigeria

Nura Idris ABDULLAHI
Department of Water Resources and Environmental Engineering, Ahmadu Bello University, Nigeria

Aliyu Adamu DANDAJE
Department of Water Resources and Environmental Engineering, Ahmadu Bello University, Nigeria

ABSTRACT
This study focused on the design of a basin irrigation system for sweet pepper (Capsicum annuum L.) in Gonar Ganye, Tudun Wada, Zaria, using the FAO CROPWAT 8.0 model to simulate crop water requirements and irrigation scheduling. The objectives were to determine the crop water requirement, design an appropriate basin irrigation layout, and evaluate irrigation water use efficiency (IWUE) under varying irrigation levels. The total seasonal evapotranspiration (ETc) for pepper was estimated at 585.4mm, corresponding to a gross irrigation demand of 9006.15m³/ha at 100% ETc, 6743.08m³/ha at 75% ETc, and 4503.08m³/ha at 50% ETc, considering a field efficiency of 65%. The loamy soil condition and effective root zone depth of 0.45m provided a readily available water capacity of 54mm, supporting an irrigation interval of 6 - 8 days. The computed IWUE values were 0.194, 0.259, and 0.389kg/m³ at 100%, 75%, and 50%ETc, respectively, indicating that moderate water deficit enhanced water productivity with minimal yield loss. The 75%ETc irrigation regime was found to be the most efficient and sustainable for pepper production in the area. The study demonstrates the usefulness of the CROPWAT 8.0 model in guiding irrigation design and water management planning under semi - arid conditions, contributing to improved resource utilization, productivity, and sustainability in smallholder vegetable farming systems of Northern Nigeria
Keywords: Crop, seasonal, productivity, efficiency, simulate

ADMINISTRATION OF THE EFFECTIVENESS OF CHEMICAL FERTILIZERS CENTERED ON INTEGRATED NUTRITION IN ARID AND SEMI-ARID AREAS

Mohamad JAFARI
Soil and Water Research Department, Hormozgan Agricultural and Natural Resources Research and Education Center, AREEO, Iran

ABSTRACT

The diminished effectiveness of chemical fertilizers in arid and semi-arid areas represents a key issue in contemporary agriculture, which not only raises production expenses but also leads to environmental repercussions like soil contamination and water resource pollution. This decline in effectiveness is frequently due to a mix of restrictive elements, such as environmental pressures (drought and salinity), inappropriate pH, lack of organic matter, nutrient discrepancies, and temperature variations that interfere with the plant's nutrient uptake. In these circumstances, relying solely on chemical fertilizers not only fails to enhance efficiency but also worsens nutrient loss via leaching, fixation, and volatilization, endangering production stability. To address this challenge, optimizing the management of chemical fertilizers through integrated nutrition has been suggested as a scientific and practical approach that enhances nutrient uptake by plants by harmonizing chemical, organic, and biological fertilizers. In this method, chemical fertilizers offer an immediate source of essential elements for plants; organic fertilizers guarantee a continuous supply of nutrients via the slow release of elements; and bio-fertilizers generate complementary and synergistic effects by enhancing element uptake and fostering beneficial microbial activity. This coordinated and focused engagement is designed based on soil characteristics and environmental factors, such as pH, salinity, organic matter, and cation exchange capacity, along with the plant's requirements at various growth stages, to minimize element deficiencies or surpluses and enhance fertilizer efficiency. Thus, integrated nutrition establishes a dynamic interconnection among soil, plants, and nutrient sources, enhancing nutrient availability and absorption while minimizing losses from leaching, stabilization, or waste of elements, thus laying the essential foundation for effective application in the field and improving production sustainability. Incorporating guidance for responsible fertilizer use based on soil analysis and weather factors within a holistic nutrition strategy, by accurately aligning the kind and amount of fertilizers with the specific requirements of the plant and the soil's capabilities, enhances nutritional equilibrium, avoids excessive fertilizer application, and boosts nutrient uptake by the plant. Consequently, the effectiveness of chemical fertilizer use is improved, and the possibility of applying this method at the farm level to boost productivity and ensure sustainable production is established. Consequently, efficiently managing chemical fertilizer usage through integrated nutrition serves as a strategic method to boost productivity, minimize resource waste, and guarantee sustainability in agriculture within arid and semi-arid zones.

Keywords: effectiveness of chemical fertilizers, integrated nutrition, soil analysis, the plant's requirements at various growth stages

OPTIMIZING NITROGEN MANAGEMENT FOR ENVIRONMENTALLY FRIENDLY AGRICULTURE

Chaimaa ELABBARI

Prof. Najoua LABJAR

Ahmed EL BOUZIDI

Prof. Souad EL HAJJAJI

ABSTRACT

In agriculture, soil and water pollution by nitrates is significantly exacerbated by the excessive use of nitrogen fertilizers, which can lead to major environmental impacts such as eutrophication, groundwater contamination, and health risks.

Several strategies have been developed to address these issues by reducing nitrogen inputs while improving nitrogen use efficiency and maintaining agricultural productivity.

These strategies include adjusting fertilizer application rates, using slow-release fertilizers, applying precision fertilization tailored to crop needs, introducing nitrogen-fixing crops such as legumes, practicing crop rotation, and improving agricultural techniques.

These approaches not only help limit nitrogen losses to the environment but also enhance the quality of agricultural products and reduce costs for farmers. They form part of a broader effort to ensure the sustainability of agricultural systems in the face of climate change, balancing productivity, environmental protection, and resilience.

Keywords: Nitrate pollution, Nitrogen fertilizers, Groundwater contamination, Eutrophication, Precision fertilization, Sustainable agricultura, Environmental protection, Climate change resilience

UNDERSTANDING OF DOWNSTREAM MECHANISMS AND PERSONALISED THERAPY IN BREAST CANCER

Busra ERKAN
Nottingham Breast Cancer Research Centre, Academic Unit of Translational Medical Sciences, School of Medicine, University of Nottingham Biodiscovery Institute, UK
ORCID: 0009-0002-2277-2362

ABSTRACT
Breast cancer (BC) is a complex disease influenced not only by genetic and transcriptomic alterations but also by their functional consequences at the protein level. Elucidating downstream mechanisms that drive tumour progression and aggressive phenotypes is essential for translating molecular findings into clinical practice. Protein-level validation of candidate molecules provides a mechanistic foundation for understanding tumour biology and supports personalised therapeutic strategies.
In this study, the expression patterns of candidate proteins and genes associated with tumour aggressiveness were examined in a large, well-characterised primary BC cohort using tissue microarrays (TMA) and immunohistochemistry (IHC). Protein expression was semi-quantitatively assessed and correlated with tumour grade, size, lymph node involvement, hormone receptor status, molecular subtypes, and patient outcomes. Genes related to glutamine transporters were identified, and their high expression significantly impacted overall survival in BC patients.
These findings emphasise the importance of downstream mechanisms in tumour progression and provide a rationale for targeted metabolic interventions and personalised treatment strategies.
Keywords: Downstream mechanisms, Glutamine metabolism, Tumour progression, Personalised therapy

MEME KANSERİNDE DOWNSTREAM MEKANİZMALARIN ANLAŞILMASI VE KİŞİSELLEŞTİRİLMİŞ TEDAVİ

ÖZET
Meme kanseri (MK), yalnızca genetik ve transkriptomik değişikliklerle değil, bu değişikliklerin protein düzeyinde oluşturduğu fonksiyonel sonuçlarla şekillenen karmaşık bir hastalıktır. Tümör progresyonunu ve agresif fenotipleri yönlendiren downstream mekanizmaların anlaşılması, moleküler bulguların klinik pratiğe aktarılması açısından kritik öneme sahiptir. Aday moleküllerin protein düzeyinde doğrulanması, tümör biyolojisinin mekanistik olarak anlaşılmasını sağlar ve kişiselleştirilmiş tedavi stratejilerini destekler.
Bu çalışmada, tümör agresifliği ile ilişkili aday protein ve genlerin ekspresyon paternleri, geniş ve iyi karakterize edilmiş bir primer MK kohortunda doku mikrodizileri (TMA) ve immünohistokimyasal (IHK) yöntemlerle incelenmiştir. Protein ekspresyonu yarı kantitatif olarak değerlendirilmiş ve tümör derecesi, boyutu, lenf nodu tutulumu, hormon reseptör durumu, moleküler alt tipler ve hasta sağkalımı ile ilişkilendirilmiştir. Glutamin taşıyıcıları ile ilişkili genler belirlenmiş ve yüksek ekspresyonlarının MK hastalarında sağkalımı anlamlı şekilde etkilediği ortaya konmuştur.
Bulgular, tümör progresyonunda downstream mekanizmaların önemini vurgulamakta ve metabolik hedeflemeler ile kişiselleştirilmiş tedavi stratejilerinin geliştirilmesi için bir temel sağlamaktadır.
Anahtar Kelimeler: Downstream mekanizmalar, Glutamin metabolizması, Tümör progresyonu; Kişiselleştirilmiş tedavi

NOVEL BIOMARKERS ASSOCIATED WITH TUMOUR AGGRESSIVENESS AND PROGNOSIS IN OESTROGEN RECEPTOR-POSITIVE BREAST CANCER

Busra ERKAN
Nottingham Breast Cancer Research Centre, Academic Unit of Translational Medical Sciences, School of Medicine, University of Nottingham Biodiscovery Institute, UK
ORCID: 0009-0002-2277-2362

Andrew R GREEN
Nottingham Breast Cancer Research Centre, Academic Unit of Translational Medical Sciences, School of Medicine, University of Nottingham Biodiscovery Institute, UK
ORCID: 0000-0002-0488-5913

ABSTRACT
Breast cancer (BC) is a heterogeneous disease characterised by diverse molecular subtypes and variable clinical outcomes. Oestrogen receptor-positive (ER+) BC represents the majority of cases and is generally associated with a favourable prognosis; however, a substantial subset of patients experiences disease recurrence due to aggressive tumour biology and therapeutic resistance. Identification of prognostic biomarkers that reflect tumour aggressiveness remains a critical unmet need.
In this study, we systematically investigated the clinical and prognostic relevance of Solute Carrier (SLC) transporters in BC using large, independent patient cohorts. Transcriptomic analyses were performed on METABRIC, bc-GenExMiner, and TCGA datasets to evaluate the expression patterns of fourteen SLC genes across BC molecular subtypes. High expression of SLC1A5, SLC7A5, and SLC3A2 was significantly enriched in Luminal B, HER2-enriched, and basal-like subtypes, and was associated with adverse clinicopathological parameters, including higher tumour grade, larger tumour size, and lymph node involvement. Importantly, elevated expression of SLC1A5 and SLC7A5 correlated with significantly shorter overall survival in ER+ BC patients. These proteins demonstrated marked intra- and inter-tumoural heterogeneity and showed significant associations with molecular subtype classification, biological markers, and patient outcomes.
Collectively, this study identifies SLC1A5, SLC7A5, and SLC3A2 as robust prognostic indicators in ER+/Luminal BC.
Keywords: Prognostic biomarkers, Tumour aggressiveness, Oestrogen receptor-positive

ER POZİTİF MEME KANSERİNDE TÜMÖR AGRESİFLİĞİ VE PROGNOZ İLE İLİŞKİLİ YENİ BİYOBELİRTEÇLER

ÖZET
Meme kanseri (MK), farklı moleküler alt tipler ve değişken klinik seyir ile karakterize heterojen bir hastalıktır. Östrojen reseptör pozitif (ER+) meme kanseri, en yaygın alt tip olmasına rağmen, hastaların önemli bir kısmında agresif tümör biyolojisi ve tedaviye direnç nedeniyle hastalık nüksü ve kötü prognoz gözlenmektedir. Bu nedenle, tümör agresifliğini yansıtan güvenilir prognostik biyobelirteçlerin tanımlanması büyük önem taşımaktadır.
Bu çalışmada, Solüt Taşıyıcı (SLC) proteinlerinin meme kanserindeki klinik ve prognostik önemini araştırmak amacıyla geniş ve bağımsız hasta kohortları kullanılmıştır. METABRIC, bc-GenExMiner ve TCGA veri setlerinde on dört farklı SLC geninin ekspresyon profilleri meme kanseri moleküler alt tipleri arasında karşılaştırılmıştır. SLC1A5, SLC7A5 ve SLC3A2'nin özellikle Luminal B, HER2-zengin ve bazal-benzeri alt tiplerde yüksek ekspresyon gösterdiği ve yüksek tümör derecesi, artmış tümör boyutu ve lenf nodu tutulumu gibi olumsuz klinikopatolojik özelliklerle ilişkili olduğu saptanmıştır. Ayrıca, ER+ meme kanseri hastalarında SLC1A5 ve SLC7A5'in yüksek ekspresyonu daha kısa genel sağkalım ile anlamlı şekilde ilişkili bulunmuştur.

Bu proteinlerin ekspresyonu belirgin intra-tümöral ve inter-tümöral heterojenite göstermiş ve moleküler alt tipler, biyolojik belirteçler ve hasta sağkalımı ile anlamlı ilişkiler ortaya koymuştur. Sonuç olarak, bu çalışma SLC1A5, SLC7A5 ve SLC3A2'yi ER+/Luminal meme kanserinde güçlü prognostik göstergeler olarak tanımlamaktadır.

Anahtar Kelimeler: Prognostik biyobelirteçler, Tümör agresifliği, Östrojen reseptör pozitif

EVALUATION OF KETEM PRACTICES IN CANCER CONTROL FROM A PUBLIC HEALTH AND HEALTH POLICY PERSPECTIVE IN TURKEY

Dr. Deniz YILMAZ
Independent Researcher, Public Health Specialist, Türkiye
ORCID: 0009-0004-3755-4397

ABSTRACT
Cancer has become a major public health problem in Turkey, as in many countries worldwide, with increasing morbidity and mortality rates. Early diagnosis and screening programs play a crucial role in reducing cancer-related deaths. Within the framework of health policies developed to combat cancer in Turkey, Cancer Early Detection, Screening and Education Centers (KETEM) have been established and expanded. KETEMs play a key role in the implementation of national screening programs, particularly for breast, cervical, and colorectal cancers. The aim of this study is to evaluate KETEM practices in Turkey from a public health and health policy perspective and to examine their role in cancer control strategies. This study is designed as a qualitative evaluation based on a review of national and international literature. The literature review focuses on the accessibility of KETEM services, participation in screening programs, public awareness, and alignment with health policies. The findings indicate that KETEMs contribute significantly to increasing access to early diagnosis services, enhancing public awareness of cancer screening, and reducing inequalities in healthcare access. However, certain challenges such as regional disparities, workforce limitations, and suboptimal participation rates in screening programs remain.In conclusion, strengthening KETEMs through comprehensive and sustainable health policies and integrating them with community-based approaches may enhance the effectiveness of cancer control efforts in Turkey.
Keywords: Cancer, Cancer Screening, KETEM, Public Health, Health Policy

TÜRKIYE'DE KANSERLE MÜCADELEDE KETEM UYGULAMALARININ HALK SAĞLIĞI VE SAĞLIK POLITIKALARI AÇISINDAN DEĞERLENDIRILMESI

ÖZET
Kanser, dünya genelinde olduğu gibi Türkiye'de de morbidite ve mortalite oranları giderek artan, önemli bir halk sağlığı sorunu olarak öne çıkmaktadır. Kanserden kaynaklanan ölümlerin azaltılmasında erken tanı ve tarama programları temel stratejiler arasında yer almaktadır. Bu doğrultuda Türkiye'de kanserle mücadele kapsamında geliştirilen sağlık politikaları çerçevesinde Kanser Erken Teşhis, Tarama ve Eğitim Merkezleri (KETEM) yaygınlaştırılmıştır. KETEM'ler, meme, serviks ve kolorektal kanser başta olmak üzere ulusal tarama programlarının uygulanmasında kritik bir rol üstlenmektedir. Bu çalışmanın amacı, Türkiye'de KETEM uygulamalarını halk sağlığı ve sağlık politikaları perspektifinden değerlendirmek ve bu merkezlerin kanserle mücadeledeki işlevlerini ortaya koymaktır. Çalışma, ulusal ve uluslararası literatürün taranmasına dayalı nitel bir değerlendirme niteliğindedir. Literatür taraması kapsamında KETEM hizmetlerinin erişilebilirliği, tarama programlarına katılım, toplum farkındalığı ve sağlık politikalarıyla uyumu incelenmiştir. Elde edilen bulgular, KETEM'lerin erken tanı hizmetlerine erişimi artırdığı, toplumda kanser taramalarına yönelik farkındalığı güçlendirdiği ve sağlık hizmetlerinde eşitsizliklerin azaltılmasına katkı sağladığını göstermektedir. Bununla birlikte, bölgesel farklılıklar, personel yetersizliği ve tarama programlarına katılım oranlarının istenilen düzeyde olmaması gibi bazı yapısal sorunlar da dikkat çekmektedir. Sonuç olarak, KETEM'lerin sürdürülebilir ve etkili bir şekilde yapılandırılması, sağlık politikalarıyla daha güçlü biçimde desteklenmesi ve toplum temelli yaklaşımlarla entegrasyonunun artırılması, Türkiye'de kanserle mücadelede önemli bir politika aracı olarak değerlendirilmektedir.
Anahtar kelimeler: NAFTA Kanser, Kanser Taraması, KETEM, Halk Sağlığı, Sağlık Politikaları

SYMPTOMATIC ECTOPIC URETERAL STUMP: EXPERIENCE WITH ENDOSCOPIC ABLATION

Asst. Prof. Dr. Sezgin YENİ
Mudanya University, Vocational School, Türkiye
ORCID: 0000-0001-5143-6507

ABSTRACT
Ectopic ureter is a rare urinary tract pathology that is often associated with congenital anomalies. Treatment strategies vary depending on the underlying anatomy and the patient's clinical symptoms. This presentation reports a case of an ectopic ureter with persistent pain despite prior surgical treatment, and the minimal invasive management approach applied.
The patient had previously undergone upper pole heminephrectomy for a left duplex kidney; however, left-sided flank pain persisted postoperatively. During the initial surgery, it was noted that the ectopic ureter of the left duplex kidney had been clipped at the proximal level, leaving the distal ureteral stump in situ. The patient had a history of chronic pain lasting approximately 15 years, which continued similarly after surgery five years ago.
Cystoscopy performed at our center revealed the ectopic ureteral orifice lateral to the urethral meatus. Subsequently, renoscopy was performed, and the ureter was entered; it was markedly dilated and extended to the lower pole of the kidney, terminating blindly. Retrograde pyelography with contrast demonstrated that the native ureter and ectopic ureter traveled together up to the kidney. These findings suggested that a nonfunctional but symptomatic ureteral stump could be the source of the patient's pain. Endoscopic ureteral ablation was performed. Following the procedure, the patient's long-standing pain resolved completely, and no complications or pain recurrence were observed during follow-up.
This case highlights that ureteral stumps left after heminephrectomy can be a cause of chronic pain and demonstrates that endoscopic ureteral ablation may be an effective and minimally invasive treatment option in selected patients.
Keywords: Ectopic ureter, Chronic flank pain, Endoscopic ablation

SEMPTOMATİK EKTOPİK ÜRETER GÜDÜĞÜ: ENDOSKOPİK ABLASYON DENEYİMİ

ÖZET
Ektopik üreter, nadir görülen ve sıklıkla konjenital anomalilerle birlikte seyreden bir üriner sistem patolojisidir. Tedavi yaklaşımı, altta yatan anatomik yapı ve hastanın klinik semptomlarına göre değişkenlik göstermektedir. Bu sunumda, daha önce cerrahi tedavi uygulanmasına rağmen uzun yıllar boyunca devam eden ağrısı olan bir ektopik üreter olgusu ve uygulanan minimal invaziv tedavi yaklaşımı sunulmaktadır.
Hastaya geçmişte sol duplike böbrek nedeniyle üst pol heminefrektomi uygulanmış; ancak cerrahi sonrasında sol yan ağrıları devam etmiştir. Operasyon sırasında, sol duplike böbreğe ait ektopik üreterin proksimal seviyeden kliplendiği ve distal üreter güdüğünün yerinde bırakıldığı öğrenilmiştir. Hastanın yaklaşık 15 yıldır devam eden, beş yıl önce geçirdiği cerrahi sonrasında da benzer şekilde süren kronik ağrı şikâyeti mevcuttu.
Tarafımızca yapılan sistoskopide, sol ektopik üreter orifisi üretral meatusun hemen lateralinde tespit edilmiş. Ardından yapılan renoskopi ile üreter içerisine girilmiş; üreterin belirgin şekilde dilate olduğu, proksimale doğru ilerlenildiğinde böbreğin alt pol seviyesine kadar devam ettiği ve kör sonlandığı izlenmiştir. Opak madde verilerek yapılan retrograd piyelografide, doğal üreter ile ektopik üreterin böbrek seviyesine kadar birlikte seyrettiği görülmüştür. Bu bulgular, fonksiyonel olmayan ancak semptomatik bir üreter güdüğünün hastanın ağrılarının kaynağı olabileceğini düşündürmüştür.

Hastaya endoskopik üreter ablasyonu uygulanmıştır. İşlem sonrasında hastanın uzun süredir devam eden ağrılarının tamamen düzeldiği gözlenmiş; takiplerinde herhangi bir komplikasyon ya da ağrı nüksü saptanmamıştır.

Bu olgu, heminefrektomi sonrasında bırakılan üreter güdüklerinin kronik ağrıya neden olabileceğini ve seçilmiş hastalarda endoskopik üreter ablasyonunun etkili ve minimal invaziv bir tedavi seçeneği olduğunu göstermektedir.

Anahtar kelimeler: Ektopik üreter, Kronik yan ağrısı, Endoskopik ablasyon

KALP KAPAK CERRAHİSİ GEÇİREN VE VARFARİN SODYUM KULLANAN HASTALARIN COVİD 19 PANDEMİ DÖNEMİNDEKİ HASTANEYE GELİŞ SIKLIKLARI, KAN INR DÜZEYLERİNİN KLİNİK OLAYLARA ETKİLERİ

Dr. Mehmet Cem BAŞEL
VM Medical Park Bursa Hospital, Department of Cardiology, Türkiye
ORCID: 0000-0002-5077-0527

ÖZET

Amaç:

Prostetik kalp kapak hastalığı nedeni ile Varfarin Sodyum kullanan hastaların pandemi dönemindeki hastaneye geliş sıklıklarının, bu hastaların kan Uluslararası Normalleştirilmiş Oran (INR) değerlerinin efektifliğinin ,bu dönem süresince hastalarda oluşabilecek kardiyak ve serebrovasküler olayların sıklığının değerlendirilmesi amacıyla bir analiz yapıldı.

Çalışmamız Ocak 2019 ile Aralık 2024 tarihleri arasında Bursa VM Medical Park Hastanesi Kardiyoloji polikliniğine başvuran prostetik kalp kapak hastalarının retrospektif olarak incelenerek yapıldı. Kalp kapak hastalığı nedeni ile aort ve/veya mitral metalik prostetik kapak operasyonu geçiren , Varfarin Sodyum kullanıp düzenli INR ölçümü yaptıran toplam 120 (60 bayan, 60 erkek) hasta analize dahil edildi. Pandemi sürecinin başlamısından önce hastaların hasteneye INR kontrollerine gelişi pandemi öncesi dönem, pandemi süresince gelişi pandemi dönemi ve pandemi bitiminden sonara gelişleri pandemi sonrası olmak üzere 3 döneme ayrılarak incelendi. Her bir dönem için hastaların INR düzeyleri ve ortalama INR değeri tespit edildi. Yeni gelişen kardiyovasküler ve serebrovasküler olaylar değerlendirildi.

Hastaların yaş ortalaması 63,07±12,65 yıl ve ortalama operasyon sonrası geçen süre 11,4±7,2 yıl saptandı. Mitral kapak replasmanı %48.3 (n:58) , Aort kapak replasmanı %32.5 (n:39) , Aort ve Mitral kapak replasman oranı ise %19,2 (n:23) tespit edildi. Pandemi öncesi dönem INR ortalaması 2,78±0,47 ve kontrole geliş zamanı 35,8±12 gün, pandemi döneminde ise INR ortalama 2,93±0,62 ve kontrole geliş zaman 45,1±24,1 gün tespit edildi. Pandemi sonrası ise INR ortalama 2,77±0,49 ve kontrole geliş zamanı 36,9±14,9 gün idi. Pandemi dönemi INR ortalaması pandemi öncesi ve sonrası dönemlerine göre istatistiksel olarak anlamlı oranda yüksek saptandı (p=0.040 ve p=0.027). Buna Karşın Pandemi döneminde iskemik inme ve intrakranial kanama da pandemi öncesi ve sonrasına göre artış yoktu. Pandemi öncesi iskemik inme %7,5 (n:9), intrakranial kanama %3,4 (n:4) , pandemi döneminde iskemik inme %2,5 (n:3) , intrakranial kanama %1,7 (n:2) , pandemi sonrası iskemik inme %3,4 (n:4) , intrakranial kanama %5 (n:6) saptandı. Pandemi dönemi ortalama INR yüksek saptanmasına rağmen her üç dönem karşılaştırıldığında intrakranial kanama oranı pandemi öncesi dönemde istatistiksel olarak anlamlı yüksek saptandı(p=0,012).Kardiyovasküler olaylar açısından 3 dönem arasında fark saptanmadı.

Covid 19 pandemi döneminde sosyal izolasyonla birlikte hastaların hastaneye başvuru süreleri uzamasına rağmen pandemi öncesi ve sonrasına göre kardiyovasküler olay ve serebrovasküler olaylarda artış olmamıştır. Dolayısı ile INR kontrol sürelerinin böyle sosyal izolasyon dönemlerinde düzenli kontrollere gelen hastalar için uzatılması önerilebilinir.

Anahtar kelimeler: Uluslararası normalleştirilmiş oran, prostetik kalp kapak, Covid 19

HOSPITAL ADMISSION RATES OF PATIENTS WHO UNDERWENT HEART VALVE SURGERY AND USED WARFARIN SODIUM DURING THE COVID-19 PANDEMIC PERIOD, EFFECTS OF BLOOD INR LEVELS ON CLINICAL EVENTS

ABSTRACT

An analysis was conducted to evaluate the frequency of hospital visits during the pandemic period among patients using Warfarin Sodium due to prosthetic heart valve disease, the effectiveness of their blood International Normalized Ratio (INR) values, and the frequency of cardiac and cerebrovascular events that may occur in these patients during this period.

Method:

Our study was conducted by retrospectively examining prosthetic heart valve patients who visited the Cardiology outpatient clinic at Bursa VM Medical Park Hospital between January 2019 and December 2024. A total of 120 patients (60 female, 60 male) who underwent aortic and/or mitral metallic prosthetic valve surgery due to heart valve disease, used Warfarin Sodium, and had regular INR measurements were included in the analysis. The patients' visits to the hospital for INR checks were divided into three periods: the pre-pandemic period (before the pandemic began), the pandemic period (during the pandemic), and the post-pandemic period (after the pandemic ended). INR levels and mean INR values were determined for each period. Newly developed cardiovascular and cerebrovascular events were evaluated.

The mean age of patients was 63.07±12.65 years, and the mean time since surgery was 11.4±7.2 years. Mitral valve replacement was 48.3% (n=58), aortic valve replacement was 32.5% (n=39), and the aortic and mitral valve replacement rate was 19.2% (n=23). The pre-pandemic period INR average was 2.78±0.47 and the time to follow-up was 35.8±12 days, while during the pandemic period, the INR average was 2.93±0.62 and the time to follow-up was 45.1±24.1 days. After the pandemic, the mean INR was 2.77±0.49 and the time to follow-up was 36.9±14.9 days. The mean INR during the pandemic period was statistically significantly higher than in the pre- and post-pandemic periods (p=0.040 and p=0.027). However, there was no increase in ischemic stroke and intracranial hemorrhage during the pandemic period compared to the pre- and post-pandemic periods. Pre-pandemic ischemic stroke was 7.5% (n=9), intracranial hemorrhage was 3.4% (n=4), ischemic stroke during the pandemic period was 2.5% (n=3), intracranial hemorrhage was 1.7% (n=2), post-pandemic ischemic stroke was 3.4% (n=4), and intracranial hemorrhage was 5% (n=6). Although the mean INR was higher during the pandemic period, the intracranial hemorrhage rate was statistically significantly higher in the pre-pandemic period when comparing all three periods (p=0.012). No difference was found between the three periods in terms of cardiovascular events.

Despite the prolonged hospital admission times of patients due to social isolation during the COVID-19 pandemic, there was no increase in cardiovascular and cerebrovascular events compared to the pre- and post-pandemic periods. Therefore, extending INR monitoring intervals for patients who attend regular follow-ups during such periods of social isolation may be recommended.

Keywords: International normalized ratio, prosthetic heart valve, COVID-19

BLOOD CULTURE CONTAMINATION RATES AND CONTAMINANT MICROORGANISMS: A SINGLE-CENTER RETROSPECTIVE STUDY

Asst. Prof. Sinan MERMER
Izmir University of Economics, Faculty of Medicine, Department of Infectious Diseases and Clinical Microbiolgy, Izmir, Türkiye
ORCID ID: 0000-0001-9937-6267

ABSTRACT
Blood cultures are essential for the diagnosis of bloodstream infections; however, contamination may lead to unnecessary antimicrobial use, prolonged hospitalization, and increased healthcare costs. This study aimed to evaluate blood culture contamination rates and contaminant microorganisms in our hospital.
This retrospective study included blood cultures obtained from adult inpatients at a 301-bed tertiary care hospital with 53 intensive care unit (ICU) beds between January 1 and December 31, 2025. Blood culture data were obtained from the microbiology laboratory database. Contamination was defined as the isolation of common skin flora from a single blood culture bottle in the absence of clinical signs of infection. Contamination rates were evaluated according to hospital units and contaminant microorganisms. Descriptive statistical methods were used for data analysis.
A total of 1,842 blood culture sets were analyzed during the study period. Microbial growth was detected in 248 cultures (13.5%). Of the cultures with microbial growth, 97 (39.1%) were evaluated as contaminants, corresponding to an overall blood culture contamination rate of 5.3%. Contamination rates were highest in samples obtained from the emergency department (6.5%), followed by medical wards (5.1%) and intensive care units (3.2%). The most frequently identified contaminant bacteria were coagulase-negative staphylococci (52.7%), diphtheroid bacilli (23.6%), Streptococcus spp. (9.2%), and other microorganisms (14.5%). Blood culture contamination remains an important problem in clinical practice. Determination of contamination rates and contaminant microorganisms may help identify problematic areas and contribute to improving blood culture collection practices.
Keywords: Blood culture, contamination, coagulase-negative staphylococci, quality indicator

KAN KÜLTÜRLERİNDE KONTAMİNASYON ORANLARI VE KONTAMİNAN MİKROORGANİZMALAR: TEK MERKEZLİ RETROSPEKTİF ÇALIŞMA

ÖZET
Amaç:
Kan kültürleri bakteriyemi tanısında önemli bir yer tutmakla birlikte, kontaminasyon gereksiz antibiyotik kullanımı, hastanede yatış süresinin uzaması ve artan sağlık maliyetlerine neden olabilmektedir. Bu çalışmada hastanemizdeki kan kültürü kontaminasyon oranlarının ve kontaminan mikroorganizmaların değerlendirilmesi amaçlanmıştır.
Yöntem:
Bu retrospektif çalışmaya 01 Ocak – 31 Aralık 2025 tarihleri arasında 301 yataklı, 53'ü yoğun bakım ünitesinde bulunan üçüncü basamak bir hastanede yatan erişkin hastalardan alınan kan kültürleri dahil edilmiştir. Kan kültürü verileri mikrobiyoloji laboratuvarı veri tabanından elde edilmiştir. Klinik enfeksiyon bulgusu olmaksızın tek şişede izole edilen cilt florası mikroorganizmaları kontaminasyon olarak kabul edilmiştir. Kontaminasyon oranları hastane birimlerine ve kontaminan mikroorganizma türlerine göre değerlendirilmiştir. Verilerin analizinde tanımlayıcı istatistikler kullanılmıştır.

Çalışma süresince toplam 1.842 kan kültürü seti değerlendirilmiştir. Kültürlerin 248'inde (%13,5) üreme saptanmıştır. Üreme saptanan kültürlerin 97'si (%39,1) kontaminasyon olarak değerlendirilmiş olup, bu durum tüm kan kültürleri içerisinde %5,3'lük bir kontaminasyon oranına karşılık gelmektedir. Kontaminasyon oranı en yüksek acil serviste (%6,5) olup, bunu servisler (%5,1) ve yoğun bakım üniteleri (%3,2) izlemiştir. En sık saptanan kontaminan bakteriler koagülaz negatif stafilokoklar (%52,7), difteri benzeri basiller (%23,6), Streptococcus spp. (%9,2) ve diğer mikroorganizmalar (%14,5) olmuştur.
Kan kültürü kontaminasyonu klinik uygulamada önemli bir kalite sorunu olmaya devam etmektedir. Kontaminasyon oranlarının ve etken mikroorganizmaların belirlenmesi, kan kültürü alma süreçlerinin iyileştirilmesine katkı sağlayabilir.

Anahtar kelimeler: Kan kültürü, kontaminasyon, koagülaz negatif stafilokoklar, kalite göstergesi

CLINICAL VALUE AND NECESSITY OF INTRAOPERATIVE METHYLENE BLUE LEAK TESTING IN LAPAROSCOPIC SLEEVE GASTRECTOMY: A RETROSPECTIVE ANALYSIS

Asst. Prof. Dr. Alper AYTEKİN
Gaziantep University, School of Medicine, Department of General Surgery, Türkiye
ORCID: 0000-0003-2872-5276

Asst. Prof. Dr. Latif YILMAZ
Gaziantep University, School of Medicine, Department of General Surgery, Türkiye
ORCID: 0000-0003-2528-9691

ABSTRACT

Obesity is one of the most significant global health problems, and laparoscopic sleeve gastrectomy (LSG) has become the most commonly performed bariatric surgical procedure. One of the most serious complications of LSG is staple line leakage, which is associated with increased morbidity and mortality. To assess the risk of leakage intraoperatively, various tests have been employed, among which the methylene blue leak test is one of the most frequently used methods.

However, the true clinical value of the methylene blue test remains controversial. Several studies have reported that this test does not reduce postoperative leak rates, has low sensitivity, and may prolong operative time, while others suggest that it could be beneficial in selected high-risk patients. Consequently, there is no clear consensus regarding the necessity of its routine use.

In this study, we retrospectively reviewed the medical records of patients who underwent LSG with intraoperative methylene blue leak testing at Gaziantep University between 2016 and 2025. Patient demographics, comorbidities, intraoperative findings, postoperative complications, length of hospital stay, and mortality were analyzed.

A total of 312 patients were included. The mean age was 34.3 ± 11.1 years, and the mean body mass index was 45.7 ± 6.5 kg/m². At least one comorbid condition was present in 40.4% of patients, with diabetes mellitus being the most common (13.5%). During intraoperative evaluation, mechanical defects of the staple line were detected in three patients through direct surgical inspection, prior to methylene blue testing. No leaks were identified by methylene blue testing at the end of the procedure in any patient.

In the postoperative period, no staple line leaks or fistulas were observed, and no mortality occurred. The median length of hospital stay was 5 (4–5) days.

Although our findings suggest that intraoperative methylene blue leak testing does not provide additional clinical benefit, the absence of postoperative leaks and the single-center retrospective design of the study should be considered major limitations. Larger prospective studies are needed to better define the role of routine leak testing in LSG.

Keywords: Sleeve gastrectomy; Leak test; Staple line; Complication; Bariatric surgery

LAPAROSKOPİK SLEEVE GASTREKTOMİ CERRAHİSİNDE İNTRAOPERATİF METİLEN MAVİSİ KAÇAK TESTİNİN KLİNİK KATKISI VE GEREKLİLİĞİNİN DEĞERLENDİRİLMESİ: RETROSPEKTİF BİR ANALİZ

ÖZET

Obezite, günümüzde en önemli sağlık sorunlarından biri olup, bariatrik cerrahi tedavileri içerisinde laparoskopik sleeve gastrektomi (LSG) en sık tercih edilen yöntem haline gelmiştir. Bu ameliyatta en ciddi komplikasyonlardan biri stapler hattı kaçağıdır. Kaçak gelişimi, morbidite ve mortaliteyi artıran önemli bir sorundur. Bu nedenle cerrahlar, ameliyat sırasında kaçak riskini değerlendirmek için çeşitli intraoperatif testler uygularlar. En yaygın kullanılan yöntemlerden biri, mide içine metilen mavisi verilerek yapılan kaçak testidir.

Ancak literatürde metilen mavisi testinin gerçek klinik yararı tartışmalıdır. Bazı çalışmalarda testin postoperatif kaçak oranlarını azaltmadığı, duyarlılığının düşük olduğu ve ameliyat süresini uzattığı bildirilmektedir. Buna karşın bazı merkezler testin yüksek riskli olgularda yararlı olabileceğini savunmaktadır. Bu nedenle, metilen mavisi testinin rutin uygulanmasının gerekliliği konusunda görüş birliği yoktur.

Bu araştırmada, Gaziantep Üniversitesi'nde 2016–2025 yılları arasında LSG yapılan ve intraoperatif metilen mavisi testi uygulanmış hastaların kayıtları retrospektif olarak incelendi. Çalışmada hastaların demografik özellikleri, komorbid durumları, intraoperatif test sonuçları, postoperatif komplikasyonlar, yatış süresi ve mortalite gibi veriler değerlendirildi.

Toplam 312 hasta çalışmaya dahil edildi. Hastaların ortalama yaşı 34.3 ± 11.1 yıl, ortalama vücut kitle indeksi 45.7 ± 6.5 kg/m² olarak saptandı. Hastaların %40.4'ünde en az bir ek hastalık mevcuttu ve en sık eşlik eden hastalık olarak Diabetus Mellitus (%13.5) saptandı.

İntraoperatif değerlendirme sırasında 3 hastada stapler hattında mekanik defekt saptandı ve bu defektler metilen mavisi ile kaçak testi uygulanmadan, doğrudan cerrahi gözlem ile fark edildi. Operasyon bitiminde yapılan kontrollerde metilen mavisi testi ile hiçbir hastada kaçak saptanmadı.

Postoperatif dönemde hiçbir hastada stapler hattı kaçağı ya da fistül gelişmedi ve mortalite gözlenmedi. Medyan yatış süresi 5 (4–5) gün olarak bulundu.

Yaptığımız çalışmanın sonucunda metilen mavisi ile yapılan kaçak testinin klinik olarak ek bir katkı sağlamadığı saptanmış olsa da, hiçbir hastada postoperatif kaçak gelişmemiş olması ve çalışmanın tek merkezli retrospektif tasarıma sahip olması çalışmanın başlıca kısıtlılıkları olarak değerlendirilmelidir.

Anahtar kelimeler: Sleeve gastrektomi, Kaçak testi, Stapler hattı, Komplikasyon, Bariatrik cerrahi

FARKLI DOZ VE SÜRELERDE PERMETRİN UYGULANAN SIÇANLARDA KARACİĞER DOKULARININ HİSTOPATOLOJİK DEĞERLENDİRİLMESİ VE KAN SERUMU BH, IGF-1, IGFBP-3 DÜZEYLERİNE ETKİSİ

Nurcihan Ayça FIRAT
Graduate School of Natural Sciences, Department of Biotechnology and Molecular Biology, Aksaray University, Türkiye
ORCID: 0009-0003-1269-1996

Hüseyin POLAT
Graduate School of Natural Sciences, Department of Biotechnology and Molecular Biology, Aksaray University, Türkiye
ORCID: 0000-0003-2835-0659

ÖZET
Günümüzde sürekli artan endüstriyel gelişim sonucu birçok sorunuda beraberinde getirmektedir. Toksikolojik çevresel kirleticiler en önemli sorunlar arasında yer almaktadır. Permetrin tarımda oldukça fazla kullanılan etkili ve geniş spektrumlu bir insektisittir. Permetrin kullanımı sadece hedef organizmayı değil hedef olmayan organizmayı da etkilemektedir.
Bu tez çalışmasında PER'e maruz kalmış (75 ve 150 mg/kg, ip) sıçanlarda akut ve subkronik sürelerde (4 ve 21 gün) kan serumu BH, IGF-1 ve IGFBP-3 seviyelerinin belirlenmesi ve karaciğer dokularının histopatolojik incelenmesi yapılmıştır. Araştırma sonucunda PER uygulaması sonucunda mononükleer hücre infiltrasyonu geliştiği izlenmiştir. Özellikle portal alanlarda daha yaygın olarak mononükleer hücre infiltrasyonu gözlenmektedir. Her iki süre ve doz gruplarında da mononükleer hücre infiltrasyon oluşumların aynı düzeyde olduğu görülmüştür. BH düzeylerindeki değişimin istatiksel olarak önemsiz ($p<0,05$) olduğu belirlenmiştir. Bu çalışma sonucunda IGF-1 ve IGFBP-3 düzeylerindeki azalış istatiksel olarak anlamlı ($p<0,05$) olduğu belirlenmiştir. Yine bu çalışmada aynı süreler içindeki doz grupları arasındaki fark istatistiksel olarak önemlidir ($p<0,05$).
Karaciğerde gelişen mononükleer hücre infiltrasyonu uygulanan PER dozlarının vücutta immünolojik olarak verilen reaktif lenfositik yanıt olduğunu düşündürmüştür. Bu çalışmada uygulanan PER doz ve sürelerinde oluşan oksidatif stresin karaciğer üzerindeki hasarı sonucu inflamasyon geliştiğini ve buna bağlı olarak mononükleer hücre infiltrasyonuna neden olduğunu düşündürmüştür. IGF-1 ve IGFBP-3 düzeyindeki azalmanın uygulanan PER'in karaciğer üzerinde meydana getirdiği inflamasyon sonucu sentezinin baskılandığını düşündürmüştür.
Anahtar Kelimeler: Sıçan, BH, IGF-1, IGFBP-3, Karaciğer, Histopatoloji.

HISTOPATHOLOGICAL EVALUATION OF LIVER TISSUES IN RATS TREATED WITH PERMETHRIN AT DIFFERENT DOSES AND DURATIONS AND ITS EFFECTS ON BLOOD SERUM GH, IGF-1, IGFBP-3 LEVELS.

ABSTRACT
Today, the continuous increase in industrial development brings with it many problems. Toxicological environmental pollutants are among the most important problems. Permethrin is an effective and broad-spectrum insecticide widely used in agriculture. Permethrin use affects not only the target organism but also non-target organisms.
In this thesis study, the levels of blood serum GH, IGF-1, and IGFBP-3 were determined and liver tissues were histopathologically examined in rats exposed to PER (75 and 150 mg/kg, ip) during acute and subchronic periods (4 and 21 days). The results showed that mononuclear cell infiltration developed as a result of PER application. Mononuclear cell infiltration was observed more frequently, especially in the portal areas. The level of mononuclear cell infiltration was similar in both duration and dose groups. The change in GH levels was found to be statistically insignificant ($p<0.05$).

This study determined that the decrease in IGF-1 and IGFBP-3 levels was statistically significant ($p<0.05$). Similarly, the difference between dose groups within the same time periods was statistically significant ($p<0.05$).
The mononuclear cell infiltration that developed in the liver suggested that the applied PER doses caused an immunologically reactive lymphocytic response in the body. This study suggested that the oxidative stress caused by the applied PER doses and durations resulted in inflammation in the liver, leading to mononuclear cell infiltration. The decrease in IGF-1 and IGFBP-3 levels suggested that their synthesis was suppressed as a result of the inflammation caused by the applied PER in the liver.
Keywords: Rat, BH, IGF-1, IGFBP-3, Liver, Histopathology.

THE PLACE OF PIERRE BOURDEIU'S SOCIOLOGY IN EDUCATION AND THE MYTH OF MERITOCRACY

Şeyma Sena TERZİOĞLU
Master Student, Adiyaman University, Institute of Graduate Studies, Department of Curriculum and Instruction, Adiyaman-Türkiye
ORCID: 0009-0009-1558-5463

ABSTRACT
Education, as a fundamentally interdisciplinary field, occupies a central position in sociological inquiry due to its role in linking individual trajectories with social structures. From a sociological perspective, education functions not merely as a pedagogical process but as a key mechanism through which individuals are constituted as social actors. Dominant approaches have largely relied on the concept of meritocracy to explain this process, presenting educational outcomes as the result of individual ability and effort. This study argues that, within Pierre Bourdieu's sociological framework, education operates not as a neutral space of learning but as a structural mechanism through which existing class relations are legitimized and reproduced.
Meritocracy frames intelligence and effort as the primary determinants of success and social mobility, thereby individualizing achievement and concealing the structural foundations of inequality. By attributing the distribution of roles and statuses to personal merit, it obscures the sociological dimensions of education and naturalizes social hierarchies. Pierre Bourdieu developed a reflexive sociology aimed at the demystification of the social world, within which he conceptualized meritocracy as a myth and emphasized its ideological function in masking relations of domination. This study adopts a theoretical and conceptual analysis grounded in Pierre Bourdieu's sociological framework.
Bourdieu analyzed the persistence of stratified and class-based social structures through key concepts such as habitus, cultural capital, social reproduction, and symbolic violence. Educational systems play a central role in this process by privileging dominant cultural forms while systematically disadvantaging subordinate groups. Within educational settings, students are classified as "successful" or "unsuccessful" through symbolic violence, classifications that are widely perceived as legitimate and fair by those embedded within the system. Drawing on Bourdieu's sociology, this study seeks to explain how educational power relations are reproduced across generations and why such inequalities persist largely without critical interrogation.
Keywords: Meritocracy, socialization, habitus, cultural capital, symbolic violence

YAPAY ZEKA TEMELLİ İLE TÜRKİYE YÜZYILI MAARİF PROGRAMI TEMELLİ DERS İÇİ ETKİNLİKLERİNİN İNCELENMESİ

Mehmet Nazif DOĞAN
Master Student, Adiyaman University, Institute of Graduate Studies, Department of Curriculum and Instruction, Adiyaman-Türkiye
ORCİD: ID/0009-0003-8179-8850

ÖZET
Bu çalışmanın amacı, bir yapay zekâ uygulaması olan Gemini 3 Pro ile hazırlanan ders içi etkinlikleri, Milli Eğitim Bakanlığı'nın hazırladığı Maarif Modeli kapsamında ders içi önerilen etkinliklerle karşılaştırmaktır. Karşılaştırma "öğrenme yaklaşımı, beceriyi ele alış biçimleri, öğrenci rolleri, farklılaştırma ve materyaller ve değerlendirme stratejileri" olmak üzere beş kategoride uygulanmıştır. Yapılan karşılaştırma, ders planlanma sürecinde sunulan olanaklar ve sınırların tespit edilmesi yoluyla, yapay zekâ uygulamaların eğitimde kullanımı konusunda farklı bir bakış açısı sağlamayı hedeflemektedir. Araştırma, nitel araştırma desenlerinden doküman analizi deseniyle gerçekleştirilmiştir. Amaca ulaşmak için belirlenmiş bir öğrenme çıktısı ve buna yönelik ders içi etkinlikler, belirlenen beş bağıntılı alanda analiz edilmiştir. Karşılaştırma sürecinde 5. Sınıf İngilizce öğretim programında yer alan ENG5.1.L1 "Dinleme/izleme- anlama hazırlığı" kazanımı ele alınmıştır. Ardından, Gemini 3 Pro'ya belirtilen kazanım becerisine yönelik bir ders içi eğitim etkinliği hazırla" komutu verilerek bir ders etkinliği oluşturulmuş ve bu etkinlik, aynı kazanıma yönelik MEB öğretim programında yayınlanan ders içi önerilen etkinlikler belirlenen beş kategoride karşılaştırılmıştır. Öğrenme yaklaşımı açısından, Gemini ipucu ve tahmin tabanlı öğrenme sunarken, MEB sorgulama becerisi üzerinden keşfetmesini hedeflemiştir. Beceriyi ele alış biçimi olarak, Gemini etkinlik içerisinde tahmin etme becerisiyle görsel ve kültürel okuryazarlık becerilerini ön plana çıkarmış; MEB ise varsayımda bulunma becerisiyle bu okuryazarlık türlerine ek olarak yurttaşlık ve sanat okuryazarlığı eklemesi yaparak öğrenciden beklenenin üstünde bir çıktı beklemiştir. Öğrenci rolleri ve etkinlik türleri bakımından, Gemini öğrenciyi zihinsel hayal kurmaya yöneltirken, MEB ise öz-farkındalık becerisini geliştirmeye yönelik etkinlikler sunmuştur. Farklılaştırma ve materyal çeşitliliği konusunda Gemini gerçek nesneler, hikâyeler ve çeşitli videolar kullanırken, MEB dijital hikâyeler kullanarak çeşitlilik getirmiştir. Değerlendirme süreçlerinde, Gemini doğrulama ve anlamaya yönelikken, MEB öz değerlendirme için fırsat vermiştir. Sonuç olarak, Gemini planı farklılaştırılmış materyal kullanımı çeşitliliğiyle dikkat çekerken, MEB planı sorgulama ve varsayımda bulunma gibi üst düzey becerileri desteklemektedir. Bununla birlikte, Gemini gibi yapay zekâ tabanlı uygulamalardan alınan ders içi etkinliklerin pedagojik olarak düzenlenmesi ve öğretmen kontrolünde uygulanabilirliğinin arttırılması önemlidir.
Anahtar Kelimeler: Maarif Modeli, Yapay Zekâ, Eğitim Programı

INVESTIGATION OF IN-CLASS ACTIVITIES BASED ON THE 'TURKEY CENTURY MAARİF MODEL' WITHIN AN ARTIFICIAL INTELLIGENCE FRAMEWORK

ABSTRACT
Purpose of this study is comparing pedagogical tasks prepared using Gemini Pro, an artificial intelligence application, with learning activities recommended by National Education Ministry (MEB) within Turkey Century Maarif Model framework. Comparison was conducted across five categories: learning approach, approaches to skill integration, student roles, differentiation and materials, and evaluation strategies. By identifying opportunities and limitations presented during lesson planning process, this research aims to provide a distinct perspective on use of AI applications in education. The research was carried out using document analysis, one of qualitative research designs. To achieve objective, a specific learning outcome and its corresponding classroom activities were analyzed across five interrelated areas. During comparison process, learning outcome ENG5.1.L1 "Preparation for

listening and watching" part of 5th-grade English curriculum, was selected. Subsequently, a lesson activity was generated by prompting Gemini Pro to "prepare a classroom activity for specified learning outcome". This generated activity was then compared to activities published by MEB curriculum for same outcome. Regarding learning approach, Gemini offered learning based on cues and predictions, while MEB aimed for discovery through inquiry skills. Regarding skill integration, Gemini emphasized visual and cultural literacy through prediction skills; MEB, while utilizing inference skills, added citizenship and arts literacy to these types, expecting a higher-level output from student. Regarding student roles and activity types, Gemini directed students imagining, whereas MEB offered activities designed to develop self-awareness. Regarding differentiation and material variety, Gemini utilized realia, stories, and various videos, while MEB introduced variety through digital stories. In evaluation processes, Gemini focused verification and comprehension, while MEB provided opportunities for self-assessment. Consequently, while Gemini plan stands out for its diversity in differentiated material usage, MEB plan supports higher-order skills such inquiry and hypothesizing. Nevertheless, it is important that learning activities obtained from AI-based applications like Gemini are pedagogically refined and implemented under teacher supervision to enhance their applicability.
Keywords: Maarif Model, Artificial Intelligence, Curriculum

FROM HISTORICAL CONSTRUCTION TO MEDIATIZED DECAY: THE ONTOLOGICAL AND SOCIOLOGICAL DEMISE OF THE CHILDHOOD PARADIGM

Nazan ATAYIK
Adıyaman University, Institute of Graduate Studies, Curriculum and Instruction, Adıyaman, Turkey,
ORCİD: ID/0009-0007-3684-1572

ABSTRACT
This study argues that childhood is a social construct built within historical and social conditions rather than merely a biological phase, examining its transformation from Antiquity to the digital media age. Historical data indicates that a modern concept of childhood did not exist prior to the 16th century. In Ancient Greece and Rome, the child was an objectified being owned by parents, used as assurance in political treaties or for debt; whereas in Medieval Europe, influenced by the Church, the child was positioned as a being born sinful who joined the adult world starting at age seven.
The "invention" of the modern idea of childhood is closely related to the cultural revolution of the printing press, which constructed an epistemological wall between adulthood and childhood by making access to information conditional on literacy. Adult secrets—such as sexuality, violence, and death—were encrypted through printed works, and a protected space called "school" was built for children unable to decode them. This new perception, grounded philosophically in the 18th century by Locke's "tabula rasa" and Rousseau's "natural innocence," also resonated in Ottoman modernization, where the child was politicized as a "future soldier" or a subject with public responsibility.
However, drawing on Neil Postman's media ecology theory, this study asserts that the childhood constructed by modernity is currently in a process of "disappearance". The information revolution shattered the hierarchy of knowledge established by the printing press; specifically, television and digital media expose children to all adult content without requiring literacy skills. Visual media has dismantled the boundaries of "shame" and "privacy," admitting children into the adults' "secret garden," thereby expelling them from their own.
Today, the adultification of children's clothing, the loss of spontaneity in professionalized games, and rising juvenile delinquency indicate that the ontological difference between childhood and adulthood is being erased. Consequently, childhood is a historical parenthesis founded on print culture; however, in the current electronic media ecosystem, this parenthesis is closing, and children are reverting to "miniature adults," much like in the Middle Ages.
Keywords: Printing press, digital dissolution, the concept of childhood

TARİHSEL İNŞADAN MEDYATİK ÇÖZÜLMEYE: ÇOCUKLUK PARADİGMASININ ONTOLOJİK VE SOSYOLOJİK DÖNÜŞÜMÜ

ÖZET
Bu çalışma, çocukluğun biyolojik bir evreden ziyade tarihsel ve toplumsal koşullar içinde inşa edilmiş bir sosyal kurgu olduğunu savunur ve bu kurgunun Antik Çağ'dan günümüz dijital medya çağına kadar geçirdiği dönüşümü inceler. Tarihsel veriler, 16. yüzyıl öncesinde modern anlamda bir çocukluk kavramının bulunmadığını göstermektedir. Antik Yunan ve Roma'da çocuk, ebeveyninin mülkiyetinde olan, politik antlaşmalarda rehin veya borç karşılığı güvence olarak kullanılan nesneleşmiş bir varlıktır; Orta Çağ Avrupa'sında ise Kilise etkisiyle doğuştan günahkâr sayılan ve yedi yaşından itibaren yetişkin dünyasına katılan bir varlık olarak konumlandırılmıştır.
Modern çocukluk fikrinin "icadı", matbaanın kültürel bir devrim olarak sahneye çıkışıyla yakından ilişkilidir. Matbaa, bilgiye erişimi okuryazarlık şartına bağlayarak yetişkinlik ile çocukluk arasına epistemolojik bir duvar örmüştür. Yetişkin dünyasının cinsellik, şiddet ve ölüm gibi "sırları", matbu eserler aracılığıyla şifrelenmiş ve bu şifreyi çözemeyen çocuklar için okul adı verilen korunaklı bir alan inşa edilmiştir.

John Locke'un "tabula rasa" yaklaşımı ve J.J. Rousseau'nun "doğal masumiyet" vurgusuyla 18. yüzyılda felsefi temelleri atılan bu yeni çocukluk algısı, Osmanlı modernleşmesinde de yankı bulmuştur. Tanzimat ve Meşrutiyet dönemlerinde çocuk, ailenin özel alanından çıkarılarak devletin bekası için yetiştirilmesi gereken "müstakbel asker" veya kamusal sorumluluk sahibi bir özne olarak politize edilmiştir.

Ancak çalışma, Neil Postman'ın medya ekolojisi kuramı ekseninde, modernitenin inşa ettiği çocukluğun günümüzde "yok olma" sürecine girdiğini savunmaktadır. Telgraf ile başlayan enformasyon devrimi, mekân ve zaman algısını yıkarak matbaanın kurduğu bilgi hiyerarşisini sarsmıştır. Özellikle televizyon ve dijital medya, okuma becerisi gerektirmeksizin yetişkin dünyasının tüm içeriğini çocuklara ifşa etmektedir. Görsel medya, "ayıp" ve "mahremiyet" sınırlarını ortadan kaldırarak çocukları yetişkinlerin "gizli bahçesine" sokmuş, böylece onları kendi çocukluk bahçelerinden etmiştir.

Günümüzde çocuk giyim tarzının yetişkinleşmesi, oyunların profesyonelleşerek spontanlığını yitirmesi ve çocuk suçluluğundaki artış, çocukluk ile yetişkinlik arasındaki ontolojik farkın silindiğinin somut göstergeleridir. Sonuç olarak çocukluk; matbaa kültürüyle var edilen, "sır" ve "merak" diyalektiği üzerine kurulu tarihsel bir parantezdir; ancak günümüz elektronik medya ekosisteminde bu parantez kapanmakta ve çocuklar yeniden, tıpkı Orta Çağ'da olduğu gibi, "minyatür yetişkinlere" dönüşmektedir.

Anahtar kelimeler: Matbaa, Dijital Çözülme, Çocukluk Kavramı

2024 SOSYAL BİLGİLER DERSİ ÖĞRETİM PROGRAMI'NIN STEAM UYGUNLUĞU AÇISINDAN İNCELENMESİ

Esengül İSPİR
Institute of Educational Sciences, Department of Basic Education, Inönü University, Türkiye
ORCID: 0000-0001-9983-327X

Prof. Dr. Hasan AYDEMİR
Institute of Educational Sciences, Department of Basic Education, Inönü University, Türkiye
ORCID: 0000-0002-3073-9194

ÖZET
21. yüzyıl eğitim paradigmaları, bilgiye erişimden ziyade; bilginin disiplinlerarası bir anlayışla işlenmesini, tasarlanmasını ve üretime dönüştürülmesini önemsemektedir. Bu bağlamda STEAM eğitimi, öğrencilerin karmaşık problemleri bütüncül bir bakış açısıyla çözmelerini sağlayan disiplinlerarası bir yaklaşım olarak öne çıkmaktadır. Bu araştırmanın amacı, bütüncül eğitim felsefesiyle hazırlanan 2024 Sosyal Bilgiler Dersi Öğretim Programı'nın, STEAM yaklaşımının bileşenlerine ve disiplinlerarası entegrasyon düzeyine uygunluğunu incelemektir. Araştırmada, nitel araştırma yöntemlerinden doküman analizi deseni kullanılmıştır. Veri kaynağı olarak, Milli Eğitim Bakanlığı tarafından yayımlanan 2024 Sosyal Bilgiler Dersi Öğretim Programı ele alınmış; programda yer alan özel amaçlar, beceriler, değerler, öğrenme alanları ve öğrenme çıktıları incelenmiştir. Verilerin çözümlenmesinde içerik analizi tekniğinden yararlanılmış; bu süreçte STEAM yaklaşımının temel bileşenleri olan bilim, teknoloji, mühendislik, sanat ve matematik disiplinlerinin bütünleşik yapısına dayalı öğretim yaklaşımı araştırmanın ana temaları olarak belirlenmiştir. İncelenen program bölümleri, bu kuramsal çerçeve doğrultusunda kodlanarak sistematik bir analize tabi tutulmuştur. Araştırmanın sonucunda, Sosyal Bilgiler Dersi Öğretim Programı'nda yer alan 18 özel amacın, doğrudan bilim, teknoloji, mühendislik, sanat ve matematik disiplinlerinin bütünleşik yapısına dayalı öğretim yaklaşımı odaklı olmasa da disiplinlerarası bir bakış açısını teşvik eden örtük bir potansiyel barındırdığı görülmüştür. Programdaki değer ve beceri boyutlarının, bu yaklaşımın bileşenlerini bütünleştirici bir unsur olarak işlev gördüğü saptanmıştır. Öğrenme alanları bazında en yüksek ilişkinin sırasıyla; Teknoloji ve Sosyal Bilimler (%88,8), Evimiz Dünya (%83,3) ve Hayatımızdaki Ekonomi (%81,8) alanlarında olduğu belirlenmiştir. Öğrenme çıktılarının sınıf düzeyine göre analizinde, disiplinlerarası entegrasyonun sarmal ve derinleşen bir yapı izlediği; 4. sınıfta yaşam temelli yaklaşımla başlayan sürecin, 5. sınıfta teknik bütünleşmenin en yoğun düzeyine ulaştığı, 6. ve 7. sınıflarda ise öğrenciyi tasarımcı rolüne yönlendiren ileri düzey bütünleşik öğrenme yapılarıyla sürdürüldüğü tespit edilmiştir. Araştırma, sosyal bilgiler öğretim programlarının bütünleşik öğretim tasarımı açısından geliştirilmesine yönelik program tasarımı ve öğretim uygulamalarına ilişkin öneriler sunmaktadır.
Anahtar Kelimeler: Sosyal Bilgiler, Sosyal Bilgiler Dersi Öğretim Programı, STEAM, Doküman Analizi

INVESTIGATION OF THE 2024 SOCIAL STUDIES CURRICULUM IN TERMS OF ITS SUITABILITY FOR STEAM INTEGRATION

ABSTRACT
21. century educational paradigms emphasise the processing, design and transformation of knowledge into production through an interdisciplinary approach rather than mere access to information. In this context, STEAM education stands out as an interdisciplinary approach that enables students to solve complex problems with a holistic perspective. The aim of this study is to examine the suitability of the 2024 Social Studies Curriculum, prepared with a holistic educational philosophy, in terms of the component of the STEAM approach and the level of interdisciplinary integration. Document analysis, one of the qualitative research methods, was used in the research.

The 2024 Social Studies Curriculum published by the Ministry of National Education was used as the data source; the specific objectives, skills, values, learning areas and learning outcomes included in the programme were examined. Content analysis was used to analyse the data; in this proces, the teaching approach based on the integrated structure of the disciplines of science, technology, engineering, art and mathematics, which are the fundamental components of the STEAM approach, were determined as the main themes of the research. The examined programme sections were coded in line with this theoretical framework and subjected to systematic analysis. The results of the research indicate that the 18 specific objectives included in the Social Studies Curriculum, while not directly focused on an integrated teaching approach based on the disciplines of science, technology, engineering, arts and mathematics nevertheless harbour an implicit potential to encourage an interdisciplinary perspective. It was determined that the values and skills dimensions in the programmefunction as an integrating element fort he components of this approach.. The highest representation rate based on learning areas were found in the areas of Technology and Social Sciences (88,8%), Our Home the Word (83,3%), and Economics in Our Lives (81,8%) respectively. Analysis of learning outcomes by grade level revealed that interdisciplinary integration follows a spiral and deepening structure; the process, which begins with a life-based approach in grade 4, reaches its most intensive level of technical integration in grade 5 and continues in grade 6 and 7 with advanced integrated learning structures that guide the student towards a designer role. The research offers recommendations regarding programme design and teaching practices aimed at developing social studies teaching programmes in terms of integrated teaching design.
Keywords: Social Studies, Social Studies Curriculum, STEAM, Documentary Analysis

AN EXAMINATION OF FATHERS' LEVELS PARTICIPATION IN EARLY CHILDHOOD EDUCATION INSTITUTIONS AND STUDIES ON THE PATERNAL ROLE: A SYSTEMATIC REVIEW

Şemsa ÖZCAN
İstanbul Aydın University, Institu of Graduate Studies, Early Childhood Education, İstanbul, Turkey,
ORCİD: ID/0009-0009-8441-3817

ABSTRACT
The early childhood education process coincides with a crucial and significant period in children's development. Experiences gained during this period are known to leave lasting impacts on children's later years. The most important sources of these experiences are the school and family environments. The interactions of mothers and fathers with their children, as well as their participation in the educational process during the preschool period, have therefore gained importance. However, within the family involvement process, fathers' participation is as important as that of mothers. Fathers, who have a significant influence on children's development, play a noteworthy role in children's emotional development, cognitive gains, and the acquisition of gender and identity roles. Accordingly, this study examines the levels of fathers' participation and their roles in early childhood education institutions. Conducted using a systematic review method, the study employed descriptive analysis to analyze the collected data. Within the scope of the systematic review, the databases **Google Scholar** and **DergiPark** were searched, and 18 articles published between 2014 and 2024 on the relevant topic were included. Based on the findings of the reviewed studies, the obtained information was synthesized and presented. As a result, the current state of fathers' perceptions of the paternal role and their levels of participation in early childhood education institutions during the preschool period is outlined, and recommendations for future research are provided.
Keywords: Paternal Role, Father Involvement, Early Childhood Education, Perceptions of Fatherhood.

BABALARIN OKUL ÖNCESİ EĞİTİM KURUMLARINA KATILIM DÜZEYİNİN VE BABALIK ROLÜNE İLİŞKİN ÇALIŞMALARIN İNCELENMESİ: BİR SİSTEMATİK DERLEME ÇALIŞMASI

ÖZET
Okul öncesi eğitim süreci, çocukların önemli ve kritik olduğu gelişim dönemine denk gelmektedir. Bu süreçte kazanılan deneyimler çocukların ileriki yıllarında önemli izler bıraktığı bilinmektedir. Bu deneyimlerin en önemli kaynakları okul ve aile ortamıdır. Anne ve babaların çocuklarıyla etkileşimi, aynı zamanda okul öncesi dönemde okul sürecine katılımı önem kazanmaktadır. Fakat aile katılım sürecinde anneler kadar babaların katılımı da önem kazanmaktadır. Çocukların gelişimi üzerinde etkileri olan babaların onların duygusal alanda, bilişsel kazanımlarda, cinsiyet ve kimlik rollerinin kazanılmasındaki yeri dikkat çekmektedir. Bunun sonucu olarak hazırlanan bu çalışmada okul öncesi kurumlarında baba katılım düzeyine ve rollerine ilişkin durumlar incelenmiştir. Sistematik tarama yöntemi ile yürütülen bu çalışma kapsamında elde edilen verilerin analizi için betimsel analiz yöntemi kullanılmıştır. Yapılan sistematik tarama sürecinde "Google Scholar, DergiPark" veritabanları taranmış ilgili konu hakkında 2014-2024 yılları arasında yazılan 18 makale ele alınmıştır. Yapılan incelemeler sonucunda çalışmaların bulguları doğrultusunda elde edilen bilgiler ortaya konmuştur. Sonuç olarak, okul öncesi dönemde babalık rolü algılarına ve okul öncesi eğitim kurumlarına babaların katılım düzeyine ilişkin mevcut durum belirtilmiştir ve gelecek araştırmalar için öneriler sunulmuştur.
Anahtar kelimeler: Babalık Rolü, Baba Katılımı, Okul Öncesi, Babalık Algısı.

VALUES EDUCATION THROUGH GAMIFIED METHODS

Aleyna YÜKSEL
TUBITAK Science High School, Turkey
ORCID NO: 0009-0000-8200-4985

Merve KOÇER
TUBITAK Science High School, Turkey
ORCID NO: 0000-0002-1128-5983

ABSTRACT
Our values have been severely undermined by the rapid integration of the internet, and especially social media, into our lives. This undermining has particularly affected adolescents and young people, who are the most frequent users of social media. Therefore, values education in middle and high schools is more critical than in the past. This makes efforts towards values education even more important. This study aims to raise awareness about values education among 13-15 years old students at different educational level using various teaching methods and techniques. For this purpose, 8 core values were selected from the 10 core values determined by the Ministry of National Education. 4-week training program was implemented for middle and high school students using presentations, orienteering, focus group workshops, and coding-puzzle methods. The study sample consisted of 110 students, 68 boys and 42 girls. 50 of these students were in middle school and 60 of these students were in high school. The data collection tools used in the research were the "Moral Maturity Scale for Children," which had previously undergone validity and reliability studies, the "Values Education Questionnaire," and a "Personal Information Form." When evaluated by gender, the average scores of girls regarding values education were found to be higher than those of boys. When evaluated by school type, both the experimental and control groups showed higher pre-test and post-test scores at the middle school level compared to the high school level when comparing their pre-test and post-test results.
Keywords: Values Education, Ten Core Values, Orienteering, Adolescence.

OYUNLAŞTIRILMIŞ YÖNTEMLERLE DEĞERLER EĞİTİMİ

ÖZET
Değerlerimiz internetin ve özellikle sosyal medyanın hayatımıza hızla girmesiyle birlikte büyük bir yıkıma uğramıştır. Bu yıkım özellikle sosyal medyayı en çok kullanan ergenlik dönemindeki çocukları ve gençleri etkilemiştir. Bu nedenle günümüzde ortaokul ve liselerdeki değerler eğitimi geçmiş zamanlara göre daha kritik bir konumdadır. Bu da değerler eğitimine yönelik yapılacak çalışmaları daha önemli hale getirmektedir. Bu çalışmada, farklı eğitim kademelerinde öğrenim gören 13-15 yaş grubundaki öğrencilere öğretimde farklı yöntem ve teknikleri kullanılarak değerler eğitimi konusunda farkındalık kazandırmak amaçlanmıştır. Bu amaçla Milli Eğitim Bakanlığı'nın 10 kök değer olarak belirlediği değerler içerisinden 8 kök değer seçilerek sunum, oryantiring, odak grup çalıştayı ve şifreleme-bulmaca yöntemleriyle ortaokul ve lisedeki öğrencilere 4 haftalık eğitim programı uygulanmıştır. Çalışmanın örneklem grubunu 68 erkek ve 42 kız olmak üzere 110 öğrenci oluşturmaktadır. 110 öğrencinin 50'si ortaokulda, 60'ı lisede öğrenim görmektedir. Araştırmada veri toplama aracı olarak daha önce geçerlik güvenirlik çalışması yapılmış "Çocuklar İçin Ahlaki Olgunluk Ölçeği" ile hazırlanan "Değerler Eğitimi Anketi" ve "Kişisel Bilgi Formu" kullanılmıştır. Elde edilen bulgulara cinsiyet açısından değerlendirildiğinde kızların değerler eğitimine ilişkin puan ortalamaları erkeklerin puan ortalamalarına göre daha yüksek belirlenmiştir.

Okul türüne göre değerlendirildiğinde ise; deney ve kontrol gruplarının her ikisinin de öntest ve sontest sonuçları kendi içinde karşılaştırıldığında öntest ve sontest puanlarının ortaokul seviyesinde lise seviyesine göre daha yüksek olduğu görülmüştür.

Anahtar kelimeler: Değerler Eğitimi, On Kök Değer, Oryantiring, Ergenlik Dönemi.

İPSALALI EBU'L-HAYR'IN MEVLİD'İNDE YER ALAN BAZI BEYİTLER ŞEYH EŞREF B. AHMED'İN MEVLİD'İNDEN ALINMIŞ OLABİLİR Mİ?

Dr. Öğr. Üyesi Esra BOZYİĞİT
Bilecik Şeyh Edebali University, Turkey
ORCID NO: 0000-0002-5809-6223

ÖZET

Klasik Türk edebiyatında mevlidler, Hz. Muhammed'in doğumunu merkeze alarak hayatının bazı safhalarını anlatan ve Hz. Peygamber'i metheden manzum eserlerdir. XV. yüzyıldan itibaren mevlid türünün gördüğü rağbet neticesinde birçok mevlid kaleme alınmıştır. Bu durum da yüzlerce mevlid nüshasının ortaya çıkmasına sebep olmuştur. Yıllar geçtikçe eserlere ait müellif nüshalarının birçoğunun kaybolması, ele geçen nüshaların ise önemli bir bölümünün tahrif edilmiş olması mevlid metinlerinin tespitini güçleştirmektedir. Bu hususlara kimi zaman müstensihlerin bilgisizliği ve özensizliği de eşlik etmektedir. Mevlidlerin birbirine karışmasına yol açan bu durum, aynı zamanda metin yayınlarında yüzlerce beytin başka şairlere atfedilmesine de neden olmuştur. Bu bildirinin konusu XV. yüzyılın başlarında hayatta olduğu kabul edilen Şeyh Eşref b. Ahmed'in *Mevlid*'i ile aynı yüzyılın ikinci yarısında yaşadığı düşünülen İpsalalı Ebu'l-Hayr'ın *Mevlid*'inde tespit edilen ortak beyitlerdir. Bildiride söz konusu ortak beyitlerin ortaya çıkarılması ve hangi şaire ait olduğunun belirlenmesi hedeflenmiştir. Bu amaçla öncelikle Şeyh Eşref b. Ahmed, *Mevlid*'i ve eserinin kayıtlı olduğu nüsha hakkında bilgi verilmiştir. Ardından İpsalalı Ebu'l-Hayr'ın hayatı ve *Mevlid*'i üzerinde durularak eserin nüshaları tanıtılmıştır. Çalışmanın bir sonraki bölümünde eserlerde yer alan ortak beyitlerin çeviri yazılı metinleri araştırmacıların dikkatine sunulmuştur. Son olarak beyitlerin kime ait olduğu hususunda nüshaların vaziyeti, istinsah tarihleri ve ortak beyitlerin muhtevası dikkate alınarak değerlendirmeler yapılmıştır.
Anahtar Kelimeler: Klasik Türk Edebiyatı, Şeyh Eşref b. Ahmed, İpsalalı Ebu'l-Hayr, Mevlid.

COULD SOME COUPLETS INCLUDED IN ABU'L-HAYR OF IPSALA'S MAWLID HAVE BEEN BORROWED FROM SHEIKH ASHRAF B. AHMED'S MAWLID?

ABSTRACT

In classical Turkish literature, mawlids are verse works that are centered on the birth of the Prophet Muhammad, describing some phases of his life and praising the Prophet. As a result of the popularity of the genre of mawlid starting from the 15th century, many mawlids were written. This situation led to the emergence of hundreds of mawlid copies. The disappearance of many of the author's copies of the works over the years and the fact that a significant part of the copies were damaged make it difficult to determine the mawlid texts. These issues are sometimes accompanied by the ignorance and carelessness of the scribes. This situation, which led to the confusion about the mawlids, also caused hundreds of couplets to be attributed to other poets in text publications. The subject of this paper is the common couplets determined in the *Mawlid* by Sheikh Ashraf b. Ahmed, who is thought to have lived in the early 15th century, and the *Mawlid* by Abu'l-Hayr of Ipsala, who is believed to have lived in the second half of the same century. In the paper, the aim is to reveal the common couplets in question and to determine which poet they belong to. For this purpose, first of all, information about Sheikh Ashraf b. Ahmed, his *Mawlid* and the copy in which his work is registered has been provided. Then, the copies of the work have been introduced by focusing on the life of Abu'l-Hayr of Ipsala and his *Mawlid*. In the next part of the study, the transcribed texts of the common couplets included in the works have been brought to the attention of the researchers. Finally, evaluations have been made on who the couplets belong to by taking into account the status of the copies, the dates of copying, and the content of the common couplets.
Keywords: Classical Turkish Literature, Sheikh Ashraf b. Ahmed, Abu'l-Hayr of Ipsala, Mawlid.

STRESS MANAGEMENT AND STUDENT WELLBEING IN FOREIGN LANGUAGE LEARNING

Nermin GÖKEL
MEB English Teacher, Antalya, Türkiye
ORCID ID: 0000-0002-2989-9334

Prof. Dr Gülden TÜM
Çukurova University, Türkiye
ORCID ID: 0000-0001-7790-0857

ABSTRACT
In foreign language learning, performance pressure, fear of making mistakes, classroom interaction demands, and high-stakes assessment environments are the stem of stress. Currently, the path of research is built on foreign language anxiety and emotional factors since a need for comprehensive studies that systematically synthesize stress management practices and their implications for student wellbeing remains unearthed. Therefore, the study aims at finding out sources of stress inquired in foreign language learning contexts, and its influence on students' wellbeing in the literature. This study employs a descriptive qualitative research design based on systematic document analysis on articles published in highly-ranked journals. The findings reveal that stress in foreign language learning is a multifaceted phenomenon with significant implications for student wellbeing. While stress negatively affects emotional, cognitive, and behavioral dimensions of learning, positive emotional experiences and effective stress management strategies can mitigate its impact..
Keywords: stress management, foreign language learning, wellbeing, emotional effects

YABANCI DİL ÖĞRENİMİNDE STRESS YÖNETİMİ VE ÖĞRENCİ REFAHI

ÖZET
Yabancı dil öğrenme ortamlarındaki stres genellikle performans baskısı, hata yapma korkusu, sınıf içi etkileşim talepleri ve yüksek riskli değerlendirme ortamlarından kaynaklanır. Yabancı dil kaygısı ve duygusal faktörler üzerine yapılan araştırmaların artmasına rağmen, stres yönetimi uygulamalarını ve bunların öğrenci refahı üzerindeki etkilerini sistematik olarak sentezleyen kapsamlı betimleyici çalışmalara hala ihtiyaç duyulmaktadır. Bu çalışma, yabancı dil öğrenme ortamlarındaki öğrenciler arasında bildirilen stres kaynaklarını ve literatürde yabancı dil öğreniminde öğrencilerin refahı üzerindeki etkisini ortaya çıkarmayı amaçlamaktadır. Bu çalışma, sistematik belge analizine dayalı betimleyici nitel bir araştırma tasarımını kullanmaktadır. Betimleyici araştırma, olguları doğru ve sistematik bir şekilde tanımlamayı amaçlar. Bulgular, yabancı dil öğreniminde stresin, öğrenci refahı için önemli etkileri olan çok yönlü bir olgu olduğunu ortaya koymaktadır. Stres, öğrenmenin duygusal, bilişsel ve davranışsal boyutlarını olumsuz etkilerken, olumlu duygusal deneyimler ve etkili stres yönetimi stratejileri etkisini azaltabilir.
Anahtar sözcükler: stress yönetimi, yabancı dil öğrenimi, refah, duygusal etkiler

SENSORY TEMPORAL ATLAS: URBAN SPATIAL EXPERIENCES WITHIN THE TRABZON BEDESTEN

Prof. Dr. Serap DURMUS OZTURK
Karadeniz Technical University, Faculty of Architecture, Department of Architecture, Türkiye
ORCID: 0000-0001-6902-069X

Res. Asst. Dr. Melis YAZICI
Artvin Coruh University, Faculty of Art and Design, Department of Architecture, Türkiye
ORCID: 0000-0001-5478-1584

Asst. Prof. Dr. Oguz KIRCI
Avrasya University, Faculty of Engineering and Architecture, Department of Architecture, Türkiye
ORCID: 0000-0003-0471-3473

ABSTRACT
City is a phenomenon experienced, perceived, and mutually interacted with by humans. Investigating the senses and emotions related to urban spatial experiences is significant for the reproduction of the city as a new and distinctive domain of knowledge. Urban spaces that influence individuals' emotions and behaviors constitute a language that communicates with the human mind. Space, experienced through all senses, generates distinct emotions across each sensory channel and forms a network of life trajectories interwoven with sensory orientations. Space possesses both a highly local and polyphonic structure. For different users, space is local insofar as it has the capacity to shape and articulate multi-meaningful experiences; simultaneously, it is polyphonic in that multiple voices, perspectives, and narratives coexist within a single spatial setting. Urban spaces, which constitute the visible face of lived and experienced environments, emerge as active productions of human perception. Experiential space denotes the subjective, corporeal, and affective relationship established by the individual with space; elements such as movement, perception, and memory shape this experience. In this regard, experiential space, grounded in sensory and emotional interaction, allows the same physical environment to be interpreted with different meanings by different individuals. This study is based on a five-day fieldwork conducted in the city of Trabzon within the scope of an ongoing research project supported by TÜBİTAK. The aim of the study is to present a temporal analysis of sensory-based emotional data of urban space. The primary objective of the research is to reveal the relationship between the sensory experiences (sight, smell, hearing, taste, and touch) generated by the Bedesten and the variations in visitors' emotional modes throughout daily time. This approach seeks to comprehend the multilayered nature of urban spatial experiences and the impact of sensory triggers on emotional perception. The narratives recorded by participants regarding each sensory experience, along with the emotional responses derived from these narratives, constitute the core dataset of the study. The multilayered data obtained were transformed into a comparative sensory-emotion matrix to visualize the relationships between temporal variability and sensory triggers. In this way, the everyday emotional profiles of urban spaces were revealed through sensory-based analyses. This study aims to contribute to the literature on architecture and sensory research by systematically examining the relationship between urban space, sensory experience, and emotion.
Keywords: Architecture, Urban Spatial Experience, Bedesten, Sensory-Emotion Matrix

ÖZET
Kent insan tarafından deneyimlenen, duyumsanan, karşılıklı etkileşime geçilen bir olgudur. Kentsel mekân deneyimlerine ilişkin duyu ve duyguların araştırılması kentin yeni ve özgün bir bilgi uzamı olarak yeniden üretilmesi açısından önemlidir. Bireylerin duygu ve davranışlarını etkileyen kentsel mekanlar, insan zihniyle iletişim kuran bir dildir. Tüm duyular aracılığıyla deneyimlenen mekân, her duyu kanalında farklı duygular üretir ve duyusal yönelimlerle örülü bir yaşam çizgisi ağıdır.

Mekân hem çok yerel hem de çok sesli bir yapıya sahiptir. Farklı kullanıcılar için mekân, çok-anlamlı deneyimlerini şekillendirme ve ifade etme kapasitesine sahip olduğu için yereldir; aynı zamanda tek bir mekân içinde birden fazla ses, perspektif ve anlatının bir arada bulunabilmesi bakımından ise çok seslidir. Yaşanılan ve deneyimlenen mekanların görünen yüzünü oluşturan kentsel mekânlar, insan algısının etkin bir üretimi olarak ortaya çıkar. Deneyimsel mekân, bireyin mekânla kurduğu öznel, bedensel ve duygulanımsal ilişkiyi ifade eder; hareket, algı ve hafıza gibi unsurlar ise bu deneyimi biçimlendirir. Bu bağlamda deneyimsel mekân, kişinin duyusal ve duygusal etkileşimine dayandığından dolayı, aynı fiziksel çevrenin farklı kişiler tarafından farklı anlamlarla yorumlanması mümkündür. Bu çalışma, Tübitak tarafından desteklenen ve yürürlükte olan araştırma projesi kapsamında Trabzon kentinde yürütülen beş günlük saha araştırmasına dayanmaktadır. Çalışmanın amacı, kentsel mekânın duyusal temelli duygusal verilerinin zamansal analizini sunmaktır. Araştırmanın temel hedefi ise, Bedesten'in ziyaretçiler üzerinde yarattığı duyusal deneyimlerin (görme, işitme, koklama, tatma ve dokunma) gündelik zaman içindeki duygusal mod değişimleri ile olan ilişkisini ortaya koymaktır. Bu yaklaşım, kentsel mekân deneyimlerinin çok katmanlı doğasını ve duyusal tetikleyicilerin duygusal algı üzerindeki etkilerini anlamaya yöneliktir. Katılımcıların her bir duyusal deneyime ilişkin kaydettikleri anlatılar ve bu anlatılardan üretilen duygusal tepkiler, çalışmanın temel veri setini oluşturmaktadır. Elde edilen çok katmanlı veriler, zamansal değişkenlik ile duyusal tetikleyiciler arasındaki ilişkileri görselleştirmek amacıyla karşılaştırmalı bir duyu–duygu matrisine dönüştürülmüştür. Böylelikle, kentsel mekânların gündelik duygusal profilleri, duyusal temelli analizlerle ortaya konmuştur. Bu çalışma mimarlık ve duyusal araştırmalar literatüründe, kentsel mekân–duyusal deneyim–duygu ilişkisini sistematik bir şekilde inceleyen çalışmalara katkı sağlamayı öngörmektedir.
Anahtar kelimeler: Mimarlık, Kentsel Mekân Deneyimi, Bedesten, Duyu-Duygu Matrisi

FROM SENSORY LAYERS TO LINEAR CODES: DISCOURSE ANALYSIS OF TAŞHAN SPACE THROUGH MULTI-SENSORY SKETCHES

Prof. Serap DURMUŞ ÖZTÜRK
Karadeniz Technical University, Faculty of Architecture, Department of Architecture, Türkiye
ORCID: 0000-0001-6902-069X

MSc. Arch. Muhammet Enes ÖKSÜZ
Karadeniz Technical University, Institute of Science and Technology, Türkiye
ORCID: 0009-0006-1467-9634

Res. Asst. Asude BALİ
Karadeniz Technical University, Faculty of Architecture, Department of Architecture, Türkiye
ORCID: 0009-0008-9400-0170

ABSTRACT
In architectural thought, space is more than a geometric whole perceived merely by the eye; it is a cultural formation experienced multi-sensorially by the body. In line with Ingold's (2011) approach that "lines are not only drawn, they are lived," this study transforms the sketch from a tool of representation into a linear trace of embodied experience. The aim of the study is to reveal the production of discursive unity through linear codes derived from multi-sensory experiences and to develop the architectural sketch as a method for analyzing embodied spatial experience. The study focuses on how linear codes related to the Taşhan space generate a visual-sensory discourse and in what ways this discourse makes visible the cultural, atmospheric, and bodily layers of the space. The study sample consists of visual impression sketches produced by architecture students at the Trabzon Taşhan stop point within the scope of a TÜBİTAK-supported research project. The reason for selecting Taşhan is that it stands as a focal point of commercial life and urban memory in Trabzon's historical narrative; it has developed a dynamic identity that ensures the continuity of social, economic, and cultural interactions by enriching itself with different functions over time. The theoretical framework of the study is built upon three axes: Tim Ingold's line-trace-movement approach treats the sketch as a dynamic extension of body-space interaction; Constance Classen and David Howes's anthropology of the senses contextualizes Taşhan's culturally shaped sensory environment for analysis; Brian Massumi's affect theory allows linear intensities to be interpreted as manifestations of pre-reflective affective processes. During the five-round field process conducted within the scope of the study, participants experienced the space through the senses of sight, hearing, smell, taste, and touch; they recorded Taşhan's embodied atmosphere with linear codes by transforming moments of sensory intensity into immediate sketches. The findings showed that each sensory category foregrounded different spatial qualities of Taşhan: sight produced linear codes representing atmospheric boundaries, hearing rhythmic reverberations, smell historical weight, taste internal traces, and touch surface resistances. In conclusion, the study reveals that Taşhan's spatial character is a field of multi-sensory experience. The linear codes in the sketches demonstrate that the space is a layered unity experienced through the five senses beyond form, proposing an analytical model that positions the sketch as a tool for architectural discourse analysis and expands the role of the senses in architectural representation.
Keywords: Architectural sketch, Spatial experience, Anthropology of the senses, Visual Discourse, Atmosphere.

DUYUSAL KATMANLARDAN ÇİZGİSEL KODLARA: TAŞHAN MEKÂNININ ÇOK-DUYUSAL ESKİZLER ARACILIĞIYLA SÖYLEM ANALİZİ

ÖZET

Mimarlık düşüncesinde mekân, yalnızca gözle algılanan geometrik bir bütün olmaktan öte, beden tarafından çok-duyulu biçimde deneyimlenen kültürel bir oluştur. Ingold'un (2011) "çizgiler yalnızca çizilmez, yaşanır" yaklaşımı doğrultusunda bu çalışma, eskizi temsil aracı olmaktan çıkarıp bedenlenmiş deneyimin çizgisel bir izine dönüştürmektedir. Çalışmanın amacı, çok-duyulu deneyimlerden türeyen çizgisel kodlar aracılığıyla söylemsel bütünlük üretimini ortaya koymak ve mimari eskizi bedenlenmiş mekânsal deneyimi çözümleyen bir yöntem olarak geliştirmektir. Çalışma, Taşhan mekânına ilişkin çizgisel kodların nasıl bir görsel-duyusal söylem ürettiği ve bu söylemin mekânın kültürel, atmosferik ve bedensel katmanlarını hangi biçimlerde görünür kıldığı üzerine odaklanmaktadır. Çalışmanın örneklemini, TÜBİTAK destekli araştırma projesi kapsamında Trabzon Taşhan durak noktasında mimarlık öğrencilerinin ürettiği görsel izlenim eskizleri oluşmaktadır. Taşhan'ın seçilme nedeni, Trabzon'un tarihsel kurgusunda ticari yaşam ve kentsel belleğin odak noktası olması; zaman içinde farklı işlevlerle zenginleşerek sosyal, ekonomik ve kültürel etkileşimlerin sürekliliğini sağlayan dinamik bir kimlik geliştirmesidir. Çalışmanın kuramsal çerçevesi üç eksen üzerine kurulmuştur: Tim Ingold'un çizgi-iz-hareket yaklaşımı eskizi beden-mekân etkileşiminin dinamik uzantısı olarak ele alır; Constance Classen ve David Howes'un duyular antropolojisi Taşhan'ın kültürel olarak biçimlenen duyusal çevresini analiz için bağlamsallaştırır; Brian Massumi'nin affect kuramı ise çizgisel yoğunlukların ön-düşünsel duygulanımsal süreçlerin tezahürü olarak yorumlanmasına imkân vermektedir. Çalışma kapsamında gerçekleştirilen beş turluk saha sürecinde katılımcılar mekânı görme, işitme, koklama, tatma ve dokunma duyuları üzerinden deneyimlemiş; duyusal yoğunluk anlarını anlık eskizlere dönüştürerek Taşhan'ın bedenlenmiş atmosferini çizgisel kodlarla kaydetmiştir. Bulgular, her duyu kategorisinin Taşhan'ın farklı mekânsal niteliklerini öne çıkardığını göstermiştir: görme atmosferik sınırları, işitme ritmik yankıları, koklama tarihsel ağırlığı, tatma içsel izi, dokunma yüzey dirençlerini temsil eden çizgisel kodlar üretmiştir. Sonuç olarak çalışma, Taşhan'ın mekânsal karakterinin çok-duyulu bir deneyim alanı olduğunu ortaya koymaktadır. Eskizlerdeki çizgisel kodlar, mekânın form ötesinde beş duyu üzerinden yaşanan katmanlı bir bütünlük olduğunu göstererek, eskizi mimarlık söylem analizinin aracı olarak konumlandıran ve duyuların mimari temsildeki rolünü genişleten analitik bir model önermektedir.

Anahtar kelimeler: Mimari eskiz, Mekânsal deneyim, Duyu antropolojisi, Görsel Söylem, Atmosfer.

ASSESSMENT OF A PREFABRICATED COMPOSITE PANEL MANUFACTURED FROM POLYESTER–FIBER COMPOSITE AND BOX-SECTION STEEL AS A CONSTRUCTION MATERIAL

Beyzanur TAŞÇI
Yıldız Technical University, Faculty of Architecture, Department of Architecture, İstanbul, Turkey, ORCİD: 0009-0005-1982-6368,

Assoc. Prof. Dr. Ali Osman KURUŞCU
Yıldız Technical University, Faculty of Architecture, Department of Architecture, İstanbul, Turkey, ORCİD: ID/0000-0002-4402-0711

ABSTRACT
Currently, extensive research and development efforts are being carried out in the construction industry to improve the technical properties of building materials. These materials are engineered to fulfill specific structural and functional requirements depending on their intended applications. This study focuses on a Prefabricated Composite Panel Manufactured from Polyester Resin Reinforced with Fiber and Box-Section Steel Profiles, developed by Architect and Civil Engineer Kübranur Uslu to enable rapid construction in rural areas and post-disaster environments. Along with the material, a dedicated construction methodology has been developed. The proposed system eliminates the use of conventional primary load-bearing systems such as reinforced concrete, steel frames, or timber structures. Instead, the composite panels are supported by structural profiles fabricated from the same composite material, forming an integrated load-transfer mechanism. No reinforced concrete foundation is employed; rather, the structural profiles are anchored directly to the soil using composite profile piles, which function as an alternative foundation system. The material is designed to provide resistance to elevated temperatures and to achieve enhanced fire resistance characteristics. Additionally, the vacuum infusion process utilized in the manufacturing stage improves the homogeneity of the composite structure and contributes to high resistance against water penetration, as well as enhanced thermal and acoustic insulation performance, which are critical for meeting environmental performance requirements. To evaluate the technical feasibility of the panel as a building material, the designer and manufacturers applied to the building materials Laboratory, where a series of standardized physical tests were conducted. Within the scope of this study, durability-related tests were performed to assess the long-term behavior of the material under environmental exposure conditions. These tests included chemical resistance testing, freeze–thaw cycling, single-flame source fire testing, and accelerated UV ageing. The experimental results were systematically observed, recorded, and analyzed. Furthermore, the production and installation procedures of the system were technically examined and presented in detail. Finally, the suitability of the developed composite panel system for its intended applications was evaluated based on the obtained experimental data.

Keywords: Composite, Panel, Polyester Resin, Fiber, Profile.

COMPARISON OF FINITE ELEMENT AND EXPERIMENTAL MODAL ANALYSIS RESULTS OF RAILWAY SLEEPER PROTOTYPES MANUFACTURED BY 3D PRINTING IN ACCORDANCE WITH PARTIAL SIMILITUDE THEORY

Dr. Ferhat ÇEÇEN
Suleyman Demirel University, Quality Coordinatorship, Türkiye
ORCID: 0000-0003-2100-8071

Prof. Dr. Mehmet SALTAN
Suleyman Demirel University, Faculty of Engineering and Natural Sciences, Department of Civil Engineering, Türkiye
ORCID: 0000-0001-6221-4918

ABSTRACT
Reliable comparison of the dynamic performance of railway sleepers is an essential requirement for modal topology optimization. However, full-scale testing of concrete sleepers is costly and time-consuming, which limits its applicability, particularly during early-stage design phases. In this study, a scalable and material-consistent methodology is presented using ABS-based miniature railway sleeper prototypes. Four geometrically distinct concrete sleeper geometries commonly used in railway superstructure systems were scaled to 1/10 in accordance with partial similitude theory. To numerically reproduce the results of experimental modal testing and analysis, finite element models were developed using the measured mass properties and geometries of the ABS prototypes. Experimentally identified damping ratios were also incorporated into the simulations to ensure realistic dynamic representation. The results indicate that the numerical analyses accurately reproduce the experimentally obtained frequency response function (FRF) characteristics and, critically, preserve the ranking of sleeper geometries based on peak magnitudes. This confirms that, when material effects are controlled, the dynamic performance ranking of sleeper designs is governed primarily by geometry. The study establishes a reliable experimental–numerical workflow for the dynamic performance comparison of railway sleepers and highlights the potential of ABS-based scaled prototyping as an effective tool for modal evaluation and early-stage design screening of structural components.
Keywords: Concrete railway sleepers, Experimental modal analysis, Finite element analysis, 3D scaled prototyping, Modal topology optimization

KISMİ BENZEŞİM TEORİSİ DOĞRULTUSUNDA ÜÇ BOYUTLU YAZICILARLA ÜRETİLEN DEMİRYOLU TRAVERSİ PROTOTİPLERİNİN SONLU ELEMAN VE DENEYSEL MODAL ANALİZ SONUÇLARININ KARŞILAŞTIRILMASI

ÖZET
Demiryolu traverslerinin dinamik performanslarının güvenilir biçimde karşılaştırılması modal topoloji optimizasyonu açısından önemli bir gerekliliktir. Ancak beton traverslerin tam ölçekli testleri, yüksek maliyetli ve zaman alıcı olması nedeniyle özellikle erken tasarım aşamalarında kullanımını sınırlamaktadır. Bu çalışmada, ABS esaslı minyatür demiryolu travers prototipleri kullanılarak ölçeklenebilir ve malzeme açısından tutarlı bir yöntem sunulmaktadır. Demiryolu üstyapısında yaygın olarak kullanılan geometrik açıdan farklı dört beton travers geometrisi 1/10 oranında kısmi benzeşim teorisine uygun şekilde ölçeklendirilmiştir. Deneysel modal test ve analiz sonuçlarını nümerik olarak yeniden üretmek amacıyla, ABS prototiplerin ölçülen kütle özellikleri ve geometrileri kullanılarak sonlu eleman modelleri geliştirilmiştir. Gerçekçi bir dinamik temsil sağlamak amacıyla, deneysel olarak belirlenen sönüm oranları da simülasyonlara dahil edilmiştir. Elde edilen sonuçlara göre, nümerik analizlerin, deneysel olarak elde edilen FRF karakteristiklerini yüksek doğrulukla yeniden ürettiği ve kritik olarak, tepe genliklerine dayalı travers geometrisi sıralamasını koruduğu görülmüştür.

Bu durum, malzeme etkileri kontrol altına alındığında travers tasarımlarının dinamik performans sıralamasının esas olarak geometriden kaynaklandığını doğrulamaktadır. Çalışma, demiryolu traverslerinin dinamik performans karşılaştırması için güvenilir bir deneysel–nümerik iş akışı ortaya koymakta ve ABS esaslı ölçeklendirilmiş prototiplemenin, yapısal bileşenlerin modal değerlendirilmesi ve tasarım ön elemesi için etkin bir araç olma potansiyelini vurgulamaktadır.

Anahtar kelimeler: Beton demiryolu traversleri, Deneysel modal analiz, Sonlu eleman analizleri, 3B ölçekli prototipleme, Modal topoloji optimizasyonu

THE DIGITAL TRANSFORMATION OF SPATIAL POWER: A MACHIAVELLIAN READING OF SMART CITY PRACTICES

Asst. Prof. Rıza Fatih MENDİLCİOĞLU
Baskent University, Faculty of Fine Arts, Design and Architecture, Department of Interior Architecture and Enviromental Design Ankara, Turkey,
ORCİD: /0000-0003-0094-2826

ABSTRACT
The discipline of architecture has been one of the most fundamental political instruments throughout history, legitimising the power of authority and organising social hierarchy through space. This foundation of legitimacy has been constructed through monumental forms that overwhelm the human scale, rigid boundaries that restrict access, and urban axes that symbolise the absoluteness of authority. However, the development of information technologies in the 21st century has necessitated a fundamental transformation in the spatial reflection of power, shifting the establishment of sovereignty from physical construction to the digital data processing process. In this new realm, Niccolò Machiavelli's struggle between chaotic forces (Fortuna) and regulatory will (Virtù), as formulated in The Prince, combines with the architectural practices of the digital age to create a new autocratic spatial language.
The primary aim of this study is to examine how the principles of 'visibility, fear, and absolute control' in Machiavelli's political theory are reproduced under today's 'Smart City' rhetoric. In this context, the new technical capabilities (Virtù) developed by power through digital data networks and algorithms, without the need for physical walls, in order to control social and natural uncertainties (Fortuna) will be discussed. The ways in which these new surveillance strategies, operating behind the promise of technological efficiency and comfort, transform urban space into instruments of discipline will be detailed.
The research is based on the argument that modern authoritarian regimes have moved away from the physical confinement spaces defined by Foucault and evolved into the 'open-air' surveillance societies predicted by Deleuze. This transformation, in which Machiavelli's strategy of 'the ruler's all-seeing eye' is now constructed through algorithms, will be examined through comparative case studies: China's Xueliang project, which transforms the urban fabric into a digital Panopticon to discipline social chaos, and Saudi Arabia's The Line project, the concrete manifestation of the Tabula Rasa desire symbolising the absolute victory of power over nature. The study will examine architectural projects and digital infrastructure schemes through a hermeneutic approach to unravel the techno-political layers of space.
The conclusion and evaluation section will demonstrate that 'smart' urbanism applications have transformed into a disciplinary mechanism that continuously scores individuals' movements and social behaviours rather than focusing on efficiency. In this era where architecture is reduced to digital codes, the study will focus on the observation that the 'Digital Prince' holds citizens in a prison of visibility, thereby realising Machiavelli's idealised concept of absolute order (Virtù) as a spatial reality. By examining the subject through classical political theory, the study demonstrates that digital architecture is a product of a political 'state mind,' thereby offering a unique contribution to the literature.
Keywords: Machiavelli, Architecture and Power, Virtù and Fortuna, Smart Cities, Digital Panopticon, Tabula Rasa.

MEKANSAL İKTİDARIN DİJİTAL DÖNÜŞÜMÜ: AKILLI ŞEHİR PRATİKLERİNİN MACHİAVELLİST BİR OKUMASI

ÖZET

Mimarlık disiplini, tarihsel süreçte iktidarın gücünü meşrulaştıran ve toplumsal hiyerarşiyi mekân üzerinden örgütleyen en temel politik aygıtlardan biri olmuştur. Söz konusu meşruiyet zemini; insan ölçeğini ezen anıtsal formlar, erişimi kısıtlayan katı sınırlar ve otoritenin mutlaklığını simgeleyen kentsel akslar aracılığıyla inşa edilmiştir. Ancak 21. yüzyılda gelişen enformasyon teknolojileri, iktidarın mekânsal yansımasında köklü bir dönüşümü zorunlu kılmış, egemenliğin tesisini fiziksel inşadan dijital veri işleme sürecine evriltmiştir. Bu yeni düzlemde, Niccolò Machiavelli'nin Prens eserinde formüle ettiği; kaotik güçlere (Fortuna) karşı düzenleyici irade (Virtù) mücadelesi, dijital çağın mimari pratikleriyle birleşerek yeni bir otokratik mekânsal dil oluşturmaktadır.

Bu çalışmanın temel amacı, Machiavelli'nin siyaset teorisindeki "görünürlük, korku ve mutlak kontrol" ilkelerinin, günümüzün "Akıllı Şehir" retoriği altında nasıl yeniden üretildiğini incelemektir. Bu kapsamda, iktidarın toplumsal ve doğal belirsizlikleri (Fortuna) zapt etmek adına, fiziksel duvarlara ihtiyaç duymadan dijital veri ağları ve algoritmalar aracılığıyla geliştirdiği yeni teknik yetenekler (Virtù) tartışılacaktır. Teknolojik verimlilik ve konfor vaadinin arka planında işleyen bu yeni gÖZETim stratejilerinin, kentsel mekânı nasıl birer disiplin aracına dönüştürdüğü detaylandırılacaktır.

Araştırma, modern otokratik rejimlerin Foucault'nun tanımladığı fiziksel kapatma mekanlarından uzaklaşarak, Deleuze'ün öngördüğü "açık hava" denetim toplumlarına evrildiği savına dayanmaktadır. Machiavelli'nin "hükümdarın her şeyi gören gözü" stratejisinin artık algoritmalarla inşa edildiği bu dönüşüm; kentsel dokunun dijital bir Panoptikon'a dönüştürülerek sosyal kaosun disipline edildiği Çin'deki Xueliang projesi ve iktidarın doğaya karşı mutlak zaferini simgeleyen Tabula Rasa arzusunun somutlaşmış hali olan Suudi Arabistan'ın The Line projesi üzerinden, karşılaştırmalı vaka analiziyle ele alınacaktır. Çalışmada; mimari projeler ve dijital altyapı şemaları hermeneutik bir yaklaşımla irdelenerek mekânın tekno-politik katmanları çözümlenecektir.

Sonuç ve değerlendirme bölümünde; "akıllı" şehircilik uygulamalarının verimlilikten ziyade, bireyin hareketini ve sosyal davranışlarını sürekli puanlayan bir disiplin mekanizmasına dönüştüğü gösterilecektir. Mimarinin dijital kodlara indirgendiği bu dönemde, "Dijital Prens"in vatandaşları görünürlük hapsinde tutarak, Machiavelli'nin idealize ettiği mutlak düzen (Virtù) anlayışını mekânsal bir gerçekliğe kavuşturduğu tespiti üzerinde durulacaktır. Çalışma, konuyu klasik siyaset teorisi üzerinden okuyarak dijital mimarlığın politik bir "devlet aklı" ürünü olduğunu ortaya koyması bakımından literatürde özgün bir değer taşımaktadır.

Anahtar kelimeler: Machiavelli, Mimarlık ve İktidar, Virtù ve Fortuna, Akıllı Şehirler, Dijital Panoptikon, Tabula Rasa.

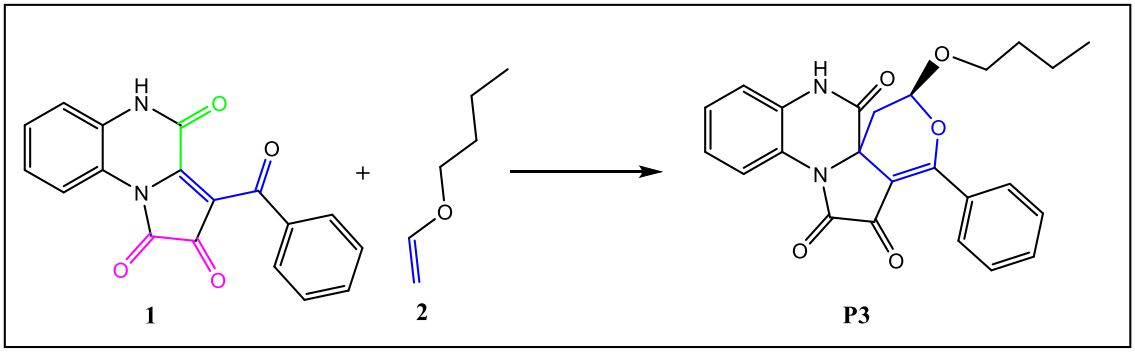
EXPLORING THE CHEMICAL REACTIVITY AND THERAPEUTIC POTENTIAL OF 1H-PYRROLE-2,3-DIONE CYCLOADDITION DERIVATIVES: INSIGHTS FROM MOLECULAR DOCKING AND ADMET PREDICTIONS

Soukaina AMEUR
Molecular Modeling and Spectroscopy Research Team, Faculty of Science, Chouaïb Doukkali University, Morocco

Assiya ATIF
Bioorganic Chemistry Team, Department of Chemistry, Faculty of Sciences, Chouaïb Doukkali University, Morocco

Abdellah ZEROUAL
Molecular Modeling and Spectroscopy Research Team, Faculty of Science, Chouaïb Doukkali University, Morocco

ABSTRACT
A comprehensive MEDT-based investigation was performed on the [4+2] cycloaddition between butyl vinyl ether and 1H-pyrrole-2,3-dione derivatives. Conceptual DFT analyses reveal the nucleophilic nature of butyl vinyl ether and the electrophilic character of the pyrrole-2,3-dione framework. Theoretical activation and reaction energies are in good agreement with experimental results, confirming the chemo-, regio-, and stereoselectivity of the cycloaddition process. Electron density analyses indicate that the reaction may proceed via either a fully concerted or an asynchronous pathway. Furthermore, molecular docking studies combined with ADMET evaluation of the predominant product toward VEGFR-2 show strong and stable binding primarily driven by hydrophobic interactions, highlighting potential photonic effects and the compound's suitability for further photochemical investigations.



Keywords: DFT, Reactivity, Docking, ADMET, VEGFR-2, Photonic Effects, ELF

SYNTHESIS AND BIOLOGICAL ACTIVITIES OF THIOPHENE DERIVATIVES

Assiya ATIF
Bioorganic Chemistry Team, Faculty of Science, Chouaib Doukkali University, Morocco

Soukaina AMEUR
Bioorganic Chemistry Team, Faculty of Science, Chouaib Doukkali University, Morocco
Molecular Modeling and Spectroscopy Research Team, Faculty of Sciences, Chouaib Doukkali University, Morocco

Houssine AIT SIR
Bioorganic Chemistry Team, Faculty of Science, Chouaib Doukkali University, Morocco

ABSTRACT
This work presents thiophene, a compound of major interest due to its increasing importance in medicinal chemistry and materials science. Thiophene is a simple substance playing an essential role in many pharmacokinetic compounds such as antihypertensives, anti-inflammatory drugs, antibacterials, antitumors, anticancers, antituberculosis and antiangiogenics. This study describes the different synthetic methods of thiophene derivatives, such as from a nitrile derivative, a thiol derivative, an amide derivative or a ketone derivative, using different reagents e.g. sulfur, indium chloride, Lawesson's reagent or carbon disulfide, adopting several conditions like reflux, room temperature or microwave, as well as their biological activities.
Keywords: Thiophene, Pharmacokinetic Compounds, Biological Activities, Study, Chemistry.

DESIGN, SEARCH, DEVELOPMENT AND APPLICATION OF NON-MEDICAL ANTIFUNGAL ANTIBIOTICS TO PROTECT AGRICULTURAL PLANTS FROM DISEASES CAUSED BY FUNGAL PHYTOPATHOGENS AND HARMFUL INSECTS

Dr. Valery V. BELAKHOV
Technion – Israel Institute of Technology, Schulich Faculty of Chemistry (formerly), Israel
ORCID: 0000-0003-1918-974X

ABSTRACT

The intensive use of chemicals in agriculture has led to environmental disruptions, the emergence of more resistant strains of pathogenic microorganisms that cause plant diseases, and other undesirable consequences. In this regard, in recent decades, the attention of researchers has been drawn to studies on the search for and implementation into practice of antibiotics obtained through microbiological synthesis. Currently, antibiotics are used in various branches of agriculture: 1) in veterinary medicine for the treatment and prevention of infectious diseases of animals; 2) in animal husbandry as a new factor in increasing the production of livestock products as growth stimulants for farm animals; 3) in plant growing as biological preparations for the control and prevention of plant diseases of various etiologies.

One of the essential requirements for antibiotics used for plant protection is that they are prohibited from being used in medical practice to avoid the development of resistance to them in harmful insects and microorganisms. In this regard, the use of non-medical antibiotics for plant protection is highly relevant. Currently, non-medical antibiotics are used in plant growing as fungicides, herbicides, insecticides, and plant growth regulators. The main requirements for antibiotic-based preparations used in the control of agricultural pests are as follows: 1) low toxicity for warm-blooded animals and humans; 2) high biological activity and specificity in the causative agent of the disease; 3) the ability to easily penetrate plant tissue; 4) therapeutic doses should be harmless to the plant; 5) stability on the surface and inside the plant; 6) the ability to easily decompose in the soil; 7) safety for the environment.

Phytopathogenic fungi play a major role in soil-borne plant diseases, as they are able to survive in the most unfavorable conditions and are characterized by a wide range of damage to a wide variety of agricultural crops. Phytopathogenic fungi cause 70% of all plant diseases, and the most terrible epiphytoties (mass plant diseases) are associated with fungal diseases. In view of this, the use of antifungal non-medical antibiotics to protect plants from diseases caused by phytopathogenic fungi and, consequently, to preserve crops is a pressing issue.

The report summarizes the literature data from recent decades regarding the successful use of antifungal non-medical antibiotics belonging to various classes of compounds to protect a wide range of agricultural crops from diseases caused by fungal phytopathogens of various etiologies and harmful insects.

Keywords: Antifungal Antibiotics, Agriculture, Plant Protection, Phytopathogenic Fungi, Plant Diseases, Harmful Insects, Environmental Protection

PHARMACOLOGICAL ASSESSMENT OF FUSED HETEROCYCLIC COMPOUNDS AS POTENTIAL THERAPEUTIC AGENTS

Tanzeela
Department of Chemistry, Government College University, Pakistan

Tanzeela RIAZ
Department of Chemistry, Government College University, Pakistan

Sana ASLAM
Department of Chemistry, Government College Women University, Pakistan

Matloob AHMAD
Department of Chemistry, Government College University, Pakistan

ABSTRACT
Fused heterocyclic systems are widely studied in the field of medicinal chemistry due to their structural and electronic flexibility. Among them, furo-pyridine fused heterocycles have become some of the promising bioactive scaffolds because of the stable combination of a furan ring and a pyridine ring, which enhances their physicochemical properties and target-binding potential. Here, a group of furo-pyridine analogs is analyzed in terms of antiviral, antibiotic, nicotinic acetylcholine receptor inhibitor, and various enzyme-inhibitor activities. The findings indicate that small structural changes in the fused core can significantly impact biological performance. Overall, the literature highlights the potential of furo-pyridine derivatives as promising candidates in the development of new therapeutic agents.
Keywords: Furo-pyridine fused heterocycles, Pharmacological evaluation, Therapeutic agents

SYNTHESIS AND BIOLOGICAL ACTIVITY OF A NEW DECAVANADATE COMPOUND

Rawia NASRI
University of Tunis El Manar, Faculty of Sciences of Tunis, Laboratory of Materials, Crystal Chemistry and Applied Thermodynamics, 2092 El Manar II, Tunis, Tunisia.

ABSTRACT
Polyoxometalates (POMs) are considered excellent receptor molecules due to their structural diversity and can interact with organic ligands and metal ions to form supramolecular compounds **[1]**. As a branch of POMs, decavanadate exhibits several pharmacological activities, including anticancer **[2]**, antiviral **[3]** and antibacterial effects **[4]**. Optical studies revealed that the complex exhibits a wide band gap. The prepared compound showed an interesting antitumoral activity.
Keywords: Decavanadate; Synthesis; biological activity.

SYNTHETIC APPROACHES TOWARDS FUNCTIONALIZED THIAZOLIDINONE DERIVATIVES

Tanzeela RIAZ
Department of Chemistry, Government College University, Pakistan

Tanzeela
Department of Chemistry, Government College University, Pakistan

Sana ASLAM
Department of Chemistry, Government College Women University, Pakistan

Matloob AHMAD
Department of Chemistry, Government College University, Pakistan

ABSTRACT
Thiazolidinone is a saturated, heterocyclic 5-member system, which has a carbonyl moiety with a sulfur and a nitrogen atom at positions 1 and 3, respectively. There are a variety of derivatives of thiazolidinone where the carbonyl group may be located. It is a recognizable ingredient in most natural and pharmaceutical products. Thiazolidinone derivatives have various biological activities. In the recent past, the production of thiazolidinone derivatives has attracted a lot of attention because of the growing need of heterocycles. A number of ways are developed to synthesize thiazolidinones. Some of the most recent synthetic methods, such as catalyst-free, metal-based nano-catalyzed, acid-catalyzed, base-catalyzed, ionic liquid-assisted, and other methods are discussed in this literature to synthesize different derivatives of thiazolidinone by multicomponent reactions. Such studies can be used to come up with more effective synthetic procedures of functionalized thiazolidinone derivatives.
Keywords: Thiazolidinone, heterocyclic compounds, multicomponent reactions, catalytic synthesis, biological activity

ADSORPTION BEHAVIOR AND INHIBITORY POTENTIAL OF 1H-PYRROLE-2,3-DIONE DERIVATIVES: A COMBINED DFT, ADMET, AND MOLECULAR DOCKING STUDY

Soukaina AMEUR
Molecular Modeling and Spectroscopy Research Team, Faculty of Science, Chouaïb Doukkali University, Morocco

Assiya ATIF
Bioorganic Chemistry Team, Department of Chemistry, Faculty of Sciences, Chouaïb Doukkali University, Morocco

Abdellah ZEROUAL
Molecular Modeling and Spectroscopy Research Team, Faculty of Science, Chouaïb Doukkali University, Morocco

Noureddine MAZOIR
Bioorganic Chemistry Team, Department of Chemistry, Faculty of Sciences, Chouaïb Doukkali University, Morocco

ABSTRACT
The adsorption behavior of **1H-pyrrole-2,3-dione derivatives** plays a crucial role in determining their effectiveness as potential inhibitors. In this study, a series of motif derivatives was investigated using an integrated **Density Functional Theory (DFT), ADMET prediction, and molecular docking approach** to evaluate their adsorption characteristics and inhibitory potential. Reactivity descriptors derived from DFT calculations were employed to analyze electronic properties governing adsorption strength and molecular interaction capability. **Molecular docking simulations** were conducted to examine adsorption modes, interaction energies, and key non-covalent interactions with selected biological targets, providing insight into inhibition mechanisms. In parallel, **ADMET analyses** were performed to assess drug-likeness and pharmacokinetic suitability of the most strongly adsorbed derivatives. The results demonstrate that structural variations within the 1H-pyrrole-2,3-dione scaffold significantly influence adsorption behavior and inhibitory efficiency, highlighting promising derivatives for further development as effective inhibitors.
Keywords: DFT, Reactivity, 1H-pyrrole-2,3-dione, Docking, Monte Carlo Simulation, Corrosion inhibitor

INTEGRATED DFT, ADMET, AND MOLECULAR DOCKING INSIGHTS INTO THE REACTIVITY AND THERAPEUTIC POTENTIAL OF 1H-PYRROLE-2,3-DIONE DERIVATIVES

Soukaina AMEUR
Molecular Modeling and Spectroscopy Research Team, Faculty of Science, Chouaïb Doukkali University, Morocco

Assiya ATIF
Bioorganic Chemistry Team, Department of Chemistry, Faculty of Sciences, Chouaïb Doukkali University, Morocco

Abdellah ZEROUAL
Molecular Modeling and Spectroscopy Research Team, Faculty of Science, Chouaïb Doukkali University, Morocco

Noureddine MAZOIR
Bioorganic Chemistry Team, Department of Chemistry, Faculty of Sciences, Chouaïb Doukkali University, Morocco

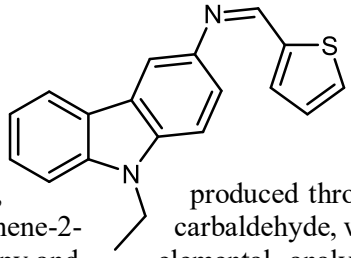
ABSTRACT
Derivatives of **1H-pyrrole-2,3-dione** constitute an important heterocyclic scaffold with notable chemical reactivity and growing therapeutic interest. In this work, a comparative computational study was carried out to evaluate the **reactivity, pharmacokinetic behavior, and potential biological activity** of a series of 1H-pyrrole-2,3-dione derivatives. Chemical reactivity was analyzed using **Density Functional Theory (DFT)** descriptors to elucidate stability, selectivity, and structure–reactivity relationships. **ADMET predictions** were performed to assess drug-likeness, absorption, distribution, metabolism, excretion, and toxicity profiles, providing insight into the pharmaceutical feasibility of the investigated compounds. In parallel, **molecular docking studies** were conducted against selected biological targets to explore binding modes and relative affinities, allowing the evaluation of their therapeutic potential. The combined results reveal that structural modifications within the 1H-pyrrole-2,3-dione motif significantly influence both reactivity and biological performance, highlighting promising derivatives for further development as potential therapeutic agents.
Keywords: DFT, Reactivity, 1H-pyrrole-2,3-dione, Docking, ADMET, Photonic Effects, ELF

A THIOPHENE-MODIFIED CARBAZOLE MONOMER: SYNTHESIS, ELECTROCHEMICAL BEHAVIOR, AND CONJUGATED POLYMER FORMATION

Assala MARIR
Laboratory of Materials Chemistry, Frères Mentouri University of Constantine, Algeria

Mounia GUERGOURI
Laboratory of Materials Chemistry, Frères Mentouri University of Constantine, Algeria

Rafik BENSEGUENI
Laboratory of Materials Chemistry, Frères Mentouri University of Constantine, Algeria
Mohamed Cherif Messaadia University, Algeria



ABSTRACT
The Schiff-base derivative **TIC**, produced through the condensation of 3-amino-9-ethylcarbazole with thiophene-2-carbaldehyde, was successfully synthesized and its structure verified by NMR spectroscopy and elemental analysis. Its electrochemical behavior was explored using cyclic voltammetry, after which the monomer was efficiently electropolymerized in a Bu_4NBF_4/CH_2Cl_2 medium, forming a stable conjugated polymer film on the electrode surface. The incorporation of thiophene, a widely used heterocycle known for its strong π-conjugation, high electron density, and excellent charge-transport properties, enhances the ability of TIC to generate electroactive polymer chains. Paired with the carbazole moiety, recognized for its oxidative stability and effective hole-transport capability, TIC provides a favorable platform for creating conductive and durable polymeric materials. The resulting electropolymerized film exhibits characteristics typical of conjugated systems, emphasizing its potential in optoelectronic applications such as organic light-emitting diodes, photovoltaic cells, and field-effect transistors. Overall, TIC demonstrates the versatility of thiophene–carbazole architectures as promising candidates for advanced organic electronic materials.
Keywords: Schiff-base monomer, Electropolymerization, Conjugated polymer, Organic optoelectronics and Conducting polymer.

GREEN SYNTHESIS AND ADSORPTIVE PERFORMANCE OF ZNO@CUO NANOCOMPOSITES DERIVED FROM EUCALYPTUS CAMALDULENSIS FOR LEAD AND CADMIUM REMOVAL

Fatima CHARBOUBAB
Applied Chemistry Physical Laboratory, Faculty of Sciences, Ibn Zohr University, Morocco

Rachid AIT AKBOURA
Applied Chemistry Physical Laboratory, Faculty of Sciences, Ibn Zohr University, Morocco

Abdallah ALBOURINE
Laboratory of Materials and Environment, Faculty of Sciences, Ibn Zohr University, Morocco
Laboratory of Industrial Engineering, Energy and Environment (LI3E), SupMT I, Morocco

ABSTRACT

Trace metals, especially lead and cadmium ions, remain the most difficult problems to solve in the field of public health and the environment. Green nanocomposites can alleviate environmental concerns by minimizing the impact of these toxic contaminants. Recent advances in nanotechnology are opening up new possibilities for the creation of innovative and promising nanocomposites that are safe for human cells and the environment.

This study highlights the potential of green nanotechnology, focusing on ZnO@CuO nanocomposites (NCPs) synthesized from an extract of Eucalyptus Camaldulensis leaves with varying weight percentages of 80% ZnO and 20% CuO. This that composite characterized several techniques, such as; X-ray diffraction (XRD), field emission scanning electron microscopy (SEM), Fourier transform infrared spectroscopy (FTIR), and thermogravimetric analysis (TGA).

The environmentally friendly synthesized ZnO@CuO NCPs are tested for their adsorption activity against certain inorganic pollutants (lead and cadmium ions).

The effectiveness of adsorption was also studied using variable parameters such as pH, initial contaminant concentration, contact time, adsorbent dose, and temperature. The removal of environmental contaminants by surface adsorption mechanisms, such as physical adsorption, precipitation, complexation, and ion exchange, is mainly due to solutions with variable pH and complex functional groups. Electrostatic interaction, metal complexation, hydrogen bonding, π-π associations, and chelation, combined with reduction, played a major role in the adsorption of heavy metals, pharmaceuticals, radioactive substances, and other inorganic pollutants.

Finally, this study concludes that plant biomass-based nanoparticles are a sustainable and environmentally friendly remediation method that exploits the unique properties of nanocomposite and minimizes the risks associated with chemical synthesis.

Keywords: Adsorption mechanism; Eucalyptus camaldulensis extract; Cd^{2+}; Green nanotechnology; Pb^{2+}; ZnO@CuO nanocomposites.

EFFECT OF QUERCETIN MEDIATED ZNO NANOPARTICLES TO INHIBIT PROTEASE ACTIVITY IN *E. COLI*

A Vinolia CHRISTY
School of Life Sciences, B.S. Abdur Rahman Crescent Institute of Science and Technology, India

S. HEMALATHA
School of Life Sciences, B.S. Abdur Rahman Crescent Institute of Science and Technology, India

ABSTRACT
Milk spoilage is a major issue in the dairy industry, often accelerated by microbial contamination, especially by *Escherichia coli.* The extracellular and intracellular proteases produced by *E. coli* degrade milk proteins such as casein, leading to loss of texture, flavor, and nutritional quality. This study investigates the inhibition of protease activity in *E. coli* by using quercetin-mediated nanoparticles (QNPs) as a novel strategy to reduce spoilage. Quercetin, a plant-derived flavonoid known for its strong antimicrobial and enzyme-modulating properties, was employed to synthesize stable metal nanoparticles through a green synthesis method. These QNPs were characterized by UV–Vis spectroscopy, FTIR, XRD, FESEM, DLS. The inhibitory effects of standard protease inhibitors (PMSF, E-64, and EDTA) and QNPs were tested individually and in combination using azocasein-based protease assays. This synergistic inhibition demonstrates that Quercetin-mediated ZnO nanoparticles can enhance the effectiveness of traditional inhibitors and provide a natural, eco-friendly approach to controlling *E. coli*-induced milk deterioration. Such Nano biotechnological interventions could play a vital role in improving milk shelf life and safety in the dairy industry.
Keywords: *E. coli*, milk spoilage, protease inhibition, quercetin nanoparticles, dairy preservation.

NANO-ENGINEERED ANTIMICROBIAL FORMULATION FOR THE CONTROL OF PLANT PATHOGEN

Kovendan M
School of Life Sciences, B.S. Abdur Rahman Crescent Institute of Science and Technology, India

S. HEMALATHA
School of Life Sciences, B.S. Abdur Rahman Crescent Institute of Science and Technology, India

ABSTRACT
Pathogenic attack and extension of shelf life of agricultural produce are global challenges in crop protection and post-harvest management. Pathogenic attacks significantly affect crop health which leads to dwarfing, leaf abscission and yield loss. Conventional preservation and plant protection techniques often rely on chemical treatments which raises environmental and health risks. This study addresses this issue and focus on developing a sustainable Nano-engineered treatment aiming for inhibiting these pathogenic microorganisms and to enhance the quality of crops. The core innovation is to synthesize a silver nanoparticles using young neem leaves (*Azadirachta indica*) which is well-known for its antimicrobial properties and the bioactive phytochemicals present acts as safe and eco-friendly reducing agents of AgNPs. Encapsulation of AgNPs into nanoemulsion enhance its stability, bioavailability, dispersion and antibacterial activity. The synthesized green nanoparticals (AIAgNPs) and nanoemulsion (AIAgNE) were characterized using UV-Vis spectroscopy, Dynamic Light Scattering (DLS), zeta potential, Fourier Transform Infrared Spectroscopy (FTIR), and X-ray Diffraction (XRD) analysis. Antibacterial efficacy of synthesized AIAgNPs and AIAgNE against two pathogenic strains of pseudomonas aeruginosa (SES4 & SES5) which has been isolated from infected sesame leaves were evaluated by MIC, MBC and Anti-biofilm formation assay. The antibacterial activity of synthesized AIAgNPs and AIAgNE with *Pseudomonas Aeruginosa* were tested at different time intervals, AIAgNPs reduced bacterial growth to 28% (SES4) and 15% (SES5), while AIAgNE showed strong inhibition with 10% (SES4) and 12% (SES5). Thus AIAgNE demonstrated the most effective antibacterial anti-biofilm activity compared to AIAgNPs. The study proves that the synthesized green silver nanoparticles using *Azadirachta indica* is effective in controlling the plant pathogens.
Keywords: Green synthesis, *Pseudomonas Aeruginosa, Azadirachta indica,* Preservation

ETHNOBOTANICAL AND ETHNOLINGUISTIC DOCUMENTATION OF WILD EDIBLE PLANTS USED BY THE BODO COMMUNITY OF ASSAM, INDIA

Asst. Prof. Bikash BANIA
Department of Medical Laboratory Technology, Rangia College, India

Asst. Prof. Nitul ALI
Department of Zoology, Rangia College, India

Dr. Guddu Prasad BASUMATARY
Department of Zoology, Rangia College, India

Asst. Prof. Prem Kishan SINGHA
Department of Bodo, Rangia College, India

ABSTRACT
India is recognized as one of the world's biodiversity-rich countries, where indigenous communities maintain extensive traditional knowledge associated with plant resources. The Bodoland Territorial Area Districts (BTAD) of Assam, located in northeastern India, represent a culturally and ecologically significant region inhabited predominantly by the Bodo community. The present study explores the ethnobotanical and linguistic dimensions of wild edible plants traditionally used by the Bodos, emphasizing their role in food practices, healthcare, and language preservation.
Field investigations were carried out across the districts of Baksa, Chirang, Kokrajhar, and Udalguri during multiple seasons. Data were gathered through direct interaction with local knowledge holders, household surveys, and observations in local markets. Wild plant species occurring in terrestrial, aquatic, marshy, and semi-aquatic habitats were documented. Collected specimens were processed following standard herbarium procedures and identified using authenticated botanical references. Local plant names, edible parts, preparation methods, and associated medicinal uses were carefully recorded, with special attention given to variations in nomenclature across different localities.
The study reveals that a wide diversity of wild plant species is consumed as vegetables, spices, and supplementary foods, with leaves and young shoots being the most frequently utilized parts. Beyond their nutritional value, these plants contribute significantly to traditional healthcare systems and enrich the ethnolinguistic vocabulary of the Bodo language. The findings highlight the interconnectedness of biodiversity, indigenous food systems, and linguistic heritage. Documenting such knowledge is essential for sustainable resource management, cultural conservation, and safeguarding indigenous wisdom in India under increasing socio-environmental change.
Keywords:
Ethnobotany; Wild edible plants; Indigenous knowledge; Bodo community;

TOXICOLOGICAL AND BIOLOGICAL CHARACTERIZATION OF *CERASTES CERASTES* VENOMS FROM MOROCCO: HEMORRHAGIC, EDEMATOUS, AND MYOTOXIC EFFECTS IN MICE

Noureddine HAMMANI
Laboratory of Venoms and Toxins, Pasteur Institute of Morocco, Morocco
Laboratory of Chemistry–Biochemistry, Environment, Nutrition and Health, Faculty of Medicine and Pharmacy of Casablanca, Hassan II University, Morocco

Nihal MESMOUDI
Laboratory of Venoms and Toxins, Pasteur Institute of Morocco, Morocco
Laboratory of Odontological Biomaterials and Nanotechnology, Faculty of Dental Medicine, Mohammed V University in Rabat, Morocco

Khawla AMMOUCH
Laboratory of Venoms and Toxins, Pasteur Institute of Morocco, Morocco
Laboratory of Odontological Biomaterials and Nanotechnology, Faculty of Dental Medicine, Mohammed V University in Rabat, Morocco

Abdellah MOUSTAGHFIR
Laboratory of Odontological Biomaterials and Nanotechnology, Faculty of Dental Medicine, Mohammed V University in Rabat, Morocco

Hanane ENNAJI
Laboratory of Chemistry–Biochemistry, Environment, Nutrition and Health, Faculty of Medicine and Pharmacy of Casablanca, Hassan II University, Morocco

Samir IBENMOUSSA
Laboratory of Chemistry–Biochemistry, Environment, Nutrition and Health, Faculty of Medicine and Pharmacy of Casablanca, Hassan II University, Morocco

Naoual OUKKACHE
Laboratory of Venoms and Toxins, Pasteur Institute of Morocco, Morocco

ABSTRACT

Within the diverse ophidian fauna of Morocco, eight venomous snake species have been identified, including one cobra and seven species belonging to the family Viperidae, which together account for approximately 80% of viperid envenomation cases. Among these, the horned viper *Cerastes cerastes* (Cc) is considered one of the most dangerous species and is implicated in the majority of envenomation cases reported by the Moroccan Poison Control and Pharmacovigilance Center (CAPM).

Bites from *Cerastes cerastes* induce polymorphic clinical manifestations, involving both local and systemic effects, such as local or locoregional edema, dermonecrosis, myotoxicity, and hemorrhagic diathesis, frequently associated with defibrinogenation and thrombocytopenia.

Current clinical management of viperid envenomation relies on a constellation of clinico-biological manifestations grouped under a single clinical syndrome, commonly referred to as “viper envenomation,” without distinguishing the species-specific clinical presentations. However, effective treatment of viperid envenomation requires a comprehensive toxicological and biological characterization of venoms from each species.

In this context, we investigated the lethality as well as the hemorrhagic, edematous, and myotoxic activities of *Cerastes cerastes* venom. Our findings indicate that the intraperitoneal median lethal dose (LD_{50}) of Cc venom is 36.30 µg/kg.

Furthermore, the minimum hemorrhagic dose (MHD) and minimum edematogenic dose (MED) were determined to be 0.35 µg/mouse and 1.74 µg/mouse, respectively. *Cerastes cerastes* venom also induced skeletal muscle myonecrosis, as evidenced by a significant increase in serum creatine phosphokinase (CPK) levels.

The LD_{50} values and the associated pathophysiological data obtained in this study provide essential reference parameters for the development and optimization of species-specific antivenoms, aimed at improving the management of envenomation caused by these highly dangerous snakes in Morocco.

Keywords: Viper; envenomation; in vivo toxicity; hemorrhage; edema; pathophysiology

ETHNOMYCOLOGICAL SURVEY OF *CANTHARELLUS CIBARIUS* IN THE MAAMORA FOREST (MOROCCO)

Anas FELLAKI
Laboratory of Natural Resources and Sustainable Development, Faculty of Sciences, Ibn Tofail University, Morocco
ORCID: 0009-0009-3191-2970

Mohamed ABOUROUH
Laboratory of Natural Resources and Sustainable Development, Faculty of Sciences, Ibn Tofail University, Morocco

Houda ELYACOUBI
Laboratory of Natural Resources and Sustainable Development, Faculty of Sciences, Ibn Tofail University, Morocco

Asmaa ELYAMANI
Laboratory of Natural Resources and Sustainable Development, Faculty of Sciences, Ibn Tofail University, Morocco

Atmane ROCHDI
Laboratory of Natural Resources and Sustainable Development, Faculty of Sciences, Ibn Tofail University, Morocco

ABSTRACT
Cantharellus cibarius (the chanterelle, also known as the common chanterelle) is one of the most well-known and highly sought-after wild edible mushrooms worldwide.
Beyond its gastronomic value (fruity aroma, firm texture, and high commercial worth), *Cantharellus cibarius* has also attracted scientific interest due to its nutritional richness and bioactive compounds.
The Maâmora Forest remains one of the regions where the traditional use of chanterelles is still preserved, offering a unique opportunity to explore these cultural practices. The present study aims to document the diverse and still insufficiently known traditional uses of *Cantharellus ciba*rius in this area.
Our ethnomycological survey, conducted using semi-structured questionnaires, showed that the golden chanterelle is most often consumed fresh and incorporated into various traditional dishes, particularly tagine and soup. Beyond its culinary value, this chanterelle is also used for medicinal purposes, especially to strengthen the immune system, with potential anti-cancer effects, and to help relieve cold symptoms.
The analysis showed that local communities consider the chanterelle not only a valuable source of income, but also an important resource for its nutritional value and therapeutic properties. Moreover, the study identified preparation and use practices that had not been reported in previous research. These findings help preserve local traditional knowledgewhile providing a solid foundation for future studies in nutrition, pharmacology, and biodiversity conservation.
Keywords: *Cantharellus cibarius* , anti-cancer, anti-cold, Maâmora Forest.

BIOTECHNOLOGICAL AND TOXICOLOGICAL CHARACTERIZATION OF CERASTES CERASTES VENOM: IMPLICATIONS FOR DIAGNOSIS AND THERAPEUTIC MANAGEMENT

Nihal MESMOUDI
Laboratory of Odontological Biomaterials and Nanotechnology, Faculty of Dental Medicine, Mohammed V University in Rabat, Morocco
Venoms and Toxins Laboratory, Institut Pasteur of Morocco, Morocco
ORCID: 0009-0004-7623-7204

Khawla AMMOUCH
Laboratory of Odontological Biomaterials and Nanotechnology, Faculty of Dental Medicine, Mohammed V University in Rabat, Morocco
Venoms and Toxins Laboratory, Institut Pasteur of Morocco, Morocco

Noureddine HAMMANI
Venoms and Toxins Laboratory, Institut Pasteur of Morocco, Morocco
Laboratory of Chemistry–Biochemistry, Environment, Nutrition and Health, Faculty of Medicine and Pharmacy of Casablanca, Hassan II University, Morocco

Samir IBENMOUSSA
Laboratory of Chemistry–Biochemistry, Environment, Nutrition and Health, Faculty of Medicine and Pharmacy of Casablanca, Hassan II University, Morocco

Abdellah MOUSTAGHFIR
Laboratory of Odontological Biomaterials and Nanotechnology, Faculty of Dental Medicine, Mohammed V University in Rabat, Morocco

Naoual OUKKACHE
Venoms and Toxins Laboratory, Institut Pasteur of Morocco, Morocco

ABSTRACT
The venom of Cerastes cerastes, a viper species native to North Africa, represents a natural source of bioactive compounds with significant biotechnological and medical potential. Despite its clinical importance, local data on its toxicological variability remain limited. This study aimed to characterize the toxicological and histopathological effects of C. cerastes venom to enhance diagnostic accuracy and therapeutic management of envenomation.Venom samples were collected from high-risk regions in Morocco. Protein content was quantified and analyzed using SDS-PAGE electrophoresis. Toxicity was evaluated by determining the LD_{50} in Swiss mice through intravenous (IV) and intraperitoneal (IP) administration, and histopathological analyses were performed on affected organs. Electrophoretic analysis revealed a complex protein composition containing both low- and high-molecular-weight components. The LD_{50} results showed higher toxicity via the IV route, suggesting slower absorption of larger molecules through the IP route. Histopathological findings indicated extensive hemorrhagic and necrotic lesions in visceral tissues, confirming the venom's potent hemorrhagic activity. These results provide valuable insights into the toxicological profile of Cerastes cerastes and demonstrate the relevance of integrating biotechnological and toxicological approaches to better understand venom mechanisms and support the development of effective therapeutic strategies against envenomation.
Keywords: Cerastes cerastes, venom, biotechnology, LD_{50}, electrophoresis, toxicity, histopathology, hemorrhage

NANO ENGINEERED FOOD PACKING MATERIAL TO INCREASE SHELF LIFE AND PROTECT FROM FOOD PATHOGENS

Kovendan M
School of Life Sciences, B.S. Abdur Rahman Crescent Institute of Science and Technology, India

Ranjani S
School of Life Sciences, B.S. Abdur Rahman Crescent Institute of Science and Technology, India

S. HEMALATHA
School of Life Sciences, B.S. Abdur Rahman Crescent Institute of Science and Technology, India

ABSTRACT
Pathogenic attack and extension of shelf life of agricultural produce are global challenges in crop protection and post-harvest management. Pathogenic attacks significantly affect crop health which leads to dwarfing, leaf abscission and yield loss. Conventional preservation and plant protection techniques often rely on chemical treatments which raise environmental and health risks. This study addresses this issue and focusses on developing a sustainable Nano-engineered treatment aiming for inhibiting these pathogenic microorganisms and enhancing the quality of crops. The core innovation is to synthesize a silver nanoparticles using young neem leaves (*Azadirachta indica*) which is well-known for its antimicrobial properties and the bioactive phytochemicals present acts as safe and eco-friendly reducing agents of AgNPs. Encapsulation of AgNPs into nanoemulsion enhances its stability, bioavailability, dispersion and antibacterial activity. The synthesized green nanoparticals (AIAgNPs) and nanoemulsion (AIAgNE) were characterized using UV-Vis spectroscopy, Dynamic Light Scattering (DLS), zeta potential, Fourier Transform Infrared Spectroscopy (FTIR), and X-ray Diffraction (XRD) analysis. Antibacterial efficacy of synthesized AIAgNPs and AIAgNE IN two pathogenic strains of *Pseudomonas aeruginosa* (SES4 & SES5) were evaluated by MIC, MBC and Anti-biofilm formation assay. The antibacterial activity of synthesized AIAgNPs and AIAgNE with *Pseudomonas Aeruginosa* were tested at different time intervals, AIAgNPs reduced bacterial growth to 28% (SES4) and 15% (SES5), while AIAgNE showed strong inhibition with 10% (SES4) and 12% (SES5). Thus, AIAgNE demonstrated the most effective antibacterial anti-biofilm activity compared to AIAgNPs. The study proves that the synthesized green silver nanoparticles using *Azadirachta indica* is effective in controlling the plant pathogens.
Keywords: Green synthesis, *Pseudomonas Aeruginosa, Azadirachta indica,* Preservation

UNLOCKING STRESS TOLERANCE IN LEGUMES THROUGH THERMO- AND HORMONAL SEED PRIMING

Dr. Fahima NABI
Laboratory of Biotechnology and Valorization of Biological Resources, Faculty of Sciences, Department of Natural and Life Sciences, Dr Yahia Farès University of Médéa, Algeria
ORCID: 0000-0002-9046-6546

Meriem CHEBAANI
Department of Natural Sciences, École Normale Supérieure Cheikh Mohamed El-Bachir El-Ibrahimi (Kouba), Laboratory of Biotechnology and Valorization of Biological Resources, Faculty of Sciences, Algeria

ABSTRACT
This study investigates the effects of water stress and seed priming on the germination and early growth of *Lens culinaris*, *Cicer arietinum*, and *Vigna unguiculata*. Seeds were subjected to various priming treatments: hormonal priming with acetic acid at different concentrations (10 mM, 20 mM, 50 mM) and thermopriming at 5°C for 4 hours, alongside an unprimed control. Germination was conducted in Petri dishes under different levels of water stress induced by PEG 6000 (5%, 10%, 15%, 20%) and distilled water as a control for 7 days. Results revealed that high water stress (20% PEG 6000) significantly reduced germination and early growth parameters. Among the tested species, *Vigna unguiculata* displayed the highest tolerance to water stress, followed by *Cicer arietinum*. Seed priming notably improved germination rates, seedling vigor, and growth parameters under both normal and water-stressed conditions. Thermopriming and acetic acid priming at 10 mM were the most effective treatments.
Keywords: *Lens culinaris*, *Vigna unguiculata*, *Cicer arietinum*, water stress, PEG 6000, acetic acid, thermopriming, seed priming

CRYSTAL VIOLET DYE DEGRADATION USING MONOCULTURE AND BLENDED CULTURE BACTERIA ISOLATED FROM POULTRY FAECES

Faisal AHMED
Department of Biotechnology and Genetic Engineering, Noakhali Science and Technology University, Bangladesh

Johirul ISLAM
Department of Biotechnology and Genetic Engineering, Noakhali Science and Technology University, Bangladesh

Tasmia Jahin MIM
Department of Biotechnology, BRAC University, Bangladesh

Iftakhar AHMAD
Department of Zoology, Comilla Victoria Government College, National University of Bangladesh, Bangladesh

ABSTRACT
Bangladesh's tannery and textile industries are heavily dependent on drying and dyeing processes, where modern mechanical methods have largely replaced traditional sun drying to improve efficiency and maintain quality. Despite their economic importance, these industries discharge large volumes of untreated effluents into rivers, with nearly 80% of wastewater released without treatment. Synthetic dyes such as crystal violet, widely used for their vivid colors, are resistant to biodegradation and contribute significantly to water pollution, equivalent to nearly 6% of the nation's GDP. Sustainable treatment approaches, including the use of microorganisms, wetlands, and biofilters, are being explored to address these challenges.

This study investigated the biodegradation of crystal violet by bacteria isolated from poultry samples and textile effluents. DNA was extracted using the boiling method, and PCR amplification of the 16S rRNA gene with primers 27F and 1492R confirmed the presence of *Enterobacter hormaechei*, *Escherichia coli*, and *Klebsiella pneumoniae*. Decolourization assays demonstrated high degradation efficiencies, with *E. hormaechei* achieving 86–93.7%, *E. coli* 95.25–99.5%, and *K. pneumoniae* 90.2–95.5% within 24 hours. Synergistic bacterial combinations further enhanced degradation rates, highlighting the benefits of microbial consortia. Notably, poultry-derived isolates exhibited superior decolourization (98% within 24 hours) compared to textile waste isolates (81% within 72 hours). These findings indicate that microbial bioremediation offers a promising, eco-friendly approach for managing dye pollution in Bangladesh's textile sector.

Keywords: Textile dye, crystal violet, Consortium, Biodegradation, Decolourization.

DIFFERENT ENTROPIES ESTIMATION FOR A ONE-PARAMETER ENTROPY TRANSFORMED EXPONENTIAL DISTRIBUTION WITH APPLICATION TO WEIGHT OF INFANTS AT DELIVERY

H. A. TUGGA
Department of Statistics, Federal University Wukari, Nigeria

I. J. DAVID
Department of Statistics, Federal University Wukari, Nigeria

O. D. ADUBISI
Department of Statistics, Federal University Wukari, Nigeria

ABSTRACT
Given the increasing application of entropy in evaluating uncertainty and variability in real-life data, especially in health sciences, this research emphasizes the modeling of infant weight at delivery as a critical neonatal health indicator. This study investigates the estimation and comparative performance of four different entropy measures such as Renyi, Havrda-Charvat, Kapur, and Mathai-Haubold under the one-parameter entropy-transformed exponential (1-PETE) distribution. Through analytical derivation and simulation techniques, each entropy measure were estimated and assessed using bias, mean squared error (MSE), and root mean squared error (RMSE) across varying sample sizes. Results from the simulation revealed that Havrda-Charvat and Renyi entropy measures exhibit superior accuracy, consistency, and convergence toward true entropy values, making them robust measures under the 1-PETE distribution. In contrast, the Kapur measure of entropy heighted poor sensitivity to increasing sample size. So also Mathai-Haubold entropy performed poorly, by underestimating the entropy with high MSE and RMSE values. Application of these measures to real-life data on 1,068 infant weights at delivery further validated the simulation findings. The study contributes to the growing literature of entropy-based modeling by identifying suitable estimators for health data and highlighting the practical limitations of certain entropy measures within transformed exponential distribution.
Keywords: Entropy, Entropy Measure, and 1-PETE distribution

UNDERSTANDING THE EXPECTATIONS OF THE SCIENTIFIC RESEARCH AND TECHNOLOGICAL DEVELOPMENT LABORATORY AT THE UNIVERSITY

Dr. RAHMOUNI Hanane
University of Oran 2 Mohamed Ben Ahmed, Faculty of economic, commerce and management,
Department of commerce, Oran-Algeria
ORCID ID: 0009-0003-1052-6188

ABSTRACT

At the university, the research laboratory receives funding from several sources, the primary source being the government.

The government prioritizes scientific research and technological development by providing funding for the acquisition of advanced technological and industrial research equipment.

Our goal is to truly understand this acquisition: is this equipment being implemented to guarantee and meet the expectations of students and doctoral candidates? Or is it being implemented to meet environmental, social, and economic expectations?

To address this concern, it is necessary to understand the mission and role of the research laboratory within the university.

The university research laboratory plays several roles within the university. Our goal is to foster closer ties between the laboratory and industry in order to provide services that ensure the profitability and efficiency of major research equipment. Operating major research equipment guarantees revenue for the laboratory and the university, while also ensuring the laboratory's continued operation and autonomy.

We begin by offering rigorous monitoring from the moment heavy equipment is installed in the research laboratory.

This monitoring allows us to understand the constraints, obstacles, and expectations of the research organization.

This monitoring also establishes a direct link between the university research laboratory and other research organizations to define the presence of the equipment within the university and to ensure technological and industrial visibility.

It is essential to implement rigorous monitoring for the laboratory, especially regarding the acquisition of major and occasional equipment, to guarantee profitability, efficiency, and revenue for the research laboratory and the university. Understanding the laboratory's expectations can only be achieved through monitoring by the bodies that fund this research organization.

Monitoring enables the achievement of objectives and also helps to understand the obstacles and constraints of the laboratory, which implies addressing any problems and concerns encountered. High-level oversight of the laboratory is one of the key conditions for understanding the expectations of the scientific research and technological development laboratory.

Keywords: university, research laboratory, monitoring, heavy equipment, profitability

FINANCIAL INTERMEDIATION, MULTILATERAL INSTITUTIONS, AND CROSS-BORDER CAPITAL FLOWS IN EMERGING MARKETS: EVIDENCE FROM STRUCTURED FINANCING MECHANISMS

Yusuf Ahmed TIJJANI
Department of Business Administration, Faculty of Management Sciences, Ahmadu Bello University, Nigeria
ORCID: 0000-0003-3424-7610

Abubakar BALA
WoodHall Capital International, Nigeria

ABSTRACT
This study investigates the intricate interplay between financial intermediation, multilateral institutions, and cross-border capital flows in emerging markets (EMs), with a particular emphasis on the role of structured financing mechanisms in promoting sustainable capital inflows. Emerging markets have deepened their integration into global financial systems, yet they persistently encounter barriers such as volatile and procyclical capital flows, information asymmetries, currency risks, and regulatory obstacles that discourage foreign investors. These issues often intensify economic vulnerabilities during global disruptions, as seen in the 2008 financial crisis and the COVID-19 pandemic. Anchored in financial intermediation theory which emphasizes intermediaries' function in lowering transaction costs and mitigating adverse selection and institutional economics, which stresses the value of trustworthy institutions in building investor confidence, this research constructs a robust theoretical framework. The study propose that multilateral development banks (MDBs), including the World Bank, International Finance Corporation (IFC), and regional counterparts, serve as key enablers by boosting cross-border capital inflows via risk-reducing structured finance instruments. These include syndicated loans, asset-backed securities (ABS), receivable securitization, and project finance arrangements, which facilitate risk tranching, segmentation, and diversification, rendering EM investments more viable for private capital. Empirically, the analyze a panel dataset covering 150 emerging market economies from 2010 to 2024, drawn from sources like the World Bank's Global Financial Development Database, IMF International Financial Statistics, and Dialogic for structured transaction data. The methodology applies Partial Least Squares Structural Equation Modeling (PLS-SEM) using Smart-PLS 4, a variance-based technique well-suited for complex, exploratory models involving latent constructs and non-normal distributions prevalent in finance studies. The model features latent variables: multilateral involvement (lending, guarantees, co-financing), structured financing mechanisms (deal volumes and complexity), financial intermediation efficiency (credit ratios, non-bank depth), and cross-border capital flows (net inflows as % GDP, encompassing FDI, portfolio, and debt). Findings show strong positive effects: multilateral engagement predicts structured financing adoption (path coefficient 0.68, $p < 0.01$), mediating capital flows (indirect effect 0.31, $p < 0.01$). Intermediation efficiency moderates positively (coefficient 0.22, $p < 0.05$). Validates coefficients (0.45–0.68, $p < 0.01$), with $R^2 = 0.62$ for flows and $Q^2 = 0.48$ for prediction. The study advances literature by offering integrated empirical insights into how structured tools address asymmetries and hurdles in EMs, using sophisticated PLS-SEM. Policy implications advocate stronger MDB-private collaborations, local currency structures, and intermediation enhancements for stable capital, supporting UN Sustainable Development Goals and resilient infrastructure.

Keywords: Financial intermediation, multilateral institutions, cross-border capital flows, emerging markets, structured financing, PLS-SEM.

GOVERNANCE, RISK STRUCTURING, AND ACCESS TO INTERNATIONAL CAPITAL: THE ROLE OF ADVISORY INTERMEDIARIES IN EMERGING ECONOMIES: EVIDENCE FROM STRUCTURED FINANCING MECHANISMS

Yusuf Ahmed TIJJANI
Department of Business Administration, Faculty of Management Sciences, Ahmadu Bello University, Nigeria
ORCID: 0000-0003-3424-7610

Abubakar BALA
WoodHall Capital International, Nigeria

ABSTRACT
This study investigates the complex interplay among governance mechanisms, risk structuring strategies, and access to international capital in emerging economies, emphasizing the critical mediating role of advisory intermediaries in structured financing mechanisms such as securitization, project finance, and asset-backed securities. Grounded in institutional theory and financial intermediation literature, the research develops a conceptual framework that positions advisory intermediaries including investment banks, consultants, and legal experts as essential actors in alleviating information asymmetries, reducing transaction costs, and bridging institutional voids prevalent in volatile emerging markets. These intermediaries facilitate risk allocation, enhance investor confidence, and enable the transformation of illiquid assets into attractive investment opportunities for global capital providers. Employing Partial Least Squares Structural Equation Modeling (PLS-SEM) through Smart-PLS 4 software, the analysis draws on primary survey data from 250 respondents, including financial managers, advisory professionals, and corporate executives operating in key emerging markets such as Brazil, India, and South Africa (with comparative insights from select developed contexts like the UK). The empirical findings demonstrate robust positive direct effects of governance quality and effective risk structuring on access to international capital, with advisory intermediaries partially mediating these relationships. This mediation underscores how intermediaries leverage expertise in regulatory navigation and deal structuring to amplify the benefits of strong governance and innovative risk mitigation tools. The results highlight the vital contribution of well-developed advisory ecosystems to economic resilience, particularly in contexts marked by institutional weaknesses and external shocks. By fostering greater capital inflows, these mechanisms support sustainable development and financial stability in emerging economies. Policy implications include incentives for building advisory capacity and regulatory reforms to strengthen intermediation. Practitioners are encouraged to prioritize intermediary partnerships for optimized structured finance deals. Limitations, such as reliance on cross-sectional self-reported data and a focused geographic scope, suggest opportunities for future longitudinal or comparative research.
Keywords: Governance, Risk Structuring, International Capital Access, Advisory Intermediaries, Emerging Economies, Structured Financing, PLS-SEM.

INTEGRATING RISK MANAGEMENT PRACTICES FOR ENHANCING ENVIRONMENTAL SUSTAINABILITY IN NIGERIAN MANUFACTURING INDUSTRIES: AN EMPIRICAL STUDY

Yusuf Ahmed TIJJANI
Department of Business Administration, Faculty of Management Sciences, Ahmadu Bello University, Nigeria
ORCID: 0000-0003-3424-7610

Iliyasu Garba YUNUSA
Department of Environmental Management, Kaduna State University, Nigeria

ABSTRACT
This study investigates the interplay between risk management practices and environmental sustainability within the Nigerian manufacturing sector, a critical area given the country's ongoing challenges with environmental degradation, resource depletion, and industrial pollution. Nigeria, as Africa's largest economy, faces significant risks from climate change, regulatory non-compliance, and operational hazards that undermine sustainable development goals. Drawing on a sample of 350 respondents from manufacturing firms across major industrial hubs like Lagos, Kano, and Port Harcourt, this research employs Structural Equation Modeling (SEM) via Smart-PLS 4 to examine the relationships between key variables. The dependent variable (DV) is Environmental Sustainability (ES), measured through indicators such as waste reduction efficiency, energy conservation practices, emission control adherence, and biodiversity preservation efforts. The independent variables (IVs) include Risk Identification (RI), Risk Assessment (RA), Risk Mitigation (RM), and Risk Monitoring (RMo), each operationalized with multi-item scales adapted from established literature. Hypotheses posit that effective risk management directly enhances ES by enabling proactive strategies against environmental threats. Data were collected via a structured questionnaire distributed online and in-person, achieving a response rate of 78%. Smart-PLS 4 analysis revealed strong model fit (SRMR = 0.042, NFI = 0.912), with RI ($\beta = 0.28$, $p < 0.01$), RA ($\beta = 0.32$, $p < 0.001$), RM ($\beta = 0.41$, $p < 0.001$), and RMo ($\beta = 0.25$, $p < 0.05$) all positively influencing ES. The model explained 68% of variance in ES ($R^2 = 0.68$). Bootstrapping (5,000 samples) confirmed path significance, highlighting RM as the strongest predictor. Findings underscore the need for integrated risk frameworks in Nigerian industries to foster sustainability, aligning with global standards like ISO 31000 and UN SDGs. Implications include policy recommendations for mandatory risk audits and training programs. Limitations involve self-reported data and sectoral focus; future research could explore cross-industry comparisons or longitudinal effects. This study contributes to the discourse on sustainable risk management in developing economies, emphasizing empirical evidence from an underrepresented context.
Keywords: Risk Management, Environmental Sustainability, Nigerian Manufacturing, Smart-PLS, Structural Equation Modeling (SEM), Sustainable Development Goals (SDGs)

AN APPRAISAL OF SUCCESSION PLANNING IN FAMILY-OWNED BUSINESSES IN NIGERIA: EMPIRICAL EVIDENCE FROM SELECTED SMEs IN LAGOS STATE, NIGERIA

Dr. Chukwuemeka G. EME (PhD)
Department of Business Administration, Faculty of Management Sciences, National Open University of Nigeria, Nigeria

ABSTRACT
Family-owned businesses in Nigeria and other nations of the world play important roles in economic growth and development some of which include creation of employment opportunities, maintenance of competition, stimulation of indigenous entrepreneurship, wealth creation, innovations and creativity, foreign exchange earnings, mobilization of savings, and contribution to the GDP. Despite these vital roles, family-owned enterprises in Nigeria are faced with the problem of succession as about 95% of family businesses do not survive the third generation of ownership. Hence, this study conducted an assessment of succession planning in family-owned businesses in Nigeria drawing empirical evidence from some selected SMEs in Lagos State. Management succession planning in family-owned businesses in Nigeria were studied to determine how family-owned businesses manage succession and continuity of family-owned businesses in Nigeria, with the aim of identifying the factors preventing smooth succession in family-owned enterprises. Data were elicited from questionnaire administered. The study adopted purposive research design, the population of the study was (3,500) and sample size studied was 350 business owners/manager, using a simple random sampling of 10% of total population. Data were analysed using descriptive statistics. The hypotheses were tested with multiple regressions. The findings revealed that the lack of succession plan is not the significant factor responsible for the problem of succession despite the fact that most family enterprises lack succession plan. There are other factors responsible for the problem of poor succession in family-owned businesses in Nigeria
Keywords: Owner-entrepreneur, Succession planning, Family-owned business, Successor, Lagos, Nigeria

IMPACT OF EMPLOYEE MOTIVATION ON THE PERFORMANCE OF MANUFACTURING FIRMS IN LAGOS STATE, NIGERIA

Dr. Chukwuemeka G. EME (PhD)
Department of Business Administration, Faculty of Management Sciences, National Open University of Nigeria, Nigeria

ABSTRACT
The main objective of this study was to identify the motivators influencing the work of employees and to assess the impact of the level of employee motivation on the results obtained by manufacturing firms based in Lagos State, Nigeria. Employees of selected manufacturing firms in Lagos State were selected to carry out the research process. The research was conducted based on the descriptive survey method, while the research tool was survey questionnaires, constructed from closed-ended questions. Google surveys were conducted anonymously. The survey was made available through Google Forms. In addition, a pilot face-to-face interview was conducted among the selected survey participants, which allowed the pre-prepared survey to be detailed. The adoption of these research techniques allowed the collection of statistical (quantitative, economic data), and qualitative (perceptions, value judgements, evaluations, opinions, awareness of facts) materials. The research confirmed that, in addition to financial motivators, high levels of employee motivation are also influenced by job stability, independence, the opportunity to be creative and a friendly atmosphere in the workplace. The research also confirmed that highly motivated employees show higher work efficiency and care more about the quality of their products or services, which positively strengthens the organization's credibility and position as a stable employer. The study concludes there exists some relationship between the level of employee motivation and its impact on organizational performance.
Keywords: Management, human resource management, employee motivation, organizational performance, manufacturing firms, Lagos State, Nigeria

THE ROLE OF HUMAN CAPITAL DEVELOPMENT IN THE NIGERIAN PUBLIC AND PRIVATE SECTORS: INSIGHT FROM SELECTED MANUFACTURING FIRMS

Dr. Chukwuemeka G. EME (PhD)
Department of Business Administration, Faculty of Management Sciences, National Open University of Nigeria, Nigeria

ABSTRACT
Human capital plays a critical role in economic growth and poverty reduction. This study examined the role of human capital development in the Nigerian public and private sector- enterprises with particular reference to selected manufacturing firms. This aim is achieved with respect to measures of human capital development (Talent Development TD; Training & Development-T&D; Knowledge Management-KM; and Career Development-CD on Organizational Performance ((ORGP) and responses from the respondents were collected with the aid of five (5) Likert-scale questionnaire. Survey research design was adopted for this study and the simple random sampling is a method used to cull a smaller sample size from a larger population of the study. A total of ninety-nine (99) questionnaires were administered to the eleven (11) selected manufacturing firms in Lagos State, Nigeria. The questionnaire was analyzed with the aid of excel spreadsheet, the respondents profile was analyzed with manual simple percentage, the research questions was analyzed with the aid of descriptive statistics which comprises of the minimum, mean and standard deviation and correlation matrix. The hypotheses of the study were tested using the multiple regression statistical tools with the aid of SPSS version 23 as the basis of testing hypotheses. The findings revealed that there is significant negative relationship between Talent Development (TD), Training & Development (T&D), Knowledge Management (KM) and Career Development (CD) has a significant relationship with Organizational Performance (ORGP). The study concluded that, human capital development had a significant impact on the organizational performance of the manufacturing firms, thereby recommends that investment profile of the studied organizations being tied to the human development of experienced employees and creation of policies that encourages human capital development including formal education should be part of their strategic plans.
Keywords: Human Capital Development, Talent Management, Training & Development, Knowledge Management, Career Development and Organizational Performance

A NOTE ON NON-CHAIN RINGS

Asst. Prof. Merve BULUT YILGÖR

Altınbaş University, Faculty of Engineering and Architecture, Basic Sciences Department, İstanbul, Türkiye,
ORCİD: 0000-0001-6842-1109

ABSTRACT
In algebraic coding theory, considerable attention has been given to codes over finite rings, particularly over non-chain rings, due to their rich algebraic structures and potential applications. This study investigates the structural properties of non-chain finite rings and analyzes linear codes defined over these rings. By employing the Gray map, a correspondence between codes over finite rings and codes over finite fields is established. The main focus of this work is to derive a fundamental necessary and sufficient condition under which a linear code over a non-chain finite ring is an LCD (Linear Complementary Dual) code. The results demonstrate how the LCD property is preserved under the Gray map, providing an explicit criterion for identifying and constructing LCD codes over non-chain rings. These findings contribute to the theoretical development of algebraic coding theory and provide a systematic approach to constructing LCD codes with potential applications in communications and cryptography.
Keywords: Linear codes, finite rings, LCD codes

ZİNCİR OLMAYAN HALKALAR ÜZERİNE BİR NOT

ÖZET
Cebirsel kodlama teorisinde, sonlu halkalar üzerindeki kodlar özellikle son yıllarda önemli bir araştırma alanı hâline gelmiştir. Bu çalışmaların büyük bir kısmı, ideal yapıları zincir oluşturmayan non-chain sonlu halkalar üzerine yoğunlaşmaktadır. Bu çalışma, non-chain sonlu halkaların cebirsel yapısını ayrıntılı biçimde incelemekte ve bu halkalar üzerinde tanımlanan doğrusal kodların temel özelliklerini ele almaktadır. Özellikle, Gray dönüşümü kullanılarak halka üzerindeki kodlar ile sonlu alanlar üzerindeki kodlar arasındaki ilişki analiz edilmektedir. Çalışmanın ana amacı, non-chain sonlu halkalar üzerinde tanımlanan bir kodun LCD (Linear Complementary Dual) kod olabilmesi için gerekli ve yeterli koşulu ortaya koymaktır. Elde edilen sonuçlar, Gray map aracılığıyla LCD özelliğinin nasıl korunduğunu göstermekte ve bu tür halkalar üzerinde LCD kodların inşası için teorik bir çerçeve sunmaktadır. Bu yönüyle çalışma hem teorik hem de uygulamalı kodlama teorisine katkı sağlamaktadır.
Anahtar kelimeler: Lineer kodlar, sonlu halkalar, LCD kodlar

15th International
ZEUGMA CONGRESS ON SCIENTIFIC RESEARCH
(THE BOOK OF ABSTRACTS)
January 19-21, 2026 / Gaziantep, Türkiye
www.zeugmakongresi.org/

AN EXAMINATION OF PRIMARY SCHOOL MATHEMATICS TEXTBOOK ACTIVITIES IN TERMS OF CONNECTION TO DAILY LIFE

Dr. Öğr. Üyesi Emine GÖZEL
Kahramanmaraş Sütçü İmam Üniversitesi, Eğitim Fakültesi
ORCID: 0000-0002-1383-5264

ABSTRACT
The aim of this study is to examine of primary school mathematics textbooks activities in terms of connection to daily life. Document evaluation, of the qualitative research methods, is used in the study. The data of the study consists of primary school mathematic first and second grade textbooks, introduced in the education year 2025-2026, verified by the Ministry of National Education. The grades 1 and 2 of primary school mathematics were examined a total of 745 activities. The data analysis is analyzed content analysis. Activities were analyzed according to their content using Gainsburg's (2008) classification of their connection with daily life, categorized as "numerical operation, painting drawing, fill in the blank, matching, cut paste, game, marking, true false, digital". According to the results of the study, the activities in the examined textbooks were mostly related to daily life. When examined by grade, it was observed that mathematics textbooks for first grade level most frequent included activities in the "fill in the blank, painting drawing, digital" categories, while the least frequent were "matching, cut paste, true false". At the second grade level, it was observed that the most frequent activities were "fill in the blank, digital, game" category, while the least frequent were "cut paste, matching, true false". Furthermore, it was observed that the activities were primarily aimed at the practical reinforcement of the relevant learning outcomes, and that instructions were provided for students during the activities. Based on the results obtained, it is recommended that "matching, cut paste, marking and true false" activities in primary school mathematics textbooks be increased.
Keywords: Mathematic education, mathematic textbook, daily life connection, activity.

İLKOKUL MATEMATİK DERS KİTAPLARINDAKİ ETKİNLİKLERİN GÜNLÜK YAŞAMLA İLİŞKİLENDİRME AÇISINDAN İNCELENMESİ

ÖZET
Bu araştırmanın amacı, ilkokul matematik 1 ve 2. sınıf ders kitaplarındaki etkinliklerin günlük yaşamla ilişkilendirme açısından incelenmesidir. Araştırmada nitel araştırma yönteminden doküman incelemesi kullanılmıştır. Araştırmanın verilerini, Milli Eğitim Bakanlığı onaylı 2025-2026 eğitim-öğretim yılında uygulanan ilkokul matematik 1 ve 2. sınıf ders kitapları oluşturmuştur. İlkokul matematik 1 ve 2. sınıf ders kitaplarında toplam 745 etkinlik incelenmiştir. Verilerin analizi ise içerik analiz ile çözümlenmiştir. Etkinlikler içeriklerine göre Gainsburg'un (2008) günlük yaşam ile ilişkilendirme sınıflandırması esas alınarak "sayısal işlem, boyama-çizme, boşluk doldurma, eşleştirme, kes-yapıştır, oyun, işaretleme, doğru-yanlış, dijital' kategorileri kullanılarak analiz edilmiştir. Araştırmanın sonuçlarına göre incelenen ders kitaplarında etkinliklerin çoğunlukla günlük yaşamla ilişkilendirildiği ortaya çıkmıştır. Sınıflar özelinde bakıldığında, matematik ders kitaplarında 1. sınıf düzeyinde en fazla "boşluk doldurma, boyama-çizme, dijital" en az ise "eşleştirme, kes-yapıştır, doğru-yanlış" kategorilerinde etkinliklerin olduğu görülmüştür. 2. sınıf düzeyinde ise en fazla "boşluk doldurma, dijital, oyun" en az ise "kes-yapıştır, işaretleme, doğru-yanlış" kategorilerinde etkinliklerin olduğu görülmüştür. Ayrıca etkinliklerin ağırlıklı olarak ilgili öğrenme çıktılarının uygulamalı pekiştirilmesine yönelik olduğu, etkinliklerde öğrenciler için yönergeye yer verildiği görülmüştür. Elde edilen sonuçlar doğrultusunda, ilkokul matematik ders kitaplarında "eşleştirme, kes-yapıştır, işaretleme ve doğru-yanlış" etkinlik sayılarının artırılması önerilmiştir.
Anahtar kelimeler: Matematik eğitimi, matematik ders kitabı, günlük yaşamla ilişkilendirme, etkinlik.

ON THE ALGEBRAIC STRUCTURE OF INTEGER-VALUED POLYNOMIALS OVER DUAL NUMBERS

Asst. Prof. Neslihan Ayşen ÖZBAY
Çankaya University, Faculty of Arts and Sciences, Department of Mathematics, Ankara, Turkey,
ORCİD: ID/ 0000-0002-7403-8701

ABSTRACT
Dual numbers are a commutative extension of real numbers defined as $z = a + b\varepsilon$, where ε is a symbol with the property $\varepsilon^2 = 0$ (but $\varepsilon \neq 0$). Originally introduced by W.K. Clifford, and it has become very popular recently. Today, dual numbers are widely used in physics and engineering, especially in robotics, kinematics, and the geometry of motion.
The set of integer-valued polynomials over the integers is defined as $\mathrm{Int}(\mathbb{Z}) = \{f \in Q[x] \mid f(\mathbb{Z}) \subseteq \mathbb{Z}\}$. This set consists of polynomials with rational coefficients that have integer values over the integers and forms a ring. In this study, we construct the set of integer-valued polynomials over the ring of dual numbers, denoted as $\mathrm{Int}(\mathbb{Z}[\varepsilon])$, and investigate its algebraic properties. Since we extend the ring of integer-valued polynomials, $\mathrm{Int}(\mathbb{Z})$, to the ring of dual integers $\mathbb{Z}[\varepsilon]$, we need to provide some additional constraints. By using the Taylor expansion property $P(n + m\varepsilon) = P(n) + P'(n)m\varepsilon$, we demonstrate that for a polynomial $P(x) \in \mathbb{Q}[\varepsilon][x]$ to be $\mathbb{Z}[\varepsilon]$-valued (i.e., to satisfy $P(\mathbb{Z}[\varepsilon]) \subseteq \mathbb{Z}[\varepsilon]$), the real component of $P(x)$ and its derivative are required to be both integer-valued. In addition, the dual component is only needed to satisfy classical integer-valued polynomial conditions. We then prove that the set $\mathrm{Int}(\mathbb{Z}[\varepsilon])$ forms a commutative ring with identity and a module over $\mathbb{Z}[\varepsilon]$. Furthermore, we establish a basis for this ring and examine some of its ideal structure.
Keywords: Dual Numbers, Integer-Valued Polynomials, $\mathbb{Z}[\varepsilon]$-Module.

DUAL SAYILAR ÜZERİNDEKİ TAMSAYI DEĞERLİ POLİNOMLARIN CEBİRSEL YAPISI ÜZERİNE

ÖZET
Dual sayılar, $\varepsilon^2 = 0$ (fakat $\varepsilon \neq 0$) özelliğini sağlayan bir ε sembolü için, $z = a + b\varepsilon$ şeklinde tanımlanan, reel sayıların değişmeli özelliğe sahip bir genişlemesidir. İlk olarak W.K. Clifford tarafından ortaya atılan bu sayılar, son zamanlarda oldukça popüler hale gelmiştir. Günümüzde dual sayılar fizik ve mühendislikte, özellikle de robotik, kinematik ve hareket geometrisinde yaygın olarak kullanılmaktadır.
Tamsayılar üzerindeki tamsayı değerli polinomlar kümesi, $\mathrm{Int}(\mathbb{Z}) = \{f \in Q[x] \mid f(\mathbb{Z}) \subseteq \mathbb{Z}\}$ olarak tanımlanır. Bu küme, tamsayılar üzerinde tamsayı değerler alan rasyonel katsayılı polinomlardan oluşur ve bir halka yapısına sahiptir. Bu çalışmada, $\mathrm{Int}(\mathbb{Z}[\varepsilon])$ ile gösterilen dual sayılar halkası üzerindeki tamsayı değerli polinomlar kümesini inşa edeceğiz ve cebirsel özelliklerini inceleyeceğiz. Tamsayı değerli polinomlar halkası olan $\mathrm{Int}(\mathbb{Z})$ kümesini dual tamsayılar halkası $\mathbb{Z}[\varepsilon]$ kümesine genişlettiğimizden dolayı bazı ek kısıtlamalar sağlamamız gerekecektir. $P(n + m\varepsilon) = P(n) + P'(n)m\varepsilon$ Taylor açılımı özelliğini kullanarak; bir $P(x) \in \mathbb{Q}[\varepsilon][x]$ polinomunun $\mathbb{Z}[\varepsilon]$ değerli olması için (yani, $P(\mathbb{Z}[\varepsilon]) \subseteq \mathbb{Z}[\varepsilon]$ sağlaması için), $P(x)$'in hem reel bileşeninin hem de türevinin tamsayı değerli olması gerektiğini göstereceğiz. Buna ek olarak, dual bileşenin yalnızca klasik tamsayı değerli polinom koşullarını sağlaması gerektiğini göstereceğiz. Daha sonra, $\mathrm{Int}(\mathbb{Z}[\varepsilon])$ kümesinin birimli ve değişmeli bir halka ve aynı zamanda $\mathbb{Z}[\varepsilon]$ üzerinde bir modül oluşturduğunu ispatlayacağız. Ayrıca, bu halka için bir taban belirleyecek ve ideal yapısının bazı özelliklerini inceleyeceğiz.
Anahtar kelimeler: Dual Sayılar, Tamsayı Değerli Polinomlar, $\mathbb{Z}[\varepsilon]$-Modül

THE DUPLICATION OF ALMOST ARF NUMERICAL SEMIGROUPS WITH RF (ROW-FACTORIZATION) MATRICES

Prof. Dr. Belgin ÖZER
Gaziantep University, Faculty of Science, Department of Mathematics, Türkiye
ORCID: 0000-0002-0686-2774

Ayşe BUSTANİ EYİD
Gaziantep University, Faculty of Science, Department of Mathematics, Türkiye
ORCID: 0009-0006-5369-5637

ABSTRACT
Almost symmetric Arf numerical semigroups have attracted attention in recent years due to their rich structures and importance in commutative algebra. In this study, the fundamental properties of these semigroups are examined in detail. To clarify the behaviour of this class, several known properties are reviewed and organized within a single framework. Furthermore, a duplication structure for Almost symmetric Arf numerical semigroups is introduced. This structure preserves the fundamental properties of the original structure under certain conditions, enabling us to obtain larger semigroups from the given semigroups. Consequently, new examples of almost symmetric Arf numerical semigroups are generated. Finally, RF matrices and RF relations are applied to the obtained structures, their algebraic properties are analyzed, and the generating sets are characterized.
Keywords: Numerical semigroup, Arf, RF-matrices, Almost Symmetric, Duplication.

HEMEN HEMEN SİMETRİK ARF SAYISAL YARIGRUPLARININ ÇOĞALTMASININ RF-MATRİSLERİ İLE İNCELENMESİ

ÖZET
Hemen hemen simetrik Arf sayısal yarıgruplar, zengin yapıları ve değişmeli cebirdeki önemleri nedeniyle son yıllarda dikkat çekmiştir. Bu çalışmada, bu yarıgrupların temel özellikleri ayrıntılı olarak incelenmiştir. Bu sınıfın davranışını açıklığa kavuşturmak için, bilinen birkaç özellik gözden geçirilmiş ve tek bir çerçeve içinde düzenlenmiştir. Ayrıca, hemen hemen simetrik Arf sayısal yarıgruplar için bir çoğaltma yapısı tanıtılmaktadır. Bu yapı, belirli koşullar altında orijinal yapının temel özelliklerini korur ve verilen yarıgruplardan daha büyük yarıgruplar elde etmemizi sağlar. Sonuç olarak, hemen hemen simetrik Arf sayısal yarıgrupların yeni örnekleri üretilir. Son olarak, elde edilen yapılara RF matrisleri ve RF ilişkileri uygulanır, bunların cebirsel özellikleri analiz edilir ve üreten kümeler karakterize edilir.
Anahtar Kelimeler : Sayısal yarıgrup, Arf, RF-matrisleri, Hemen hemen simetrik, Çoğaltma.

INVESTIGATION OF THE EFFECTS OF RARE EARTH ELEMENT OXIDE ADDITION ON THE ARMORING PERFORMANCE OF AMORPHOUS MATERIALS

Cahide BOBİÇ
Eskisehir Osmangazi University, Institute of Science, Department of Physics, Türkiye
ORCID: 0009-0009-9771-0474

Assoc. Prof. Dr. Erkan İLİK
Eskisehir Osmangazi University, Faculty of Science, Department of Physics, Türkiye
ORCID: 0000-0003-2986-0015

ABSTRACT
Rare earth elements are called rare earth elements because, despite their relatively high abundance in nature, they are difficult and costly to separate economically. Today, these elements are increasingly important in high-tech applications, optoelectronic systems, energy, defense, and radiation shielding. Among rare earth elements, Europium occupies a special position due to its unique physical and chemical properties. The fact that it can be obtained more easily through recycling processes, offers a more environmentally sustainable option, and is a safer alternative to lead in terms of human health plays an important role in the preference for Europium. Within the scope of this study, tellurite glasses with a high %mol content of Europium were synthesized instead of the low-addition amorphous glass structures found in the literature. Eu_2O_3 was doped into the base tellurite glass structure at molar ratios of 1, 5, 10, 15, and 20%, respectively. It was determined that the density values of the glasses increased to 4.065-5.300 g/cm^3 with increasing Europium doping. Since this increase in density was thought to contribute to material-radiation interaction mechanisms, the changes in the mass attenuation coefficient, linear attenuation coefficient, mean free path, half-value thickness, and effective atomic number of the doped and undoped amorphous glasses were investigated theoretically. According to the findings, it was determined that high-energy photons in the 0.01-10 MeV energy range are absorbed and attenuated over a shorter distance within the material. This reveals that Europium-doped glasses offer a more environmentally friendly, safer, and sustainable alternative compared to traditional lead-based shielding materials. The synthesized Eu_2O_3-doped glasses are considered to be suitable for use as alternative materials in application areas such as medical and health technologies, radiation shielding, nuclear applications, space defense, and high-energy systems.
Keywords: Rare Earth Elements, Tellurite Glasses, Radiation Shielding, Eu_2O_3.

NADİR TOPRAK ELEMENT OKSİTİ KATKISININ AMORF YAPILI MALZEMELERİN ZIRHLAMA PERFORMANSI ÜZERİNE ETKİLERİNİN İNCELENMESİ

ÖZET
Nadir toprak elementleri, doğada bulunma oranlarının nispeten yüksek olmasına rağmen ekonomik olarak ayrıştırılmalarının zor ve maliyetli olması nedeniyle nadir toprak elementleri olarak adlandırılmaktadır. Günümüzde bu elementler; yüksek teknoloji uygulamaları, optoelektronik sistemler, enerji, savunma ve radyasyon zırhlama alanlarında artan bir öneme sahiptir. Nadir toprak elementleri arasında Evropiyum, sahip olduğu özgün fiziksel ve kimyasal özellikler nedeniyle özel bir konuma sahiptir. Özellikle geri kazanım süreçleriyle elde edilebilirliğinin daha kolay olması, çevresel açıdan daha sürdürülebilir bir seçenek sunması ve insan sağlığı açısından kurşuna kıyasla daha güvenli bir alternatif oluşturması Evropiyum'un tercih edilmesinde önemli rol oynamaktadır. Bu çalışma kapsamında literatürde yer alan düşük katkılı amorf cam yapıları yerine yüksek %mol oranında Evropiyum katkılı tellürit camlarının sentezi gerçekleştirilmiştir. Taban tellürit cam yapısına sırasıyla %1, 5, 10, 15, 20 mol oranında Eu_2O_3 katkılanmıştır. Evropiyum katkısının artmasıyla birlikte camların yoğunluk değerleri 4.065-5,300 g/cm$_3$ olarak artış gösterdiği belirlenmiştir.

Yoğunluktaki bu artışın malzeme-radyasyon etkileşim mekanizmalarına katkı sağlayabileceği düşünüldüğünden, katkısız ve katkılı amorf camların kütle zayıflatma katsayısı, doğrusal zayıflatma katsayısı, ortalama serbest yol, yarı-değer kalınlığı ile etkin atom numarasının değişimleri teorik açıdan incelenmiştir. Elde edilen bulgulara göre, 0,01-10 MeV enerji aralığındaki yüksek enerjili fotonların malzeme içerisinde daha kısa mesafede soğurulduğu ve zayıflatıldığı belirlenmiştir. Bu durum kurşun esaslı geleneksel zırhlama malzemelerine kıyasla, Evropiyum katkılı camların daha çevre dostu, daha güvenli ve sürdürülebilir bir alternatif sunduğunu ortaya koymaktadır. Sentezlenen Eu_2O_3 katkılı camların medikal ve sağlık teknolojileri, radyasyon zırhlama ve nükleer uygulamalar uzay savunma ve yüksek enerji sistemleri gibi uygulama alanlarında alternatif malzeme olarak kullanılabileceği düşünülmektedir.
Anahtar kelimeler: Nadir Toprak Elementleri, Tellürit Camlar, Radyasyon Zırhlama, Eu_2O_3.

MATHEMATICAL MODELING OF OPTICAL PHENOMENA IN PRIMARY SCHOOL: A PLANNED IMPLEMENTATION STUDY

Lect. Dr. Mehtap YALÇIN
Iğdır University, Vocational School of Health Services, Türkiye
ORCID: 0000-0002-2367-3908

Abidin YALÇIN
Karakoyunlu Şehit Polis Ali Asker Gonca Primary School, Ministry of National Education, Türkiye
ORCID: 0009-0007-3616-2844

ABSTRACT
This paper reports a full-text design of a planned classroom-based implementation study that uses elementary optical phenomena—reflection and refraction—as a mathematically measurable context for mathematical modelling in primary school mathematics. The intervention treats optical phenomena not as physics content, but as situations that naturally involve measurable quantities such as angles, direction and distance. The theoretical rationale is grounded in the mathematical foundations of geometrical optics, including Fermat's principle, optical path length, and paraxial linearisation that connects ray behaviour to angle relations and (approximate) linear mappings (Yalçın, 2025). The planned implementation spans four weeks (two class-hours per week) and targets modelling-related competencies: measurement accuracy, data organisation, representation (tables/diagrams), generalisation from data, and mathematical justification. A mixed-methods research design is proposed, combining pre/post performance tasks, a modelling rubric, and qualitative analysis of students' written explanations and artefacts. The paper details the instructional sequence, the assessment framework, and analysis plan in a form that is intended to be replicable by practitioners. The study is expected to contribute to early mathematical modelling by providing a measurement-driven pathway from empirical observation to generalisation and justification.
Keywords: mathematical modelling; primary school mathematics; measurement; reflection; refraction

İLKOKULDA OPTİK OLGULARIN MATEMATİKSEL MODELLEMESİ: PLANLANAN BİR UYGULAMA ARAŞTIRMASI

ÖZET
Bu tam metin bildiri, ilkokul matematik öğretiminde yansıma ve kırılma gibi temel optik olguların matematiksel modelleme bağlamı olarak kullanılmasına yönelik planlanan bir uygulama araştırmasının kuramsal gerekçesini ve uygulama tasarımını ayrıntılı biçimde sunmaktadır. Optik olgular bu çalışmada fen öğretiminin hedefi olarak değil; açı, doğrultu ve uzaklık gibi ölçülebilir büyüklükler üzerinden matematiksel düşünmeyi besleyen gerçek yaşam durumları olarak ele alınmaktadır. Kuramsal temel, geometrik optikte Fermat ilkesi, optik yol uzunluğu ve paraksiyal yaklaşımın sağladığı yaklaşık doğrusal ilişkiler bağlamında yapılandırılmıştır (Yalçın, 2025). Dört haftalık (haftada iki ders saati) planlanan uygulamada öğrencilerin ölçme doğruluğu, veri düzenleme/temsil, veriden genelleme üretme ve matematiksel gerekçelendirme becerilerini geliştirmesi hedeflenmektedir. Araştırma deseni karma yöntemli olup ön-test/son-test performans görevleri, modelleme rubriği ve öğrenci ürünlerine dayalı nitel analiz sürecini içermektedir. Bildiride öğretim akışı, ölçme araçları, rubrik boyutları, veri analizi ve etik hususlar açık biçimde verilerek uygulamanın tekrarlanabilirliği amaçlanmıştır.
Anahtar Kelimeler: matematiksel modelleme; ilkokul matematiği; ölçme; yansıma; kırılma

TRANSFORMER-BASED SENTIMENT ANALYSIS OF TURKISH E-COMMERCE REVIEWS

Kamilya KAMİRDİNOVA
Yıldız Technical University, Faculty of Arts and Sciences, Department of Mathematics, Istanbul, Türkiye
ORCID: ID/0009-0003-7132-386X

Sema AKIN BAS
Yıldız Technical University, Department of Mathematics,Istanbul, Türkiye,
ORCID: 0000-0002-9937-316X

ABSTRACT
This study addresses automatic sentiment analysis of Turkish user reviews using data collected from the e-commerce platform Hepsiburada. The objective is to develop and evaluate a binary classification approach for textual reviews (positive and negative) based on a transformer model adapted for Turkish-language texts. A dataset of 16,100 real user comments was compiled by automatically collecting reviews from product pages. Standard preprocessing steps were applied, including removal of invalid or duplicate entries, text cleaning, and formatting for model training. For sentiment classification, the BERTurk model was employed due to its pretraining on Turkish corpora and its ability to capture contextual dependencies characteristic of user-generated content. Model training and evaluation were performed on a balanced dataset to mitigate the effects of class imbalance on performance metrics. Experimental evaluation on a held-out test set demonstrated a classification accuracy of 91%, with precision, recall, and F1-score remaining comparable across both classes. These results indicate the model's suitability and its capacity to generalize to previously unseen reviews. The study also briefly outlines the software implementation for review analysis. Mechanisms such as asynchronous task execution and result caching were used to separate computational components from the user interface, simplifying processing and ensuring stable performance with growing data volumes. Overall, the findings confirm the effectiveness of transformer-based models for sentiment analysis of Turkish e-commerce reviews and demonstrate the reproducibility of the proposed approach within the defined task.
Keywords: Sentiment analysis, Natural language processing, Turkish language, Transformer models, BERTurk, E-commerce reviews

ÖZET
Bu çalışma, Hepsiburada e-ticaret platformundan toplanan veriler kullanılarak Türkçe yazılmış kullanıcı yorumlarının otomatik duygu analizi görevini ele almaktadır. Çalışmanın amacı, Türkçe metinleri işlemek için uyarlanmış bir transformer modeli temelinde metin yorumlarının (pozitif ve negatif) ikili sınıflandırmasını geliştirmek ve değerlendirmektir. Ürün sayfalarından otomatik olarak toplanan 16.100 gerçek kullanıcı yorumundan oluşan bir veri seti oluşturulmuştur. Veriler, geçersiz ve tekrar eden girdilerin çıkarılması, metin temizliği ve model eğitimi için uygun formata dönüştürülmesi gibi standart ön işleme adımlarından geçirilmiştir. Duygu sınıflandırması için, Türkçe dil korpusları üzerinde ön eğitim almış ve kullanıcı üretimi içeriklerin bağlamsal bağımlılıklarını yakalayabilen BERTurk modeli kullanılmıştır. Model eğitimi ve değerlendirmesi, sınıf dengesizliğinin performans metrikleri üzerindeki etkisini azaltmak için dengeli bir veri seti üzerinde gerçekleştirilmiştir. Ayrı bir test setinde yapılan deneysel değerlendirme, önerilen yaklaşımın %91 sınıflandırma doğruluğu sağladığını ve precision, recall ile F1-score değerlerinin her iki sınıf için de karşılaştırılabilir kaldığını göstermiştir. Bu sonuçlar, modelin uygunluğunu ve daha önce görülmemiş yorumlara genelleme yapabilme kapasitesini ortaya koymaktadır. Çalışmada ayrıca yorum analiz sürecinin yazılım uygulaması kapsamında organizasyonuna kısa bir şekilde değinilmiştir. Hesaplama bileşenleri ile kullanıcı arayüzü arasında ayrım sağlamak ve işlem verimliliğini artırmak için eşzamansız görev yürütme ve sonuç önbellekleme mekanizmaları uygulanmıştır. Bu sistem organizasyonu, metin işleme sürecini basitleştirmekte ve artan veri hacmiyle çalışırken istikrarlı performansı garanti etmektedir. Sonuç olarak, elde edilen bulgular, gerçek dünyadaki Türkçe e-ticaret yorumlarının duygu analizi için transformer tabanlı modellerin etkinliğini doğrulamakta ve önerilen yaklaşımın tanımlı görev kapsamında tekrarlanabilirliğini göstermektedir.
Anahtar kelimeler: Duygu analizi, Doğal dil işleme, Türkçe, Transformer modelleri, BERTurk, E-ticaret yorumları

IFM RECEIVER PROCESSOR MODULE DESIGN AND MANUFACTURE

Orkun KAYAM
Baskent University, Institute of Science, Department of Electrical and Electronics Engineering, Türkiye
ORCID: 0000-0002-2098-4241

Murat ÜÇÜNCÜ
Baskent University, Institute of Science, Department of Electrical and Electronics Engineering, Türkiye
ORCID: 0000-0002-2113-1398

ABSTRACT
Electronic Warfare (EW) has always been a hot topic for every country since the early 1900's. With the beginning of World War I, some of the ancestors of today's receiver and transmitter structures have begun to arise. At first, they were not eligible to mobile usage and they were used for experimental works in laboratories. As the war goes by, the need of threat detection and tracing of enemy forces has occurred. Consequently; aeronautical, naval and land vehicles and platforms began to be equipped with EW systems. By that point of time, engineers began to develop hardware with wider bandwidths and smaller physical dimensions. It has been observed that performance augmentation, reduction in size, power consumption optimization and cost balancing are a predicament for designers. In this study, compact, low cost and low power IFM receiver processor module has been designed and manufactured. ANSI VITA standard was mainly used in the design and fabrication of the product. The advantage of a VITA compliant module is that it can be mounted to other compliant systems. After the manufacturing and assembly processes, laboratory tests were held and performance of the hardware has been evaluated. The results are promising when the design prerequisites are considered. Even though the hardware meets the requirements, has a better performance and power consumption; there was a sacrifice in cost while designing the module to be ANSI VITA compliant. After all, this designed IFM processor module is compact, adaptable for different platforms and presented to the use of defence industry companies.
Keywords: Instantaneous Frequency Measurement, Mixed Signal PCB Design, Digital Communications

PREDICTION OF DAILY WIND ENERGY PRODUCTION USING MACHINE LEARNING MODELS

Asst. Prof. Onur KURT
Istanbul Technical University, Department of Electronics and Communication Engineering, Istanbul, Türkiye,
ORCID: 0000-0002-4486-2257

ABSTRACT
The increasing global energy demand, concerns about environmental sustainability, and the limited availability of fossil fuel resources have heightened the importance of renewable energy sources. Among these, wind energy has emerged as a prominent alternative due to its environmentally friendly nature, low operating costs, and long-term sustainability. This pilot study presents a machine learning-based framework for predicting daily mean wind energy production at the Çataltepe Wind Power Plant located in Istanbul, Türkiye. A three-year dataset (2022–2025) consisting of daily mean wind energy generation and corresponding meteorological variables was utilized to develop predictive regression models. Following data preprocessing, three supervised machine learning-based regression algorithms, Least Absolute Shrinkage and Selection Operator (Lasso), Random Forest (RF), and Extreme Gradient Boosting (XGBoost), were trained and evaluated using an 80 to 20 train-test split. Model performance was assessed using mean squared error (MSE), mean absolute error (MAE), root mean squared error (RMSE), and the coefficient of determination (R^2). The results indicate that all models achieve satisfactory predictive performance; however, XGBoost outperforms the others, yielding the lowest error metrics (MSE = 1.3438, MAE = 0.8810, RMSE = 1.1592) and the highest coefficient of determination (R2 = 0.8330). Visual comparisons of actual and predicted values further confirm the strong agreement between observations and model outputs. Overall, the findings demonstrate that ensemble learning approaches, particularly XGBoost, are highly effective for short-term wind energy forecasting and offer valuable support for improved grid management, energy planning, and renewable energy integration.
Keywords: Extreme Gradient Boosting (XGBoost), Least Absolute Shrinkage and Selection Operator (Lasso), Random Forest (RF), Supervised Machine Learning Regression, Wind Energy Prediction.

A META-LEARNING-BASED DECISION SUPPORT APPROACH FOR QUALITY ASSESSMENT IN PRESCHOOL EDUCATION

Asst. Prof. Mustafa Furkan KESKENLER
Atatürk University, Faculty of Engineering, Department of Artificial Intelligence and Data Engineering, Türkiye
ORCID: 0000-0002-7604-4179

Prof. Dr. Eyüp Fahri KESKENLER
Bayburt University, Faculty of Education, Department of Primary Education, Türkiye
ORCID: 0000-0002-6762-856X

ABSTRACT
Monitoring and evaluating classroom quality in preschool education is of critical importance for fostering learning environments that support children's cognitive, social, and emotional development. However, quality assessments are largely based on expert observations, which involve considerable time, cost, and human resource constraints. In this study, a meta-learning–based approach is proposed for predicting ordinal classroom quality ratings in preschool education. The study utilizes the Preschool Education Quality Assessment Dataset, an open-access dataset obtained from Kaggle, consisting of 1,383 observations. Three target variables—Overall Quality Rating, Teaching Quality Rating, and Classroom Engagement Rating—are considered as ordinal outcomes due to their inherent ordered structure.

To appropriately model the ordinal nature of the problem, an ordinal encoding scheme is applied to the target variables. The proposed framework employs a stacking-based meta-learning architecture in which the outputs of multiple base learners—Random Forest, Extra Trees, Logistic Regression, and Gradient Boosting—are combined through a meta-learner. Logistic Regression is used as the meta-learner, and cross-validation–based out-of-fold predictions are employed to mitigate overfitting and ensure robust generalization. Model performance is evaluated using Accuracy, Mean Absolute Error (MAE), and Quadratic Weighted Cohen's Kappa (QWK), the latter being particularly suitable for ordinal classification tasks.

Experimental results demonstrate that the proposed meta-learning approach achieves consistently high and balanced performance across all three quality dimensions. QWK values exceeding 0.80 indicate a strong ordinal agreement between predicted and actual ratings, while low MAE values suggest that most prediction errors are confined to adjacent classes. These findings confirm that the stacking-based meta-learning framework effectively captures the complex and multidimensional patterns underlying preschool classroom quality assessments.

In conclusion, this study shows that meta-learning–based stacking models provide a powerful and reliable solution for predicting ordinal quality ratings in preschool education. Rather than replacing expert observations, the proposed approach can serve as a complementary decision-support tool for quality monitoring, early warning, and targeted intervention planning. The results highlight the potential of data-driven methods to enhance quality assurance processes in early childhood education.

Keywords: Basic Education, Quality of Preschool Education, Education and Artificial Intelligence, Meta-Learning, Decision Support Systems.

OKUL ÖNCESİ EĞİTİMDE KALİTE DEĞERLENDİRMESİ İÇİN META-ÖĞRENME TABANLI BİR KARAR DESTEK YAKLAŞIMI

ÖZET
Okul öncesi eğitimde sınıf kalitesinin izlenmesi ve değerlendirilmesi, çocukların bilişsel, sosyal ve duygusal gelişimlerini destekleyen öğrenme ortamlarının oluşturulması açısından kritik öneme sahiptir.

Ancak kalite değerlendirmeleri çoğunlukla uzman gözlemlerine dayalı olup zaman, maliyet ve insan kaynağı açısından önemli sınırlılıklar barındırmaktadır. Bu çalışmada, okul öncesi eğitimde sınıf kalitesini yansıtan ordinal derecelendirmelerin tahmini için meta-öğrenme tabanlı bir yaklaşım önerilmektedir. Çalışmada Kaggle platformunda açık erişimle sunulan ve 1383 gözlemden oluşan Preschool Education Quality Assessment veri seti kullanılmıştır. Veri setinde yer alan Genel Kalite Değerlendirmesi (Overall Quality Rating), Öğretim Kalitesi Değerlendirmesi (Teaching Quality Rating) ve Sınıf İçi Katılım Değerlendirmesi (Classroom Engagement Rating) değişkenleri, doğal sıralamaya sahip ordinal hedefler olarak ele alınmıştır.

Önerilen yöntemde, problem yapısına uygun olacak şekilde ordinal kodlama uygulanmış ve farklı varsayımsal önyargılara sahip birden fazla temel öğrenicinin (Random Forest, Extra Trees, Logistic Regression ve Gradient Boosting) çıktıları, stacking tabanlı bir meta-öğrenme mimarisi ile birleştirilmiştir. Meta-öğrenici olarak Logistic Regression kullanılmış ve aşırı uyumu önlemek amacıyla çapraz doğrulama temelli out-of-fold tahminler üzerinden eğitim gerçekleştirilmiştir. Model performansı, doğruluk (Accuracy), ortalama mutlak hata (MAE) ve karesel ağırlıklı Cohen kappa (QWK) ölçütleri ile değerlendirilmiştir.

Deneysel sonuçlar, önerilen meta-öğrenme yaklaşımının üç kalite boyutu için de yüksek ve dengeli bir performans sunduğunu göstermektedir. Elde edilen QWK değerlerinin 0.80'in üzerinde olması, modelin ordinal sınıf yapısını yüksek düzeyde koruduğunu ve tahminlerin gerçek derecelendirmelerle güçlü bir uyum sergilediğini ortaya koymaktadır. Sonuç olarak, bu çalışma okul öncesi eğitimde kalite değerlendirmelerinin otomatik tahmininde meta-öğrenme tabanlı yaklaşımların etkili bir karar destek aracı olarak kullanılabileceğini göstermekte ve eğitim alanında veri temelli kalite izleme çalışmalarına önemli bir katkı sunmaktadır.

Anahtar kelimeler: Temel Eğitim, Okul Öncesi Eğitim Kalitesi, Eğitim ve Yapay Zeka, Meta-Öğrenme, Karar Destek Sistemleri.

KALP HASTALIĞI TEŞHİSİ İÇİN ÖĞRENME TABANLI KARAR FÜZYONU: META-ÖĞRENİCİ İLE HİBRİT BİR MODEL

Asst. Prof. Mustafa Furkan KESKENLER

Atatürk University, Faculty of Engineering, Department of Artificial Intelligence and Data Engineering, Erzurum, Turkey,
ORCİD: ID/ 0000-0002-7604-4179

ÖZET

Kardiyovasküler hastalıklar, dünya genelinde başlıca ölüm nedenleri arasında yer almakta olup, erken teşhis ve doğru risk değerlendirmesi klinik karar destek sistemleri açısından kritik bir öneme sahiptir. Son yıllarda makine öğrenmesi tabanlı yöntemler, kalp hastalığı tahmini probleminde umut verici sonuçlar ortaya koymuştur. Ancak tekil sınıflandırıcıların performansı, veri setine ve kullanılan algoritmaya bağımlı olmakta; bu durum genellikle sınırlı genelleme kabiliyeti ile sonuçlanmaktadır. Bu sınırlamaları aşmak amacıyla topluluk öğrenme yaklaşımları önerilmiş olsa da, literatürdeki pek çok çalışma basit çoğunluk oylamasına dayalı karar birleştirme stratejilerini tercih etmektedir.

Bu çalışmada, kalp hastalığı tahmini problemine yönelik olarak stacking tabanlı hibrit bir sınıflandırma yaklaşımı önerilmektedir. Önerilen yöntemde, Lojistik Regresyon, Destek Vektör Makineleri, Rastgele Ormanlar, Extra Trees ve Gradyan Artırma algoritmaları taban sınıflandırıcılar olarak kullanılmıştır. Bu taban modellerin pozitif sınıfa ait olasılık çıktıları, klasik oylama mekanizmalarının aksine, öğrenme tabanlı bir karar birleştirme süreci ile değerlendirilmiştir. Bu amaçla, ikinci seviyede K-En Yakın Komşu (KNN) algoritması meta-öğrenici olarak kullanılmıştır.

Önerilen stacking-KNN mimarisi, UCI kalp hastalığı veri setinin bir türevi üzerinde değerlendirilmiştir. Meta-öğrenicinin tarafsız bir şekilde eğitilmesini sağlamak ve veri sızıntısını önlemek amacıyla, meta-özelliklerin oluşturulması sürecinde stratified K-katlı çapraz doğrulama uygulanmıştır. Model performansı; doğruluk (Accuracy), F1-skoru ve ROC-AUC metrikleri kullanılarak değerlendirilmiş ve sonuçlar tekil sınıflandırıcılar ile karşılaştırılmıştır.

Deneysel sonuçlar, önerilen hibrit modelin tüm tekil sınıflandırıcılara kıyasla üstün bir performans sergilediğini göstermektedir. Stacking-KNN modeli %91.33 doğruluk, 0.9085 F1-skoru ve 0.9317 ROC-AUC değerlerine ulaşarak, öğrenme tabanlı karar birleştirmenin kalp hastalığı tahmininde etkili ve güvenilir bir yaklaşım olduğunu ortaya koymuştur.

Anahtar Kelimeler: Kalp Hastalığı Tahmini, Meta-Öğrenme, Topluluk Tahmini, Hibrit Sınıflandırma, Makine Öğrenmesi

LEARNING-BASED DECISION FUSION FOR HEART DISEASE DIAGNOSIS: A HYBRID MODEL WITH A META-LEARNER

ABSTRACT

Cardiovascular diseases remain one of the leading causes of mortality worldwide, highlighting the critical need for accurate and reliable early diagnostic systems. In recent years, machine learning–based decision support systems have shown promising results in heart disease prediction; however, the performance of single classifiers is often limited by data dependency and model-specific biases. To address these limitations, ensemble learning methods have been introduced, yet many existing studies rely on simple majority voting schemes that fail to exploit the complementary strengths of heterogeneous classifiers.

In this study, a novel stacking-based hybrid classification framework is proposed for heart disease prediction. The proposed approach integrates five diverse base classifiers—Logistic Regression, Support Vector Machines, Random Forest, Extra Trees, and Gradient Boosting—each capturing different structural patterns in the data. Instead of employing conventional voting mechanisms, the probabilistic outputs of these base models are combined using a learning-based decision fusion strategy.

Specifically, a K-Nearest Neighbors (KNN) algorithm is employed as a meta-learner to model the relationships among base classifier predictions and generate the final decision.
The proposed framework is evaluated on a benchmark heart disease dataset derived from the UCI repository. To prevent data leakage and ensure unbiased learning, stratified K-fold cross-validation is applied during the meta-feature generation phase. Model performance is assessed using Accuracy, F1-score, and ROC-AUC metrics and compared against individual base classifiers.
Experimental results demonstrate that the proposed stacking-KNN model consistently outperforms all single classifiers. The hybrid model achieves an accuracy of 91.33%, an F1-score of 0.9085, and a ROC-AUC of 0.9317, indicating a significant improvement in both classification balance and discriminative capability. These findings confirm that learning-based decision fusion provides a more effective alternative to traditional ensemble strategies.
Keywords: Heart Disease Prediction, Meta-Learning, Ensemble Learning, Hybrid Classification, Machine Learning

DETERMINING THE APPROPRIATE ITEM PROCESSING ORDER FOR HIGH-EFFICIENCY ITEMSET MINING

İrfan YILDIRIM
Iskenderun Technical University, Faculty of Engineering and Natural Sciences,
Department of Computer Engineering, Hatay - Türkiye
ORCID: 0000-0002-5635-2991

ABSTRACT
High-efficiency itemset mining (HEIM) aims to discover all itemsets in a dataset that meet a certain efficiency threshold. HEIM inherently involves a very large search space, making its solution challenging and complex. Current studies have primarily focused on narrowing the search space through pruning strategies; however, the impact of item processing order on algorithm performance has not been sufficiently addressed. This study comprehensively investigates the role of item order in the efficiency of HEIM algorithms. For this purpose, six different item ordering strategies were identified, and experimental evaluations were conducted on various benchmark datasets. The results reveal that item processing order plays a significant role in reducing the search space, consequently having a decisive effect on runtime required for solving the HEIM problem. These findings clearly demonstrate that determining an appropriate item processing order is a critical factor in effectively solving the HEIM problem.
Keywords: Efficiency, Itemset Mining, Processing Order, Utility, Investment, Pruning Strategy

15th International
ZEUGMA CONGRESS ON SCIENTIFIC RESEARCH
(THE BOOK OF ABSTRACTS)
January 19-21, 2026 / Gaziantep, Türkiye
www.zeugmakongresi.org/

EVALUATING FEATURE SELECTION METHODS FOR EOG SIGNAL CLASSIFICATION: A COMPARATIVE STUDY

Yazan Osama Mohammed SOBOH
Ondokuz Mayıs University, Faculty of Engineering, Department of Electrical and Electronics Engineering, Türkiye
ORCID: 0009-0000-5244-914X

Asst. Prof. Cengiz TEPE
Ondokuz Mayıs University, Faculty of Engineering, Department of Electrical and Electronics Engineering, Türkiye
ORCID: 0000-0003-4065-5207

Mustafa Kerem PİŞKİN
Kabataş Erkek High School, Türkiye
ORCID: 0009-0004-3084-2396

ABSTRACT
Handling multidimensional data poses a significant challenge for researchers and engineers, particularly in the context of biosignals such as electrooculography (EOG) and electromyography (EMG), which often contain various features extracted from the time, frequency, and time–frequency domains. This study presents a comparative analysis of various feature selection methods applied to EOG signal classification; the aim of this study is to find the optimal feature selection method for use with EOG signals. A diverse set of time-domain, frequency-domain, wavelet-based, and nonlinear features was extracted from a balanced EOG dataset that was collected using a standardized experimental protocol. The study compares different types of feature selection methods, which can be grouped into filter, wrapper, embedded and hybrid feature selection techniques — including statistical tests, correlation-based selection, mutual information, mRMR, ReliefF, recursive feature elimination—and evaluates the resulting dataset containing the selected features using K-Nearest Neighbors (KNN) classifier. Performance comparisons were conducted across several criteria, including classification accuracy, F1-score, area under the curve (AUC), computational cost, and selection stability. Statistical significance tests were employed to assess the differences among the evaluated methods. The findings provide valuable insights into the effectiveness of different feature selection strategies and their ability to identify the most informative features for reliable EOG signal classification, which will provide a stable base for further implementation in real-time classification applications in future studies.
Keywords: EOG, Feature Selection, Support Vector Machine, K-Nearest Neighbors.

SIĞ KRİYOJENİK İŞLEMİN VAKUM KARBÜRLENMİŞ ÖN-ALAŞIMLI TOZ METALURJİ ÇELİK PARÇALARININ SERTLİK PROFİLLERİ ÜZERİNDEKİ ETKİSİ

Dr. Öğr. Üyesi Özer PAMUK
Uşak University, Faculty of Engineering and Natural Sciences, Nanotechnology Engineering, Uşak, Türkiye
ORCID: 0000-0001-6810-8526

ÖZET
Bu çalışmada, sığ kriyojenik işlemin vakum karbürlenmiş Ön Alaşımlı Toz Metalurjisi (ÖATM) çelik parçaların sertlik profilleri üzerine etkileri araştırılmıştır. Ilık Presleme (IP) yöntemiyle üretilen numunelere, Doğrudan Vakum Karbürleme (DVK), DVK + Sığ Kriyojenik İşlem (SKİ), Sinterleme (S) + Vakum Karbürleme (VK) ve S+VK+SKİ den oluşan dört farklı ısıl işlem süreçleri uygulanmıştır. Devamında, numunelerin mikroyapı inceleme, yoğunluk ölçümü ve sertlik testleri gerçekleştirilmiştir. ÖATM çelik parçaların DVK ve S+VK işlemleri başarılı bir şekilde gerçekleştirilmiştir. DVK ısıl işlemi sonrası numunelerde 6.75 g/cm^3 yoğunluk elde edilmiştir. En yüksek yoğunluk değeri 7.28 g/cm^3 ile S ısıl işlemi sonrası elde edilmiştir. DVK ısıl işlemi uygulanan numuneler yaklaşık 1627 µm karbürleme derinliğine sahiptir. S+VK numunelerin de ise bu değer yaklaşık 1552 µm olarak gerçekleşmiştir. DVK ısıl işlemi sonrası numunelerin yüzey sertlikleri 470.61 $HV_{1.0}$ olarak gerçekleşmiştir. Bu numunelere uygulanan SKİ ile numunelerin yüzey sertlikleri 598.14 $HV_{1.0}$ (DVK+SKİ8) seviyesine yükselmiş ve %27.09'luk bir artış meydana gelmiştir. S+VK ısıl işlemleri sonrası ise numunelerin yüzey sertlikleri 520.72 $HV_{1.0}$ olarak gerçekleşmiştir. Bu numunelere uygulanan SKİ ile numunelerin yüzey sertlikleri 627.32 $HV_{1.0}$ (S+VK+SKİ8) seviyesine yükselmiş ve %20.47'lik bir artış meydana gelmiştir. SKİ ile ÖATM çelik parçaların yüzey sertlikleri artmaktadır. Sertlikteki bu artış DVK numunelerin de daha fazladır. SKİ sürelerinin sertlik profillerine etkileri değerlendirildiğinde en yüksek sertlik artışı 8 saatte gerçekleşmesine rağmen diğer süreler (2-4-6 saat) ile aralarında önemli bir fark bulunmamaktadır.
Anahtar kelimeler: Sığ kriyojenik işlem, Vakum karbürleme, Ön-alaşımlı toz, Toz metalurjisi, Sertlik

THE EFFECT OF SHALLOW CRYOGENIC TREATMENT ON THE HARDNESS PROFILES OF VACUUM CARBURETED PRE-ALLOYED POWDER METALLURGY STEEL PARTS

ABSTRACT
In this study, the effects of shallow cryogenic treatment on the hardness profiles of vacuum carburized Pre-Alloyed Powder Metallurgy (PAPM) steel parts were investigated. Four different heat treatment processes were applied to samples produced by the Warm Pressing (WP) method: Direct Vacuum Carburizing (DVC), DVC + Shallow Cryogenic Treatment (SCT), Sintering (S) + Vacuum Carburizing (VC), and S+VC+SCT. Subsequently, microstructure analysis, density measurement and hardness tests were performed on the samples. The DVC and S + VC processes were successfully applied to the PAPM steel parts. A density of 6.75 g/cm^3 was obtained in the samples after DVK heat treatment. The highest density value of 7.28 g/cm³ was obtained after S heat treatment. Samples subjected to DVC heat treatment have a carburizing depth of approximately 1627 µm. In S+VK samples, this value was approximately 1552 µm. After the DVC heat treatment, the surface hardness of the samples was measured as 470.61 $HV_{1.0}$. With the application of SCT to these samples, the surface hardness increased to 598.14 $HV_{1.0}$ (DVC+SCT8), corresponding to an increase of 27.09%. After the S+VC heat treatments, the surface hardness of the samples was measured as 520.72 $HV_{1.0}$. With the application of SCT to these samples, the surface hardness increased to 627.32 $HV_{1.0}$ (S+VC+SCT8), representing an increase of 20.47%. The surface hardness of the PAPM steel parts increases with the application of SCT. This increase in hardness is more pronounced in the DVC treated samples. When the effects of SCT durations on the hardness profiles are evaluated, although the highest hardness increase occurs at 8 hours, no significant difference is observed compared to the other durations (2, 4, and 6 hours).
Keywords: Shallow cryogenic treatment, Vacuum carburizing, Pre-alloyed powder, Powder metallurgy, Hardness

PV SYSTEM DESIGN FOR BUILDING FACADES

Asst. Prof. Dr. Mustafa TEKİN
Kahramanmaraş Sütçü İmam University, Faculty of Engineering and Architecture, Department of Electrical and Electronics Engineering, Kahramanmaraş, Türkiye
ORCID: 0000-0002-8682-411X

M.Sc. Ahmet KADİRLİOĞLU
Kahramanmaraş Sütçü İmam University, Institute of Science, Department of Electrical and Electronics Engineering, Kahramanmaraş, Türkiye
ORCID: 0009-0004-4483-7854

ABSTRACT
As electricity demand continues to increase, the reliance on fossil fuels in fossil fuel-based power plants is also rising. Increased fossil fuel consumption intensifies the greenhouse gas effect, which is a major contributor to global warming. Consequently, expanding the use of renewable energy sources, also referred to as clean energy sources, in electricity generation has become a critical energy issue. Renewable energy sources include solar, wind, and hydropower, among others. Electricity generation from solar energy has increased steadily each year. Solar power plants (SPPs) are classified according to their installation type as Ground Mounted PV (GPV), Floating PV (FPV), and Building Applied PV (BAPV) systems. BAPV can be further categorized into Rooftop PV (RPV) and Facade PV. In this study, a facade PV was designed for the rectorate building located on the Avşar Campus of Kahramanmaraş Sütçü İmam University (KSÜ) in Türkiye using PVsyst software. The installed capacity of the facade PV was determined to be 176 kW. The results indicate that when the facade PV is installed on the SouthEast (SE) and SouthWest (SW) oriented facades of the building, based on its existing orientation, the annual energy generation is 187.06 MWh. Furthermore, if the building were designed to face directly south (S), the annual energy generation would increase to 201.69 MWh. These findings demonstrate that energy related factors should be taken into consideration in building design.
Keywords: Renewable Energy, Solar Power Plant (SPP), Facade PV, PVsyst

BİNA CEPHELERİ İÇİN FOTOVOLTAİK SİSTEM TASARIMI

ÖZET
Elektrik enerji talebinin artmasına paralel olarak fosil yakıt kullanan elektrik santrallerinde bu yakıtların kullanımı da artmaktadır. Artan fosil yakıt kullanımı ise küresel ısınmanın nedenlerinden olan sera gazı etkisini arttırmaktadır. Bundan dolayı elektrik üretiminde temiz enerji kaynakları olarak da adlandırılan yenilenebilir enerji kaynaklarının kullanımının artması önemli bir enerji konusu haline gelmiştir. Yenilenebilir enerji kaynakları güneş, rüzgar, su vb. olarak sıralanabilir. Bu kaynaklar içinde güneş enerjisinden elektrik üretimi her geçen yıl bir önceki yıla göre artış göstermektedir. Güneş enerji santralleri (GES) kuruldukları yerlere göre; Arazi GES (AGES), Yüzen GES (YGES) ve binalara monte edilen GES olarak sınıflandırılmaktadır. Binalara monte edilen GES'ler ise Çatı GES (ÇGES) ve Cephe GES (CGES) olarak kategorize edilebilmektedir. Yapılan bu çalışmada; Kahramanmaraş Sütçü İmam Üniversitesi (KSÜ) Avşar Kampüsünde bulunan rektörlük binası için CGES tasarımı PVsyst yazılımından faydalanılarak gerçekleştirilmiştir. Bu bina için tasarlanan CGES'in kurulu gücü 176 kW olarak belirlenmiştir. Binanın doğal konumuna göre güneydoğu ve güneybatı yönelimli cephelere CGES kurulduğunda yıllık enerji üretiminin 187.06 MWh olacağı tespit edilmiştir. Ayrıca binanın tam güney yönelimli tasarlanmış olması halinde ise yıllık enerji üretiminin 201.69 MWh olacağı görülmüştür. Buna göre; binaların tasarımında enerji faktörünün de göz önünde bulundurulmasının gerekliliği anlaşılmıştır.
Anahtar kelimeler: Yenilenebilir Enerji, Güneş Enerji Santrali (GES), Cephe GES (CGES), PVsyst

15th International
ZEUGMA CONGRESS ON SCIENTIFIC RESEARCH
(THE BOOK OF ABSTRACTS)
January 19-21, 2026 / Gaziantep, Türkiye
www.zeugmakongresi.org/

ZEKİ FAİK İZER, CEMAL TOLLU VE ŞEREF AKDİK'İN ESERLERİNDEKİ 'AĞAÇ' İMGESİNİN SANAT PSİKOLOJİSİ VE SANAT FELSEFESİ BAĞLAMINDA ANALİZİ

Uz. Öğrt. Makbule TORLAK
Uşak Üniversitesi, Lisansüstü Eğitim Enstitüsü, Sanat ve Tasarım Ana Sanat Dalı, Tasarım Çalışmaları Programı Yüksek Lisans Öğrencisi -Turhan Akçay Bilsem Görsel Sanatlar Öğretmeni, Uşak-Türkiye
ORCID: 0009-0002-7569-269X

Doç. Dr. Nazan DÜZ
Uşak Üniversitesi, Güzel Sanatlar Fakültesi, Resim Bölümü Öğretim Üyesi
Uşak-Türkiye,
ORCID: 0000-0003-2799-8328

ÖZET
Araştırmada *ağaç imgesi*, sanat psikolojisi bağlamında, sanatçının eserine yansıyan ruhsal durumu, alımlayıcının imgeye yüklediği duygusal anlam ile imgenin yorumlanması olarak ele alınmakta; sanat felsefesi bağlamında ise sanatçının ifadesindeki anlam, eserin özünde taşıdığı anlam ve bütüne olan estetik katkısı kavramsal olarak açıklanmaktadır. Araştırmanın amacı, ağaç imgesini betimleyen D Grubu sanatçılarından Zeki Faik İzer'in *Mühürdar Çeşmesi*, *Dolmabahçe Sahili* adlı eserlerini; Cemal Tollu'nun *Antalya'dan Ağaçlı Bir Köşe*, *Antalya Akköprü Ziraat İstasyonu'nda Fidanlı Bir Yol*, *Manzara* adlı eserlerini ve Şeref Akdik'in *Manzara Bahariye*, *İlkbahar* ve *Büyükada* adlı eserlerini sanat psikolojisi ve sanat felsefesi bağlamında analiz etmektir. Araştırma, betimsel araştırma niteliğinde olup, tarama modelli araştırma yöntemi kullanılmıştır. Araştırmanının sınırlılıkları kapsamında sanatçılar ve eserler tarihsel süreç içinde incelenmiştir. Sonuç olarak seçilen eserler analiz edildiğinde; Zeki Faik İzer'in lirik (soyut) leke değerleriyle, Cemal Tollu'nun kütlesel-hacimli formla, Şeref Akdik'in empresyonist atmosferiyle ağaç imgesini betimlediği görülmüştür. Bu ressamların üslupları itibariyle ağaç imgeleri farklılık gösterirken; Zeki Faik İzer'in soyut düzlemdeki analizi, Cemal Tollu'nun Anadolu sanatını anıtsallaştırmadaki tavrı ve Şeref Akdik'in doğal haliyle bütünsel lirik dışavurumla eserlerini betimlediği bulgulanmıştır. Sanatçıların eserlerindeki ağaç imgesi; sanat psikolojisi bağlamında *içsel huzur, terk edilmişlik, yalnızlık, yaşam enerjisi, canlılık, dinginlik, dayanma gücü, korku, kaygı, bilinmezlik, belirsizlik ve içsel güç* gibi duyguların birliğini temsil ederken sanat felsefesi bağlamında ise *ataraksia (ruh dinginliği), yaşam atılımı, özdeşleyim, erk, iç daralması, çatışkı, oluş ve koşutçuluk* gibi felsefi kavramları taşıdığı sonucuna varılmıştır.
Anahtar Kelimeler: Zeki Faik İzer, Cemal Tollu, Şeref Akdik, Ağaç İmgesi, Üslup, Analiz.

AN ANALYSIS OF THE IMAGE OF THE 'TREE' IN THE WORKS OF ZEKİ FAİK İZER, CEMAL TOLLU, AND ŞEREF AKDİK IN THE CONTEXT OF ART PSYCHOLOGY AND ART PHILOSOPHY

ABSTRACT
In this study, *the image of a tree* is examined in the context of art psychology as the artist's psychological state reflected in their work, the emotional meaning the viewer attributes to the image, and the interpretation of the image. In the context of art philosophy, the meaning in the artist's expression, the meaning inherent in the work, and its aesthetic contribution to the whole are explained conceptually. The aim of the study is to examine the works of Zeki Faik İzer, an artist from Group D who depicts the image of trees, namely *Mühürdar Çeşmesi* and *Dolmabahçe Sahili*; Cemal Tollu's *Antalya'dan Ağaçlı Bir Köşe*, *Antalya Akköprü Ziraat İstasyonu'nda Fidanlı Bir Yol* and *Landscape*, and Şeref Akdik's works *Manzara Bahariye*, *Spring* and *Büyükada* in the context of art psychology and art philosophy. The research is descriptive in nature and employs a survey-based research method.

Within the scope of the research limitations, artists and works are examined within a historical context. As a result, when the selected works were analyzed, it was seen that Zeki Faik İzer depicted the image of trees with lyrical (ABSTRACT) stain values, Cemal Tollu with mass-volumetric forms, and Şeref Akdik with an impressionistic atmosphere. While the tree images of these painters differ in terms of their styles, it was found that Zeki Faik İzer's analysis in the ABSTRACT plane, Cemal Tollu's approach to monumentalizing Anatolian art, and Şeref Akdik's depiction of his works with a holistic lyrical expression in their natural state. The image of trees in the artists' works represents a unity of emotions such as *inner peace, abandonment, loneliness, life energy, vitality, tranquility, resilience, fear, anxiety, uncertainty, ambiguity, and inner strength* in the context of art psychology. In the context of art philosophy, it carries philosophical concepts such as *ataraxia (peace of mind), life impulse, identification, power, inner constriction, conflict, becoming, and parallelism*.
Keywords: Zeki Faik İzer, Cemal Tollu, Şeref Akdik, Image of Trees, Style, Analysis.

SPORTSWEAR USED IN COLD CLIMATE CONDITIONS

Assoc. Prof. Dr. Esra TAŞTAN ÖZKAN
Bitlis Eren University, Faculty of Fine Arts, Department of Traditional Turkish Arts, Bitlis, Türkiye
ORCID: ID/ 0000-0001-8950-6048

ABSTRACT
As consumers spend significant amounts of money on functional sportswear, many manufacturers are designing products for use in various sports branches. Numerous researchers and industries have collaborated to improve the properties of sports fabrics and make them suitable for active sportswear. Although numerous studies have been conducted on sportswear used in warm climates, studies on sportswear for cold climates are limited. For use in cold climates, sportswear must possess properties such as thermal resistance, water vapor permeability, water repellency, and windproofing. Even though thermal resistance is the most important factor, especially in cold weather. The moisture formed as a result of sweating cannot be removed to the outside environment, causing moisture accumulation in the layer (microclimate) between the skin and clothing, making the person feel uncomfortable after a certain period. Therefore, sportswear used in cold weather conditions must also have high moisture management properties. Sports activities performed in cold climates can be categorized into running, skiing, trekking, and mountaineering. Sportswear is chosen based on the climate conditions in which it is used, and specific sporting activities also influence sportswear choices. This study aimed to determine the features that sportswear should have for activities carried out in cold climate conditions, as well as to define the types of clothing to be used in different sports branches.
Keywords: sportswear, cold climate, thermal resistance.

PREDICTORS OF PSYCHOLOGICAL WELL-BEING: THE ROLES OF LONELINESS, PHUBBING AND TECHNOSTRESS

Assoc. Prof. Dr. Evren ERZEN
Kırşehir Ahi Evran University, Faculty of Education, Department of Psychological Counseling and Guidance, Türkiye
ORCID: 0000-0001-9726-2688

Graduate Student (MSc) Eda Selin ŞAHİN
Kırşehir Ahi Evran University, Faculty of Education, Department of Psychological Counseling and Guidance, Türkiye
ORCID: 0009-0006-8623-9646

ABSTRACT
This study aimed to examine the relationships between psychological well-being and loneliness, phubbing, and the subdimensions of technostress (uncertainty, invasion, complexity, insecurity, and overload), as well as to investigate differences in psychological well-being according to various demographic variables, among a sample of 663 healthcare professionals (286 women and 377 men). The findings indicated that psychological well-being differed significantly across occupations (Welch's $F_{(9, 158.47)} = 5.07$, $p < .001$), with the lowest mean observed among paramedics ($\bar{x} = 20.50$) and the highest among medical secretaries ($\bar{x} = 29.76$). Regarding social media use, TikTok users ($\bar{x} = 29.18$) demonstrated significantly higher psychological well-being compared to users of Instagram, YouTube, and X ($p < .05$). Analyses by educational level revealed that participants with a high school education ($\bar{x} = 30.70$) and associate degrees ($\bar{x} = 28.21$) exhibited significantly higher psychological well-being than those with bachelor's ($\bar{x} = 24.73$) and postgraduate degrees ($\bar{x} = 22.14$) (Welch's $F_{(3, 142.88)} = 14.66$, $p < .001$). Psychological well-being was further examined using a four-step hierarchical regression model. In the first step, loneliness emerged as the strongest predictor of psychological well-being, explaining 25% of the variance ($R^2 = .25$, $F_{(1, 661)} = 230.73$, $p < .001$). In the second step, the inclusion of phubbing significantly increased the explanatory power of the model ($\Delta R^2 = .04$, $\Delta F_{(1, 660)} = 40.28$, $p < .001$), raising the total explained variance to 30% ($R^2 = .30$). In the third step, the addition of the insecurity subdimension of technostress increased the explained variance to 39% ($\Delta R^2 = .09$, $\Delta F_{(1, 659)} = 106.52$, $p < .001$). In the final step, the inclusion of the uncertainty subdimension further increased the explanatory power of the model to 40.9% ($R^2 = .409$, $\Delta R^2 = .01$, $\Delta F_{(1, 658)} = 11.58$, $p = .001$). In the final model, loneliness ($\beta = -.31$, $p < .001$), phubbing ($\beta = -.09$, $p = .01$), insecurity ($\beta = -.24$, $p < .001$), and uncertainty ($\beta = -.16$, $p < .001$) were identified as significant and negative predictors of psychological well-being. The findings were discussed in line with the existing literature.
Keywords: psychological well-being, loneliness, phubbing, technostress, healthcare professionals

PSİKOLOJİK İYİ OLUŞUN YORDAYICILARI: YALNIZLIK, PHUBBİNG VE TEKNOSTRESİN ROLÜ

ÖZET
Bu araştırma, sağlık alanında çalışan 663 katılımcının *(286 kadın ve 377 erkek)* psikolojik iyi oluş düzeylerinin yalnızlık, phubbing ve teknostresin alt boyutlarıyla *(belirsizlik, istila, karmaşıklık, güvensizlik, aşırı yük)* ilişkisini ve çeşitli demografik değişkenlere göre nasıl farklılaştığını inceleme amacıyla gerçekleştirilmiştir. Bulgular psikolojik iyi oluşun mesleklere göre anlamlı biçimde değiştiğini *(Welch's $F_{(9,158.47)}=5.07$, $p<.001$)*; en düşük ortalamanın paramediklerde *($\bar{x}=20.50$)* en yükseğin ise tıbbi sekreterlerde *($\bar{x}=29.76$)* olduğunu göstermektedir. Sosyal medya kullanımında TikTok kullanıcılarının *($\bar{x}=29.18$)* Instagram, YouTube ve X kullanıcılarına göre daha yüksek psikolojik iyi oluşa sahip olduğu belirlenmiştir *($p<.05$)*.

Eğitim düzeyine ilişkin analizler sonucunda, lise *($\bar{x}$=30.70)* ve ön lisans mezunlarının *($\bar{x}$=28.21)*, lisans *($\bar{x}$=24.73)* ve lisansüstü mezunlarından *($\bar{x}$=22.14)* anlamlı biçimde daha yüksek psikolojik iyi oluş sergilediği bulgulanmıştır *(Welch's $F_{(3,142.88)}$ =14.66, p<.001)*. Psikolojik iyi oluşun yordayıcı dört aşamalı bir model ile belirlenmiştir. İlk aşamada yalnızlık, psikolojik iyi oluşun en güçlü yordayıcısı olarak modele girmiş ve varyansın %25'ini açıklamıştır *(R^2 = .25, $F_{(1,661)}$ = 230.73, p < .001)*. İkinci aşamada phubbing değişkeninin eklenmesiyle modelin açıklayıcılığı anlamlı biçimde artmış *(ΔR^2 = .04, $\Delta F_{(1,660)}$ = 40.28, p < .001)* ve toplam açıklanan varyans %30'a yükselmiştir *(R^2 = .30)*. Üçüncü aşamada teknostresin güvensizlik alt boyutunun modele dâhil edilmesiyle açıklanan varyans %39'a çıkmıştır *(ΔR^2 = .09, $\Delta F_{(1,659)}$ = 106.52, p <.001)*. Son aşamada belirsizlik alt boyutunun eklenmesiyle modelin açıklayıcılığı %40,9'a ulaşmıştır *(R^2 = .409, ΔR^2 = .01, $\Delta F_{(1,658)}$ = 11.58, p = .001)*. Nihai modelde yalnızlık *(β = −.31, p < .001)*, phubbing *(β = −.09, p = .01),* güvensizlik *(β = −.24, p < .001)* ve belirsizlik *(β = −.16, p <.001)* psikolojik iyi oluşun anlamlı ve negatif yordayıcıları olarak belirlenmiştir. Bulgular literatür doğrultusunda tartışılmıştır.

Anahtar kelimeler: psikolojik iyi oluş, yalnızlık, phubbing, teknostres, sağlık çalışanları

THE POWER OF ART IN *FRIDA KAHLO* BY RAUDA JAMIS AS A BIOFICTIONAL REFLECTIVE

Master's Student Hakime ÇELİK AKBAŞ
Van Yüzüncü Yıl University, Institute of Social Sciences, Türkiye
ORCID: 0009-0000-5349-9157

ABSTRACT
Rauda Jamis' *Frida Kahlo* is an important biofictional novel. The original name, Frida Kahlo: Autoportrait d'une femme; this novel does not only explore chronogical order but also the power of art through a biofictional approach. In this novel, Rauda Jamis reflects the tragedies and miracles of an important Mexican artist, Frida Kahlo, during Mexican Revolution. This biofictional reflection novel tells biografies of Frida Kahlo by using pictural pages of her through exploring how Kahlo transformed her physical pain into her aesthetic creativity. The artist of novel, Kahlo, suffered from physical and pscyhological pains throught her life. In *Frida Kahlo*, writer shows us her art as a description of her with self portraits and the impression of modern Mexican Art on Frida Kahlo. We can understand that the most important figure of woman is to be productive against all of the hardships through this novel, as she could recover herself by continuing painting despite a great deal of pain in her body. While writing this novel, Jamis tries to analyze how Frida Kahlo identifies herself in self portraits and how art encourages her against life regardless of her serious and painfully illness with the effect of surrealism and feminisim on her self portraits. The aim of this study is to reveal how the special life and experienceses of Frida Kahlo became a motivation and significant points in her paintings and how she can questioned her life and herself in her self portraits.
Key Words: Frida Kahlo, Biofiction novel, Power of Art, Self Portrait, Surrealism

RAUDA JAMİS'İN GÖZÜNDEN *FRİDA KAHLO*'DA SANATIN GÜCÜ: BİR BİYOGRAFİK KURGU YANSIMASI OLARAK

ÖZET
Rauda Jamis'in Frida Kahlo adlı romanı önemli bir biyografik kurgu romanıdır. Orijinal adı Frida Kahlo: Autoportrait d'une Femme olan bu roman, sadece olanları kronolojik sırayla değil aynı zamanda biyografik kurgu yaklaşımıyla sanatın gücünü de ele almaktadır. Bu romanda, Rauda Jamis Meksika Devrimi sırasında önemli bir Meksikalı artist olan Frida Kahlo'nun trajedilerini ve mucizelerini bize yansıtır. Biyografik kurgu yansıması olan bu roman, Frida Kahlo'nun fiziksel acısını nasıl estetik yaratıcılığa dönüştürdüğünü resimli sayfalar kullanarak onun biyografilerini anlatır. Romanın sanatçısı Kahlo hayatı boyunca fiziksel ve psikolojik acılar çekmiştir. *Frida Kahlo'* da yazar bize modern Meksika sanatının Frida Kahlo üzerindeki etkisini ve otoportreleri üzerinden yapılan bir betimleme ile onun sanatını gösterir. Bu roman aracılığıyla, bir kadının en önemli özelliğinin tüm zorluklara karşı üretken kalabilmek olduğunu anlıyoruz, çünkü Frida Kahlo bedenindeki büyük acılara rağmen resim yapmaya devam ederek kendini iyi etmeyi başarabilmiştir. Jamis bu romanı kaleme alırken, Kahlo'nun otoportrelerinde surrealizmin ve feminizmin etkisiyle kendini nasıl tanımladığını ve ciddi ve ağrılı hastalığını umursamadan hayata karşı sanatın onu nasıl cesaretlendirdiğini inceler. Bu çalışmanın amacı, Frida Kahlo'nun özel yaşamının ve deneyimlerinin onun resimlerinde nasıl bir motivasyon kaynağı olduğunu ve otoportrelerinde hayatını ve kendisini nasıl sorguladığını ortaya koymaktır.
Anahtar Kelimeler: Frida Kahlo, Biyografik Kurgu Romanı, Sanatın Gücü, Otoportre, Surrealizm

FROM TURKISH MYTHOLOGY TO DESIGN: THE MEANING AND APPLICABILITY OF SYMBOLS

Esra BALCI
Istanbul University–Cerrahpaşa, Faculty of Technical Sciences, Department of Textile, Clothing, Footwear and Leather, Footwear Design and Production Program, Türkiye
ORCID: 0009-0003-6361-7825

Sema ARIKAN
Istanbul University–Cerrahpaşa, Faculty of Technical Sciences, Department of Textile, Clothing, Footwear and Leather, Footwear Design and Production Program, Türkiye
ORCID: 0009-0002-5516-0653

Cansu KANTAR
Istanbul University–Cerrahpaşa, Faculty of Technical Sciences, Department of Textile, Clothing, Footwear and Leather, Footwear Design and Production Program, Türkiye
ORCID: 0009-0008-2932-5307

Asst. Prof. Serap ÇAŞKURLU
Istanbul University–Cerrahpaşa, Faculty of Technical Sciences, Department of Textile, Clothing, Footwear and Leather, Footwear Design and Production Program, Türkiye
ORCID: 0000-0002-4103-3314

ABSTRACT

Turkish culture has developed a rich symbolic and mythological world shaped by the vast geographies it has interacted with throughout history and the cosmological perspectives it has embraced. The aim of this study is to examine the symbolic meanings of figures found in Turkish mythology through a literature-based approach, within a theoretical framework that is interpretable and applicable to contemporary design disciplines.

The scope of the research is limited to the Central Asian–originated *Animal Style*, which has exhibited a distinctive character since the early periods of Turkish art. Within this framework, animal figures such as the deer, horse, eagle, and ram are examined alongside cultic elements including Umay Ana and the Tree of Life, with an emphasis on their roles within the Turkish belief system. In addition, fantastical mythological beings such as the Anka (Simurgh), griffon, and dragon are also addressed, and their symbolic associations with concepts such as rebirth, protection, power, and cosmic balance are analyzed.

This study adopts a qualitative research method; written sources, iconographic materials, and archaeological findings are examined collectively in order to interpret the historical and semantic layers of these symbols. The findings indicate that these figures function not merely as decorative aesthetic elements, but as multi-layered symbolic expressions representing cosmic order, strength, protection, and continuity. It has been determined that these motifs have persisted within material culture across a broad chronological spectrum, ranging from boots and carpets uncovered in the Pazyryk kurgans to rock paintings, textile traditions, and various forms of traditional craftsmanship. This continuity demonstrates that Turkish mythological symbols have not been confined to oral tradition, but have remained active components of everyday life through tangible cultural artifacts.

In contemporary contexts, integrating these symbols into modern footwear design contributes not only to the creation of an original aesthetic value, but also facilitates the establishment of a cultural connection between the user and the designed object. Over time, footwear has evolved from a purely protective item into a symbolic object reflecting identity and social status, which further reinforces the relevance of this symbolic transfer. This paper aims to provide a theoretical and conceptual foundation for the original footwear design sketches to be developed in the subsequent stages of the project by decoding the symbolic language of Turkish mythology.

Keywords: Turkish Mythology; Mythological Symbols; Animal Style; Cultural Heritage; Footwear Design

TÜRK MİTOLOJİSİNDEN TASARIMA: SEMBOLLERİN ANLAMI VE UYGULANABİLİRLİĞİ

ÖZET

Türk kültürü, tarihsel süreç boyunca etkileşim kurduğu geniş coğrafyalar ve benimsediği kozmolojik bakış açıları doğrultusunda zengin sembolik ve mitolojik dünya geliştirmiştir. Bu çalışmanın amacı, Türk mitolojisinde yer alan figürlerin taşıdığı sembolik anlamları, çağdaş tasarım disiplinleri açısından yorumlanabilir ve uygulanabilir bir kuramsal çerçeve içinde, literatür temelli bir yaklaşımla incelemektir.

Araştırmanın kapsamı, Türk sanatının erken dönemlerinden itibaren ayırt edici bir karakter sergileyen Orta Asya kökenli Hayvan Üslubu ile sınırlandırılmıştır. Bu bağlamda geyik, at, kartal ve koç gibi hayvan figürlerinin yanı sıra Umay Ana ve Hayat Ağacı gibi kült unsurların Türk inanç sistemi içerisindeki rolleri ele alınmıştır. Ayrıca Anka (Simurg), grifon ve ejder gibi fantastik mitolojik varlıklar da incelenmiş; bu figürlerin yeniden doğuş, koruyuculuk, güç ve kozmik denge gibi kavramlarla kurduğu sembolik ilişkiler analiz edilmiştir.

Çalışmada nitel araştırma yöntemi benimsenmiş; yazılı kaynaklar, ikonografik veriler ve arkeolojik buluntular bir arada değerlendirilerek bu sembollerin tarihsel ve anlamsal katmanları yorumlanmıştır. Elde edilen bulgular, söz konusu figürlerin yalnız estetik amaçlı dekoratif öğeler olmadığını; kozmik düzen, güç, koruyuculuk ve süreklilik gibi kavramları temsil eden çok katmanlı bir anlatım dili sunduğunu ortaya koymaktadır. Bu motiflerin, Pazırık Kurganları'nda ortaya çıkarılan bot ve halılardan kaya resimlerine, dokuma geleneklerinden çeşitli geleneksel el sanatlarına kadar uzanan geniş bir kronolojik süreç boyunca maddi kültür unsurları içinde varlığını sürdürdüğü tespit edilmiştir. Bu süreklilik, Türk mitolojik sembollerinin sözlü gelenekle sınırlı kalmadığını, somut kültürel eserler aracılığıyla günlük yaşamın aktif bileşenleri olarak varlıklarını sürdürdüklerini göstermektedir.

Günümüzde bu sembollerin modern ayakkabı tasarımıyla ilişkilendirilmesi, tasarıma özgün bir estetik değer kazandırmanın ötesinde, kullanıcı ile tasarım nesnesi arasında kültürel temelli bir bağ kurulmasına olanak sağlamaktadır. Zaman içerisinde ayakkabının koruyucu bir nesne olmaktan çıkarak kimlik ve statüyü yansıtan simgesel bir objeye dönüşmesi, bu sembolik aktarımın anlamını daha da güçlendirmektedir. Bu bildiri, Türk mitolojisinin sembolik dilini çözümleyerek, projenin ilerleyen aşamalarında geliştirilecek özgün ayakkabı tasarım eskizleri için kuramsal ve kavramsal bir zemin oluşturmayı amaçlamaktadır.

Anahtar Kelimeler: Türk Mitolojisi, Mitolojik Semboller, Hayvan Üslubu, Kültürel Miras, Ayakkabı Tasarımı

PSİKONÖROİMMÜNOLOJİ VE HİPNOTERAPİNİN İYİLEŞTİRİCİ ROLÜ

Şeyma ARVAS
Van Yüzüncü Yıl Üniversitesi, Sağlık Hizmetleri Meslek Yüksekokulu, Van, Türkiye
ORCID ID: 0000-0001-6274-4812

ÖZET
Psikonöroimmunoloji (PNI) beyin, davranış ve bağışıklık sistemi arasındaki çift yönlü etkileşimleri ve bu ilişkisel mekanizmaların zihinsel ve fiziksel sağlık üzerindeki etkilerini incelemektedir. Multidisipliner bir alan olan PNI araştırmaları, bağışıklık aktivasyonunun davranış, duygu ve biliş üzerindeki etkilerini incelemekte; bu süreçlerin, depresyon, şizofreni ve travma sonrası stres bozukluğu gibi psikiyatrik rahatsızlıklar ve somatik semptomlarla ilişkili nöroimmün düzensizlikler temelinde şekillendiğini göstermektedir. Travma ve stres gibi psikolojik deneyimler bağışıklık sistemini etkileyebilir ve hastalıkların ortaya çıkmasına katkıda bulunabilir
Bu bağlamda yapılan araştırmalar, psikolojik stresin davranışsal veya nörobiyolojik yollarla bağışıklık yanıtlarını ve antikor üretimini etkilediğini göstermektedir. Stresin ardından ortaya çıkan travmatik anıların yeniden işlenmesi ve bu anıların bedende oluşturduğu duygusal yükün ortadan kaldırılması için hipnoterapi etkili bir yöntem olarak değerlendirilmektedir. Beden, fiziksel duyuları kaydeder ve hipnoterapi aracılığıyla travmatik olaylar kısmen yeniden etkinleştirilerek beden belleği yeniden yapılandırılır. Bastırılan travmatik anıların hipnoterapi ile çözümlenmesi hem fizyolojik hem de psikolojik iyileşmeyi destekler. Bu nedenle hipnoterapi, psikonöroimmünolojik açıdan kronik stres ve travmanın bedende bıraktığı izleri ele alırken zihin-beden etkileşimini güçlendirerek tamamlayıcı bir tedavi seçeneği olarak klinik uygulamalarda değerlendirilmektedir.
Anahtar Kelimeler: Psikonöroimmünoloji, bağışıklık sistemi**,** hipnoterapi, stres, travma.

THE HEALING ROLE OF PSYCHONEUROIMMUNOLOGY AND HYPNOTHERAPY

ABSTRACT
Psychoneuroimmunology (PNI) examines the bidirectional interactions between the brain, behavior, and the immune system and the effects of these relational mechanisms on mental and physical health. As a multidisciplinary field, PNI research examines the effects of immune activation on behavior, emotion, and cognition; demonstrating that these interactions are shaped by neuroimmune dysregulation associated with psychiatric disorders such as depression, schizophrenia, and post-traumatic stress disorder as well as somatic symptoms.
Psychiatric disorders and somatic symptoms are associated with neuroimmune dysregulation and these disorders include psychological disorders such as depression, schizophrenia, and post-traumatic stress disorder. Psychological experiences such as trauma and stress can affect the immune system and contribute to disease onset.
Research in this context shows that psychological stress affects immune responses and antibody production through behavioral and neurobiological pathways. Hypnotherapy is considered an effective method for reprocessing traumatic memories that emerge after stress and eliminating the emotional burden these memories create in the body. The body records physical sensation and through hypnotherapy, traumatic events are partially reactivated, restructuring of body memory. Resolving repressed traumatic memories through hypnotherapy supports both physiological and psychological healing. Therefore, hypnotherapy is being evaluated in clinical practice as a complementary treatment option, addressing the physical traces of chronic stress and trauma from a psychoneuroimmunological perspective while strengthening the mind-body interaction.
Keywords: Psychoneuroimmunology, immune system, hypnotherapy, stress, trauma.

FROM MAP TO SCREEN: THE COGNITIVE ADVANTAGE OF DIGITAL GAME-BASED TRAINING IN ORIENTEERING

Burak ALKAYA
Istanbul Nişantaşı University, Postgraduate Education Institute, Movement and Training Sciences Program, Türkiye
ORCID: 0009-0007-9497-8411

Asst. Prof. Eda BAYTAŞ
Istanbul Nişantaşı University, School of Physical Education and Sports, Department of Exercise and Sports Sciences, Türkiye
ORCID: 0000-0003-2963-0199

ABSTRACT
The purpose of this study was to examine the effects of computer games used within the scope of digital training on the cognitive performance of orienteers, with a particular focus on changes in mental rotation and attentional processes. A total of 20 volunteer participants with a mean age of 19.85±1.09 years were included in the study. Participants were divided into a digital training group (n=10) and a traditional training group (n=10). The digital training group participated in a computer game–based digital training program for 1 hour per session, 3 days per week over an 8-week period, whereas the traditional training group engaged only in conventional desk-based orienteering training. Cognitive performance was assessed in all participants using the Mental Rotation (MR) test and the Flanker Task (FT), administered as pre-tests and post-tests. Data normality was assessed using the Shapiro–Wilk test, and due to the violation of parametric assumptions, between-group comparisons were conducted using the Mann–Whitney U test. Effect sizes were calculated using the r coefficient. No statistically significant differences were found between the digital training and traditional training groups in terms of anthropometric characteristics ($p>0.05$). Pre-test results indicated that the groups were generally comparable. Analysis of post-test–pre-test difference scores revealed that the digital training group demonstrated a significantly greater increase in mental rotation accuracy compared to the traditional training group ($p=0.011$; $r=0.57$). In addition, the digital training group showed significant reductions in mean reaction time under both congruent and incongruent conditions ($p< 0.05$). Effect sizes for all cognitive performance variables were large ($r=0.54$, $–0.59$). These findings indicate that computer game–based digital training significantly enhances mental rotation and attentional performance in orienteering athletes. Digital training applications may therefore be considered a complementary approach to traditional training methods for supporting cognitive skill development.
Keywords: Orienteering, Digital Training, Computer Games, Spatial Awareness, Cognitive Performance.

HARİTADAN EKRANA: DİJİTAL OYUN TABANLI ANTRENMANLARIN ORYANTİRİNGDE BİLİŞSEL AVANTAJI

ÖZET
Bu çalışmanın amacı, dijital antrenman kapsamında kullanılan bilgisayar oyunlarının oryantiring sporcularının bilişsel performansları üzerindeki etkisini incelemektir. Özellikle zihinsel rotasyon ve dikkat süreçlerine ilişkin performans değişimlerinin değerlendirilmesi hedeflenmiştir. Araştırmaya yaş ortalaması 19,85 ± 1,09 yıl olan toplam 20 gönüllü katılımcı dâhil edilmiştir. Katılımcılar dijital antrenman grubu (n=10) ve geleneksel antrenman gurubu (n=10) gruplarına ayrılmıştır. Dijital antrenman grubuna 8 hafta süresince haftada 3 gün 1 saat dijital antrenman kapsamında bilgisayar oyunu uygulaması yaptırılırken, geleneksel antrenman grubuna sadece geleneksel masa başı oryantiring antrenmanı uygulaması yaptırılmıştır.

Tüm gruplar uygulamada Bilişsel performans; Mental Rotasyon (MR) testi ve Flanker Görevi (FT) kullanılarak ön test ve son test şeklinde değerlendirilmiştir. Verilerin normallik analizi Shapiro–Wilk testi ile yapılmış, parametrik varsayımların sağlanmaması nedeniyle gruplar arası karşılaştırmalarda Mann–Whitney U testi kullanılmıştır. Etki büyüklükleri r katsayısı ile hesaplanmıştır. Dijital antrenman grubu ve geleneksel antrenman grupları arasında antropometrik özellikler açısından anlamlı fark bulunmamıştır ($p>0,05$). Ön test sonuçlarında gruplar genel olarak benzerlik göstermiştir. Son test–ön test fark puanları incelendiğinde, Dijital antrenman grubunun mental rotasyon doğru yanıt yüzdesinde kontrol grubuna göre anlamlı düzeyde daha fazla artış gösterdiği belirlenmiştir ($p=0,011$; $r=0,57$). Ayrıca dijital oyun grubunda ortalama tepki süresi, uyumlu ve uyumsuz koşullardaki tepki sürelerinde anlamlı azalmalar saptanmıştır ($p<0,05$). Tüm bilişsel performans değişkenlerinde etki büyüklüklerinin büyük düzeyde olduğu görülmüştür ($r=0,54,–0,59$). Elde edilen bulgular, bilgisayar oyunlarına dayalı dijital antrenmanların oryantiring sporcularında zihinsel rotasyon ve dikkat performansını anlamlı düzeyde geliştirdiğini göstermektedir. Dijital antrenman uygulamalarının, bilişsel becerilerin desteklenmesinde geleneksel antrenmanlara tamamlayıcı bir yöntem olarak kullanılabileceği düşünülmektedir.

Anahtar kelimeler: Oryantiring, Dijital Antrenman, Bilgisayar Oyunları, Mekânsal Farkındalık, Dikkat

EXAMINATION OF ERGOGENIC SUPPORT USE LEVELS OF KICK BOXING ATHLETES

Abdulmecit YAKIŞIK
Istanbul Nişantaşı University, Postgraduate Education Institute, Movement and Training Sciences Program, Türkiye
ORCID: 0000-0002-6181-3115

Asst. Prof. Eda BAYTAŞ
Istanbul Nişantaşı University, School of Physical Education and Sports, Department of Exercise and Sports Sciences, Türkiye
ORCID: 0000-0003-2963-0199

ABSTRACT
The conscious use of ergogenic aids for performance enhancement is closely related to athletes' level of knowledge and the sources from which this knowledge is obtained. Kickboxing is a combat sport that requires high levels of endurance, strength, and mental performance, and therefore represents a discipline in which the use of ergogenic aids may be widespread. The aim of this study was to examine the knowledge levels of kickboxing athletes regarding ergogenic aid use, their information sources, and their related usage behaviors. In this study, an ergogenic aid usage level questionnaire was employed to determine the ergogenic aid usage levels of kickboxing athletes. A total of 283 kickboxing athletes participated in the study. Data were collected via Google Forms and analyzed using descriptive statistics (frequency and percentage). The findings indicated that 51.6% of the athletes reported using ergogenic aids, while 48.4% reported not using them. The most commonly used ergogenic aids were protein powder (31.8%) and creatine (31.1%), followed by vitamin–mineral supplements (21.9%), omega-3 (18.4%), and caffeine (15.5%). The primary purposes for ergogenic aid use were performance enhancement (32.5%), muscle mass development (21.9%), rapid recovery (20.5%), and increased endurance (20.5%). Among athletes who did not use ergogenic aids, 29.3% reported not feeling the need for such supplements, 20.5% stated that they lacked sufficient knowledge, and 16.3% considered them to be risky for health. In addition, concerns about doping risk (9.2%) and economic cost (9.5%) were identified as factors limiting ergogenic aid use. Regarding information sources, 39.2% of the athletes obtained information from the internet and social media, while 34.6% reported coaches as their primary source; the proportion of athletes consulting health professionals was relatively low. While 56.2% of the participants believed that ergogenic aids enhance performance, 37.1% were undecided. In conclusion, ergogenic aid use is common among kickboxing athletes; however, knowledge levels largely rely on sources with limited scientific credibility, and insufficient knowledge and health-related concerns influence usage behaviors. Therefore, it is important to provide athletes with education from qualified professionals to promote the conscious and safe use of ergogenic aids.
Keywords: Combat sports, Ergogenic aids, Performance, Sports nutrition

KİCK BOKS SPORCULARININ ERGOJENİK DESTEK KULLANIM DÜZEYLERİNİN İNCELENMESİ

ÖZET
Performans artırma amacıyla kullanılan ergojenik desteklerin bilinçli kullanımı, sporcuların bilgi düzeyi ve bu bilginin kaynağı ile yakından ilişkilidir. Kick boks; yüksek dayanıklılık, kuvvet ve mental performans gerektiren bir dövüş sporu olması nedeniyle ergojenik destek kullanımının yaygın olabileceği branşlar arasında yer almaktadır. Bu araştırmanın amacı, kick boks sporcularının ergojenik destek kullanımına ilişkin bilgi düzeylerini, bilgi kaynaklarını ve buna bağlı kullanım durumlarını incelemektir. Bu çalışmada, kick boks sporcularının ergojenik yardımcı kullanım düzeylerini belirlemek amacıyla ergojenik yardımcı kullanım düzeyi anketi kullanılmıştır.

Araştırmaya toplam 283 kick boks sporcusu katılmış, veriler Google Forms aracılığıyla toplanmış ve betimsel istatistikler (frekans ve yüzde) kullanılarak analiz edilmiştir. Bulgulara göre sporcuların %51,6'sı ergojenik destek kullandığını, %48,4'ü ise kullanmadığını belirtmiştir. En sık kullanılan ergojenik desteklerin protein tozu (%31,8) ve kreatin (%31,1) olduğu; bunu vitamin-mineral (%21,9), omega-3 (%18,4) ve kafein (%15,5) desteklerinin izlediği belirlenmiştir. Sporcuların ergojenik destek kullanım amaçlarının başında performans artırma (%32,5) yer almakta olup, kas kütlesi geliştirme (%21,9), hızlı toparlanma (%20,5) ve dayanıklılığı artırma (%20,5) diğer önemli nedenlerdir. Ergojenik destek kullanmayan sporcuların başlıca gerekçeleri incelendiğinde, %29,3'ünün bu desteklere ihtiyaç duymadığını düşündüğü, %20,5'inin yeterli bilgiye sahip olmadığını belirttiği ve %16,3'ünün sağlık açısından riskli bulduğu görülmüştür. Ayrıca doping riski (%9,2) ve ekonomik nedenlerin (%9,5) de destek kullanımını sınırlayan faktörler arasında yer aldığı saptanmıştır. Ergojenik desteklere ilişkin bilgi kaynakları incelendiğinde, sporcuların %39,2'sinin internet ve sosyal medyadan, %34,6'sının ise antrenörlerinden bilgi edindiği, sağlık uzmanlarından bilgi alma oranının görece düşük olduğu belirlenmiştir. Katılımcıların %56,2'si ergojenik desteklerin performansı artırdığı görüşünde iken, %37,1'i bu konuda kararsızdır. Sonuç olarak, kick boks sporcuları arasında ergojenik destek kullanımının yaygın olduğu, ancak bilgi düzeyinin büyük ölçüde bilimsel dayanağı sınırlı kaynaklara dayandığı ve bilgi eksikliği ile sağlık endişelerinin kullanım davranışlarını etkilediği görülmektedir. Bu nedenle sporcuların bilinçli ve güvenli ergojenik destek kullanımı konusunda uzmanlar tarafından bilgilendirilmesi önem taşımaktadır.

Anahtar kelimeler: Dövüş sporları, Ergojenik yardımcılar, Performans, Sporcu beslenmesi

REASSESSING LABOUR DYNAMICS: ENSLAVEMENT AND SERFDOM IN THE MEDIEVAL CAUCASUS

Prof. Dr. Ananda MAJUMDAR
Harvard University, USA
ORCID: 0000-0003-3045-005

ABSTRACT
The transitions between enslavement and serfdom in the medieval Caucasus present a complex landscape that merits careful examination, particularly regarding the socio-economic implications for non-elite groups. While the decline of the Western Roman Empire contributed to the rise of serfdom, it did not eliminate the persistence of enslaved individuals. A qualitative analysis of primary historical documents, including legal records and ecclesiastical transactions, reveals patterns of labour and social status that highlight a nuanced understanding of this duality. Findings indicate that despite the increasing prevalence of serfdom, enslavement remained a vital aspect of the region's socio-economic fabric. Many individuals continued to face forms of oppression that closely resembled earlier conditions, thereby challenging simplistic narratives that suggest a linear progression from enslavement to serfdom. This insight underscores the enduring complexities of labour dynamics in the medieval Caucasus. It emphasizes the importance of recognizing non-elite experiences, which have often been overlooked in broader historiographical discussions. Acknowledging and incorporating these non-elite perspectives is essential for achieving a more inclusive and comprehensive understanding of the region's history. Traditional methodologies, particularly those derived from Eurocentric contexts, may fail to adequately address the unique cultural and historical characteristics of the Caucasus. Therefore, there is a pressing need for an interdisciplinary research approach that fuses history, anthropology, and sociology. This framework should prioritize regional primary sources and integrate community histories, employing qualitative methods such as oral histories to capture local narratives. By developing this comprehensive approach, scholars can attain a deeper understanding of the medieval Caucasus. This endeavour not only honours the complexities of its labour relations but also illuminates the lived experiences of non-elite individuals, ultimately enriching our historical comprehension of this significant yet often overlooked region and its people.
Keywords: Enslavement, Medieval Era.

TRANSFORMING CIVIL SERVICE, A FRAMEWORK FOR DIGITAL PEDAGOGY IN GOVERNANCE EDUCATION

Asst. Prof. Muhammad FAISAL
Allama Iqbal Open University, Pakistan
ORCID: 0000-0002-5797-766X

ABSTRACT
Dr Faisal showing his interest in the rapid digitalization of public sectors globally necessitates a paradigm shift in how governance and public administration are taught. This paper explores the integration of **Digital Pedagogy** the use of digital tools to enhance and transform teaching within governance education. By analyzing current frameworks like **TPACK** and **Education 5.0**, this study evaluates how interactive platforms, AI-driven simulations, and data analytics can bridge the gap between theoretical administrative concepts and practical e-governance applications. Findings suggest that digital pedagogy increases student engagement by 35% and improves decision-making competencies through experiential learning. The paper concludes with a strategic roadmap for institutions to modernize governance curricula.
Keywords: Digital Pedagogy, Governance Education, Public Administration, E-governance, EdTech, Artificial Intelligence, Digital Literacy.

HISTORY OF BEAN CULTURE IN GEORGIA IN THE OPINION OF A WRITER AND HISTORIAN

Prof. Dr. Tamar GOGOLADZE
GSSU, Faculty of Human Sciences, Georgia

ABSTRACT
Among the cultivated crops, beans occupy a large place in the diet of the Georgian people. Information about them can be found in written sources since the 17th century (Arcangelo Lambert, Guldenstedt, S.S. Orbeliani, Vakhtang VI, etc.). They were sown in both Western and Eastern Georgia. According to some researchers, bean culture must have been spread from the Ottoman Empire.
Since there was no special science in Georgia until the 1980s, writers and public figures undertook to mention and study them.
The first description of bean culture species was given by the writer and lexicographer Rapiel Eristavi (1824-1901), who in 1884 published a "Short Georgian-Russian-Latin Dictionary", in which 14 species of beans found in Georgia are named. From these, he singled out the three most common varieties.
In 1926, Professor L. Decaprelevich's work "Materials for the Study of Grain Beans in Georgia" was published, in which 79 species of beans are described, only a small part of which is more or less widespread, while the rest are rarely found.
The next large and serious study belongs to Ivane Javakhishvili, who was called the "father of Georgian history", having studied the materials on the history of the agricultural economy of Georgia, considered it necessary to publish it in 1934 in the work "Book II of the Economic History of Georgia", in which he included the subsection "On the Culture of Grain Crops in Georgia in General".
The work, based on complete scientific research (based on historical, archaeological, botanical sciences), provides a classification of beans starting from ancient sources, an analysis of its existing species and their true meaning, properties, the issue of origin, etc.
Today, the mentioned works are of great importance for the history of the culture of beans included in the diet, especially by the 21st century, 7 out of 20 species (some obtained through selection) are widespread in Georgia. Therefore, the works are relevant and are useful for the study of legume cultures today and for the introduction of new varieties in the future.
Explanatory words: beans, R. Eristavi, I. Javakhishvili

SOCIAL AND POLITICAL REFORM: THE ORIGINS, DEVELOPMENT, AND IMPACT OF THE SADRIST TREND ON THE IRAQI ARENA

Nadhim M. FALEH
Mustansiriyah University, College of Engineering, Department of Mechanical Engineering, Iraq
ORCID: 0000-0003-0003-1643

Duaa N. MEJBIL
Mustansiriyah University, College of Arts, Department of Philosophy, Iraq
ORCID: 0009-0001-5928-6272

Muhammed Salman ABBAS
Mustansiriyah University, College of Law, Iraq

ABSTRACT
This paper examines the origins, development, and contemporary political impact of the Sadrist movement in Iraq, analysing its trajectory from underground religious opposition during the Baathist era to its emergence as the dominant political force in post-2003 Iraq. Drawing upon comprehensive socio-historical analysis, the study demonstrates that the Sadrist movement—founded by Mohammed Baqir al-Sadr and developed by Mohammed Sadeq al-Sadr, and continued through Muqtada al-Sadr—represents an authentic indigenous reform movement grounded in principled nationalism and genuine popular legitimacy. The research distinguishes between authentic religious-nationalist movements characterised by financial independence and popular sovereignty, and pseudo-religious parties functioning as instruments of foreign interests or sectarian agendas. By analysing the 2022 parliamentary withdrawal wherein Muqtada al-Sadr vacated seventy-three parliamentary seats despite electoral victory, the paper argues that the Sadrist movement's moral authority extends beyond institutional accumulation. The findings challenge Western secularisation theory by demonstrating that religious authority, when genuinely rooted in popular consciousness and organisational capability, proves more resilient and effective in governance than secular alternatives in post-colonial contexts. The research contributes to scholarly debates on political legitimacy, religious authority, and sustainable development in societies with profound religious consciousness.
Keywords: Sadrist movement, Iraqi politics, religious authority, political legitimacy, social reform, political development, post-colonial governance

DIGITAL HEALTH DIPLOMACY IN THE 21ST CENTURY: BALANCING CROSS-BORDER DATA SHARING, SURVEILLANCE, AND PRIVACY PROTECTION

Sodiq Adetunji ADEKOLA
University of Abuja, Nigeria
ORCID: 0009-0000-0264-6022

Zainab OYERINDE
Federal University Wukari, Nigeria

ABSTRACT

Digital technologies have reshaped global health through real-time disease surveillance, cross-border data sharing, and digital public health interventions. These advances have also generated complex diplomatic challenges related to data sovereignty, privacy, ethical governance, and unequal power relations between countries. Digital health diplomacy has emerged as a key sub-field of global health diplomacy, addressing how states, international organizations, private technology actors, and civil society negotiate the governance of digital health data. This study examines how digital health diplomacy can balance public health surveillance needs with privacy and equity concerns in the 21st century, with particular attention to low- and middle-income countries, especially Nigeria and the wider African region.

A policy-oriented narrative review was conducted, drawing on international treaties, regional frameworks, policy documents, and peer-reviewed literature on digital health, data governance, surveillance, and privacy. The analysis focused on global and regional governance instruments, ethical tensions between surveillance and privacy, and diplomatic dynamics shaping negotiations between high-income countries and low- and middle-income countries, with contextual emphasis on African health data ecosystems. The review shows that digital surveillance significantly strengthens early warning systems, outbreak detection, and global health security. However, fragmented legal frameworks, weak diplomatic coordination, and limited negotiating capacity in low- and middle-income countries undermine equitable data sharing and effective privacy protection. Power asymmetries between technology-producing states and data-providing countries further complicate issues of data ownership, trust, and regulatory enforcement. In Africa, including Nigeria, gaps in infrastructure, governance capacity, and diplomatic leverage constrain meaningful participation in global digital health negotiations.

Digital health diplomacy is critical for aligning global health security goals with privacy, equity, and data sovereignty. Without coherent diplomatic engagement and harmonized governance, digital health risks reinforcing global inequities and eroding trust.

Strengthen regional and international cooperation, build diplomatic and technical capacity, embed privacy-by-design and human-rights principles, promote inclusive multi-stakeholder engagement, and support Africa-led digital health initiatives.

Keywords: Digital Health Diplomacy; Global Health Governance; Data Sharing; Surveillance; Privacy; Data Sovereignty.

SOCIAL CAPITAL FOR PROMOTING FINANCIAL OUTCOMES AND WELLBEING TO LEFT-BEHIND HOUSEHOLD OF MIGRANT WORKER IN NORTHERN BANGLADESH

Dr. Md. Rostom ALI
Institute of Bangladesh Studies (IBS), University of Rajshahi, Bangladesh

Prof. Dr. Md. Fakrul ISLAM
Department of Social Work, Faculty of Social Sciences, University of Rajshahi, Bangladesh

Mst. Surovi AKTHER
Department of Population Science and Human Resource Development, University of Rajshahi, Bangladesh

ABSTRACT
The application of social capital is vastly used to accrue positive socio-economic outcomes in the development of rural Bangladesh. The key purpose of this paper is to investigate the relationship between social capital and poverty reduction among left-behind families of migrant worker in rural areas of Northern Bangladesh.
A cross-sectional study was conducted among 400 households of migrant workers in a rural setting of Northern Bangladesh. To measure an association between social capital and poverty, multivariate binary logistic regression model was applied, in where odd ratio were used to determine the presence of of the regression coefficients.
This paper argues that social network plays a significant role to deal with poverty and other socio-economic matters in household settings. The logistic regression reveals that social capital positively helps to improve household condition and family income during post-migration by OR=0.586, 95% CI, P=**0.004, CI=**1.421, 95% CI. That means, there is a possibility to develop household condition from Kacha to Semi-pacca, if migrant workers work in the developed countries of the world ($p=0.042<0.05$). This paper has a significant policy implication related to mitigating poverty in rural Bangladesh as well as other developing countries of the world. Because, the application of social capital offers a positive improvement and change in the household conditions of the poor citizens as a whole.
Keywords: Social Capital, Financial Outcomes, Wellbeing, Northern Bangladesh

CLIMATE CHANGE AND ITS EFFECTS ON THE SOCIO-ECONOMIC DEVELOPMENT OF NIGERIA

Dr. Chukwuemeka Godson EME (PhD)
Department of Business Administration, Faculty of Management Sciences, National Open University of Nigeria, Nigeria

ABSTRACT
Climate change has become a great challenge to our generation and its impact is felt in almost every society in the world. Nigeria is likely to be the one of the most negatively impacted countries in the world as a result of climate change. Nigeria is plagued with many ecological problems of various dimensions. Whilst the people living in the southern part of the country are being ravaged by flood and gully erosion, their counterparts in the north are contending with the menace of desertification, deforestation and drought, among others. These environmental challenges have direct and indirect effects on the social and economic activities of the societies. The paper reviews the potential impact of climate change on Nigeria's economic and socio-cultural developments. Secondary data were used and descriptive research design was adopted. The findings indicates that many sectors of the Nigerian economy appears to be directly vulnerable to the impacts of climate change such as manufacturing, insurance, transportation, offshore oil and gas exploration and thermal and hydro-power generation and transmission. Other vulnerable sectors are those dependent on climate-sensitive resources like agriculture, fishing, forestry, renewable energy and eco-tourism. These cumulative effects will impact the GDP negatively. On the basis of the findings, the following were recommended; there should be policies toward mitigation and toward developing technology that can improve productivity and are environmentally friendly, irrigation should be encouraged, NIMET should be well equip to enable it function effectively, government agencies and NGO should sensitize the people about the danger and had to work towards a sustainable environment.
Keywords: Climate change, Global warming, Economic development, Sustainable development, Nigeria

OPTIMIZING OUTCOMES IN PSORIASIS: IMPACT OF DENIPLANT NUTRACEUTICALS

Maj. Gheorghe GIURGIU
Deniplant-Aide Sante Medical Center, Biomedicine, Romania
ORCID: 0000-0002-5449-2712

Prof. Dr. Manole COJOCARU
Academy of Romanian Scientists, Romania
Titu Maiorescu University, Faculty of Medicine, Romania
ORCID: 0000-0002-7192-7490

ABSTRACT

Background A growing body of evidence highlights that intestinal dysbiosis is associated with the development of psoriasis. The gut–skin axis is the novel concept of the interaction between skin diseases and microbiome through inflammatory mediators, metabolites and the intestinal barrier. The gut microbiome affects skin homeostasis through its influence on the signaling pathways that coordinate epidermal differentiation.

The objective of this study was to synthesize current data on the Deniplant natural modulator of the gut microbiome in patients with psoriasis.

Materials and methods All studies confirmed the association of psoriasis and gut microbiota dysbiosis. We describe the recent advances regarding the interplay between gut microbiota and the skin. Thus, the microbiome can be considered an effective therapeutical target for treating this disorder.

Results This presentation provides a detailed and comprehensive systematic study regarding gut microbiome in patients with psoriasis. These results are supported by clinical observations based on a case serie showing improvement in psoriatic skin lesions after Deniplant natural modulator. It is still not clear whether psoriasis is an effect or a cause of the observed disbalance between beneficial and pathogenic microbes. In this context, the study provides very interesting results, showing significantly greater changes in the gut microbiome of patients with psoriasis treated Deniplant natural modulator

Conclusion There is a significant association between alterations in gut microbial composition and psoriasis. Intestinal dysbiosis is a state of imbalanced gut microbiome that eventually has a negative impact on skin function and integrity. Deniplant natural modulator is a potential therapeutic strategy in patients with psoriasis

Keywords: dysbiosis, microbiome, psoriasis, gut-skin axis, gut barrier, Deniplant nutraceuticals

THE EVOLVING ROLE OF PHARMACISTS IN DEPRESSION CARE: A SCOPING REVIEW

S. DEEPAK
Faculty of Pharmacy, Bharath Institute of Higher Education and Research, India

A. PALANISAMY
Faculty of Pharmacy, Bharath Institute of Higher Education and Research, India

S. KALAIVANAN
Faculty of Pharmacy, Bharath Institute of Higher Education and Research, India

Lavanya BABU
Faculty of Pharmacy, Bharath Institute of Higher Education and Research, India

C. RAVI
Faculty of Pharmacy, Bharath Institute of Higher Education and Research, India

K. VAISHNAVI
Faculty of Pharmacy, Bharath Institute of Higher Education and Research, India

ABSTRACT
This scoping review explores the global evidence on pharmacists' contributions to depression care, with a particular focus on studies conducted in the Arab region. Across 40 included studies, pharmacists were shown to deliver a wide range of services that support people with depression, from specific single interventions to more comprehensive or team-based management approaches. Most interventions were associated with improved patient outcomes, highlighting pharmacists' value as accessible healthcare professionals who can enhance treatment adherence, provide medication counselling, monitor therapy, and offer support throughout the management process. Despite this positive impact, the review also identified several barriers that limit pharmacists' involvement in depression care, including limited time, insufficient training, and challenges integrating mental health services into routine pharmacy practice. These obstacles suggest a need for greater support, education, and structural changes to optimise pharmacists' contributions. A notable finding is the lack of evidence from the Arab region. Only three studies addressed pharmacists' roles in depression management within the 22 Arab League countries, revealing a significant research gap. Overall, the review demonstrates strong international support for expanding pharmacists' roles in mental health and underscores the importance of further research and policy development, particularly in the Arab region, to fully utilise pharmacists' potential in improving depression-related outcomes.
Keywords: Depression; Management; Pharmaceutical care; Pharmacist; Pharmacy; Pharmacy services.

BENZODIAZEPINES VS ZOLPIDEM: A PHARMACOLOGICAL PERSPECTIVE

Lulzime BALLAZHI
Faculty of Medical Sciences, Department of Pharmacy, University of Tetovo, North Macedonia

Edita ALILI-IDRIZI
Faculty of Medical Sciences, Department of Pharmacy, University of Tetovo, North Macedonia

Merita DAUTI
Faculty of Medical Sciences, Department of Pharmacy, University of Tetovo, North Macedonia

Sihana AHMETI-LIKA
Faculty of Medical Sciences, Department of Pharmacy, University of Tetovo, North Macedonia

Drita HAVZIU-YZEIRI
Faculty of Medical Sciences, Department of Pharmacy, University of Tetovo, North Macedonia

Hanife RUSTEMI-AHMETI
Faculty of Medical Sciences, Department of Pharmacy, University of Tetovo, North Macedonia

Arbnora QAHILI-NAZIFI
Faculty of Medical Sciences, Department of Pharmacy, University of Tetovo, North Macedonia

ABSTRACT
Benzodiazepines and zolpidem are widely used sedative–hypnotic agents that exert their effects through modulation of the γ-aminobutyric acid type A ($GABA_A$) receptor, yet they differ significantly in their pharmacological profiles and clinical applications. Benzodiazepines act non-selectively on multiple $GABA_A$ receptor α subunits, resulting in a broad spectrum of effects including anxiolysis, sedation, muscle relaxation, anticonvulsant activity, and amnesia. In contrast, zolpidem, a non-benzodiazepine "Z-drug," demonstrates preferential affinity for the α1 subunit of the $GABA_A$ receptor, conferring a more selective hypnotic action with minimal anxiolytic, muscle-relaxant, or anticonvulsant effects. These pharmacodynamic differences translate into distinct clinical profiles: benzodiazepines are used across a wide range of neurological and psychiatric conditions, whereas zolpidem is primarily indicated for short-term management of insomnia, particularly sleep-onset difficulties. Furthermore, zolpidem is associated with less disruption of sleep architecture, fewer residual daytime effects, and a lower risk of tolerance and dependence compared to benzodiazepines, although such risks are not eliminated. This ABSTRACT highlights the key pharmacological distinctions between benzodiazepines and zolpidem, emphasizing how receptor selectivity influences therapeutic efficacy, safety, and clinical decision-making.
Keywords*:* benzodiazepines, zolpidem, pharmacological profiles, clinical applications

PROCESS AND FORMULATION ENGINEERING OF PLANT-DERIVED ACTIVES: PHARMACEUTICAL MANUFACTURING STRATEGIES FROM EXTRACTION TO FINAL DOSAGE FORMS

Idris SHAMSUDDEEN
Umaru Musa Yar'adua University, Nigeria

Oliyide Daramola ESTHER
Moshood Abiola Polytechnic, Nigeria

ABSTRACT

Plant-derived actives have become increasingly significant in pharmaceutical product development owing to their diverse therapeutic properties, biocompatibility, and heightened acceptability of natural-based therapies. Despite its potential, the translation of botanical resources into marketable pharmaceutical products remains complicated because of chemical complexity, unpredictability in raw materials, and sensitivity to processing conditions. Pharmaceutical engineering offers systematic methodologies for addressing these challenges via regulated extraction, formulation, scale-up, and quality management measures. This study rigorously examines the approaches of process and formulation engineering utilized in the pharmaceutical manufacturing of plant-derived active ingredients, covering the entire product lifecycle from extraction and purification to the design of the final dosage form. Critical engineering solutions, encompassing advanced extraction technologies, stabilization and encapsulation techniques, processing of solid and semi-solid dosage forms, and Quality-by-Design (QbD) frameworks, are examined. Current research reveals patterns and trends, highlighting strengths, limitations, and discrepancies between laboratory success and commercial applicability. This review synthesizes current literature to highlight the limits in incorporating engineering principles into the production of botanical medications, asserting that process-driven design is crucial for maintaining consistent quality, efficacy, and regulatory compliance. The paper further suggests future research methodologies focused on scalable, repeatable, and sustainable production of plant-derived pharmaceuticals.

Keywords: Pharmaceutical engineering, Plant-derived actives, Process engineering, Formulation engineering, Dosage forms, Quality-by-Design, Botanical pharmaceuticals

ENGINEERING THE PHARMACOSMETIC INTERFACE: PROCESS-DRIVEN DESIGN OF BOTANICAL ACTIVES FOR THERAPEUTIC-GRADE NATURAL COSMETICS

Idris SHAMSUDDEEN
Umaru Musa Yar'adua University, Nigeria

Oliyide Daramola ESTHER
Moshood Abiola Polytechnic, Nigeria

ABSTRACT

The convergence of pharmaceutical engineering and beauty science has given rise to the notion of pharmacosmetics, where cosmetic products are produced to generate therapeutic advantages while meeting pharmaceutical-grade quality requirements. Botanical actives, widely acknowledged for their bioactivity, biocompatibility, and consumer appeal, play a significant part in this interaction. However, their incorporation into high-performance natural cosmetic products is inhibited by challenges connected to chemical instability, batch-to-batch variability, poor bioavailability, and restricted process scalability. This research critically explores the pharmacosmetic interface from a pharmaceutical engineering standpoint, highlighting process-driven solutions for the extraction, stabilization, formulation, and production of botanical actives. Key engineering approaches including advanced extraction technologies, encapsulation systems, nano-enabled delivery platforms, and Quality-by-Design (QbD) frameworks are analyzed to highlight how engineering principles enhance product consistency, efficacy, and regulatory compliance. Trends in industrial processing, strengths and limitations of contemporary approaches, and contradictory discoveries in formulation performance are discussed. By integrating current work, this study exposes inadequacies in the systematic integration of engineering design into natural cosmetic creation and offers pharmaceuticization as a pathway toward therapeutic-grade goods.

Keywords: Pharmacosmetics, Pharmaceutical engineering, Botanical actives, Process design, Nanoformulation, Quality-by-Design, Natural cosmetics

FABRICATION OF FLAVONOIDS BASED NANOPARTICLES FOR TREATMENT OF COLON CANCER

Samruddhi Amar Pisal
Bharati Vidyapeeth College of Pharmacy, Student of Shivaji University, Department of Pharmaceutical Quality Assurance, Kolhapur
ORCID: 0009-0006-0030-0806

Dr. P. B. Varne
Assistant Professor, Faculty of Bharati Vidyapeeth College of Pharmacy, Kolhapur, Department of Pharmaceutical Quality Assurance, Kolhapur

ABSTRACT
Nanoparticles are small particles that can be used to deliver herbal drugs directly to specific areas in the body, improving the effectiveness and safety of treatments. In particular, nanoparticle-based treatments have shown promise in managing cancer, including colon cancer, by reducing the side effects of traditional treatments like chemotherapy. By using nanoparticles, the drug's solubility, stability, and ability to reach targeted areas are improved, making the treatment more effective and reducing harmful side effects. Colon cancer is one of the leading causes of death globally, and current treatments like chemotherapy and surgery often come with significant drawbacks. Natural compounds like flavonoids, are being studied for their antioxidant and anticancer properties. To improve the delivery of these compounds to cancer cells, researchers have developed nanoparticles made from pectin and glyceryl monooleate, which are substances that help form the particles. These nanoparticles enhance the stability and solubility of the flavonoids and release them slowly, which is beneficial for targeting colon cancer cells. The nanoparticles were carefully designed and tested using various techniques, including Xray diffraction (XRD), differential scanning calorimetry (DSC), and transmission electron microscopy (TEM). These tests confirmed that the nanoparticles were small, stable, and able to effectively carry the flavonoids. In vitro studies on colon cancer cells showed that the nanoparticles successfully delivered the drugs, suggesting that this approach could lead to better oral drug delivery systems for colon cancer treatment, with improved safety and effectiveness.
Keywords: Nanoparticles, Colon Cancer, Flavonoids.

PREVALENCE OF HBsAg AMONG HIV-POSITIVE PATIENTS ON ANTIRETROVIRAL THERAPY FOR THREE YEARS AT GENERAL HOSPITAL OFFA, KWARA STATE

Emmanuel Bukola IYIOLA
Department of Microbiology, Faculty of Life Sciences, University of Ilorin, Nigeria

Aanuoluwa Temitayo IYIOLA
Department of Biochemistry, Federal University of Technology, Minna, Nigeria

Esther Opeyemi AWORENI
Department of Anatomy, Faculty of Basic Medical Sciences, Ladoke Akintola University of Technology, Nigeria

Dr. A. O. UDEZE
Department of Microbiology, Faculty of Life Sciences, University of Ilorin, Nigeria

ABSTRACT
Hepatitis B and Human immunodeficiency virus (HIV) are highly endemic in Nigeria and are important causes of death and disability. Co-infection between Hepatitis B virus (HBV) and Human Immunodeficiency Virus (HIV) commonly occur as both viruses share a common mode of transmission. This study was carried out at General Hospital Offa, Kwara State, Nigeria to determine the prevalence of hepatitis B virus (HBV) among HIV-infected individuals who have been on therapy for less than or equal to 3 years. A total number of 51 infected HIV individuals (15 males and 36 females) were selected and participated in the study and these subjects were screened for the presence of hepatitis B surface antigen (HBsAg) using ezymes linked immunosorbent assay (ELISA). Out of the 51 samples, 3(5.9%) were positive to HBsAg. The result also shows that 3(8.3%) ouf of the 36 females were positive while male individuals showed no prevalence. Analysis of the result by age group showed that the highest prevalence of 15.3% occurred between the age group 21 – 30, followed by those between the age group of 11 – 20, where the prevalence was 6.7%. Others age groups showed zero prevalence. Analysis of the results based on marital status showed that single patients had a prevalence of 6.3%, followed by married patients who had a prevalence of 5.8% while other marital status showed zero prevalence. Analysis of the results based on the subjects' occupation showed that subjects who works as a Student had a prevalence of 11.8%, followed by those in self-employed category with a prevalence of 5.3%, no prevalence for other groups. This study confirms the presence of hepatitis B infection among HIV patients who have been on therapy for $\leq$ 3 years in General Hospital Offa, Kwara State. Hence, there is need to screen all HIV- positive individuals for HBV infection.
Keywords: Antiretrovirals, HBsAg Prevalence, Hepatitis B Virus, HIV, Kwara State, Nigeria.

ARTIFICIAL INTELLIGENCE APPLICATIONS IN ACADEMIC LIBRARIES: OPPORTUNITIES AND ETHICAL CONCERNS

OSUNKENTAN OLADOTUN AYOWUMI
Federal College of Education (Special), Oyo

ABSTRACT
The growing adoption of Artificial Intelligence (AI) technologies is transforming service delivery and operational practices within academic libraries. As universities increasingly embrace digital innovation, libraries are leveraging AI-driven tools such as chatbots, intelligent discovery systems, automated cataloguing, and data analytics to enhance access to information, improve efficiency, and support teaching and research. This paper examines the major applications of Artificial Intelligence in academic libraries and evaluates the opportunities and ethical concerns associated with its implementation. Using a conceptual and literature-based approach, the study explores how AI technologies improve user services, information retrieval, collection management, digitization, and research support. While AI offers significant benefits, including personalized services, 24/7 user support, and data-driven decision-making, it also raises critical ethical issues related to user privacy, data protection, algorithmic bias, transparency, and the future role of library professionals. The paper argues that uncritical adoption of AI may undermine core library values such as intellectual freedom, equity of access, and user confidentiality. Consequently, the study emphasizes the need for responsible and ethical AI deployment guided by professional standards, institutional policies, and continuous capacity building for librarians. The paper concludes that Artificial Intelligence should be viewed as a complementary tool that enhances, rather than replaces, the professional role of librarians. It recommends the development of ethical AI frameworks, stakeholder collaboration, and further empirical research to ensure sustainable and inclusive AI adoption in academic library environments.
Keywords: Artificial Intelligence, Academic Libraries, Ethical Issues, Library Innovation, Information Services, Library and Information Science

TRANSLATION QUALITY ASSESSMENT

Olena PANCHENKO
Oles Honchar Dnipro National University, Dnipro, Ukraine
ORCID 0000-0003-2217-5613

ABSTRACT
Translation quality assessment is a cornerstone for both distinguished TSPs and specialized departments of translation training. The former aim primarily at maintaining their reputation as a reliable partner, the latter strive to make the learning process as close as possible to the competitive conditions of the translation industry (rigid deadlines, customer-specific requirements to each particular case, high expectations). Thus, the need arises to introduce the objective and adequate (not too high, and not too "student-friendly) training standard based on such factors as error calculation, good practices appreciation, compliance and formal rules applicable to the context and the text type (in our case literary, summary, and technical translation).
The professional standards and evaluation metrics may be successfully integrated into the translator training, how the latter may be modified to suit the learning objectives defined by instructors, and further serve as an efficient tool of measuring both the efficiency of the training process in general (if the process should be changed, improved or left as it is), and the academic achievement of an individual student (for competition purposes; and to eliminate huge gaps between "the best" the "the worst" student within one group hindering further academic progress).
Having investigated the main theoretical notions of the quality aspect of applied translation studies, and summarized versatile definitions and classifications of such phenomena as quality, equivalence and adequacy, we were able to arrive at a conclusion that translation equivalence is a complex notion which may be realized at above-word or even text level depending on the type of the source text and the objectives of a translator (provided that the translation remains adequate, does not violate the TL norms, and in no way disturbs the original "skopos" – the author's intent). On the other hand, there are cases which clearly require equivalence at a word level, and any deviation from the original order of facts (including translator's comments, personal interpretations and products of imagination) would constitute a serious error and, most probably, lead to rejection of a translation by the prospective customer. Relatively free translations are allowed for creative assignments that involve rendering expressive means and stylistic devices. On the contrary, technical pieces with much terminology and summary translations during conferences and briefings require maximum loyalty to the facts and ideas presented in the original message.
Keywords: translation, assessment, standards.

STRUCTURAL CHARACTERISTICS AND BASEMENT DEPTHS INTERPRETED FROM MAGNETIC DATA OF THE GUENFOUDA REGION (NORTHEASTERN MOROCCO): HYDROGEOLOGICAL IMPLICATIONS

Dr. Soufiane ZIANI
Laboratory of Applied Geosciences, Department of Geology, Faculty of Sciences, Mohammed I University, Morocco
Laboratory of Innovation in Sciences, Technology and Education, Regional Center for the Professions of Education and Training (CRMEFO), Morocco
ORCID: 0000-0003-3302-3973

Dr. Driss KHATTACH
Laboratory of Applied Geosciences, Department of Geology, Faculty of Sciences, Mohammed I University, Morocco
ORCID: 0000-0002-4756-8336

Dr. Jamila ABDERBI
Laboratory of Applied Geosciences, Department of Geology, Faculty of Sciences, Mohammed I University, Morocco
Laboratory of Innovation in Sciences, Technology and Education, Regional Center for the Professions of Education and Training (CRMEFO), Morocco

Dr. Zahra ZERROUQI
Laboratory of Innovation in Sciences, Technology and Education, Regional Center for the Professions of Education and Training (CRMEFO), Morocco

ABSTRACT
The application of magnetic methods in groundwater exploration has significantly advanced over the past three decades. Magnetic surveys are commonly employed during reconnaissance studies to delineate subsurface geological structures and identify zones of interest for detailed hydrogeological investigations. By detecting lithological contrasts and structural features associated with groundwater occurrence, magnetic data provide valuable insights into potential aquifer systems and recharge zones. The Guenfouda region in northeastern Morocco is characterized by Neogene volcanic formations emplaced within an extensive basaltic rocks extending toward the Angads Plain. Despite its hydrogeological importance, the structural and lithological framework of the region—particularly the volcanic edifices that may host groundwater—remains poorly understood. In this context, the present study aims to characterize the subsurface structural framework, map lithological variations, and estimate the depth to the magnetic basement. To achieve these objectives, several magnetic data processing and enhancement techniques were applied, including reduction to the pole, vertical and horizontal gradients, analytic signal combined with upward continuation, tilt angle, logistic transformation, spectral analysis, and Euler deconvolution. These results were integrated with available geological information and borehole data to improve interpretation reliability. The analyses reveal that the study area is predominantly affected by NNE–SSW and NNW–SSE trending structural lineaments, which are interpreted as inherited tectonic features. These structures likely exert a strong control on the regional groundwater system by influencing aquifer geometry, groundwater flow paths, and potential recharge zones. The findings highlight the effectiveness of magnetic methods in supporting hydrogeological investigations in volcanic and structurally complex regions.
Keywords: Northeastern Morocco; Guenfouda region; Magnetic data; Structural lineaments; Basement depth; Groundwater

SINTERED CLAY CERAMIC WATER FILTER: *E.coli* and Fluoride

Enyew Amare ZEREFFA
Adama Science and Technology University, School of Applied Natural Sciences, Department of Applied Chemistry, Ethiopia

ABSTRACT
Metal oxide ceramic is getting more attention in the current era due to its unique pore structures, hydrophilic surfaces, high chemical, thermal, and mechanical stabilities, which provide opportunities for application in water treatment. This paper presents the results of an experimental study on the effects of different ratios of clay, grog, burnout, and bone char on the efficiency of ceramic composite water filters. Filters of different designs were developed from clay (50, 60, 70, 75, and 80) %, burnouts (15, 25, and 35) %, grog (5 and 15) %, bone char (5%) by volume and sintered at a temperature of 900°C for 6 hours. The phase and functional group identification of the sintered filters, investigated with x-ray diffraction and infrared spectroscopy, revealed the presence of mixed phases and hydroxyl functional groups on the surface of the sintered filters. Field emission scanning electron microscopy (FESEM) revealed the porous nature of the microstructures of the sintered filter elements. The ceramic water filter design (C900-50-15-35) with total porosity 35.89±0.04 %, flow rate 2.05±0.41 % and the percent *E coli*, nitrite and fluoride removal efficiency: 99.6±0.40 %, 81.17±0.22 % and 96.4±0.42 % were obtained from this work. Porosity evaluated by BET study for C900-50-15-35 demonstrated an average pore size and surface area of 5 nm and 7.30 m2/g, respectively.
Keywords: sintering, ceramic filter, grog, microstructure, porosity

MAPPING STORMWATER HARVESTING POTENTIAL IN SEMI-ARID ZONES USING A HUMAN-PHYSICAL ANALYSIS-GEOGRAPHIC INFORMATION SYSTEM: IMPLICATIONS FOR SUSTAINABLE DEVELOPMENT IN THE KHÉMISSET REGION

Aziz BOURASS
Geosciences Laboratory, Faculty of Sciences, Ibn Tofail University, Morocco

Miloud CHAKIT
National School of Public Health, Morocco

Rajaa KADDAR
Geosciences Laboratory, Faculty of Sciences, Ibn Tofail University, Morocco

Sanae EL HARCHE
Department of Natural Resources and Environment, Hassan II Institute of Agronomy and Veterinary Medicine, Morocco

Mohamed MANAOUCH
Laboratory of Environment, Societies and Territories, Department of Geography, Faculty of Humanities and Social Sciences, Ibn Tofail University, Morocco

Mohamed AGHAD
Laboratory of Environment, Societies and Territories, Department of Geography, Faculty of Humanities and Social Sciences, Ibn Tofail University, Morocco

Mohamed SADIKI
Geosciences Laboratory, Faculty of Sciences, Ibn Tofail University, Morocco

ABSTRACT
In a context of water stress exacerbated by climate change, identifying areas suitable for stormwater harvesting is a strategic lever for securing water supplies in semi-arid regions. This study applies a multi-criteria model based on HPA and GIS to assess the suitability of the Khémisset territory for stormwater harvesting infrastructure. Twelve key factors related to climate, topography, hydrology, geology, and land use were analyzed. Thematic maps were integrated into a weighted model to generate a composite suitability map. The analysis reveals a predominance of moderately suitable areas (48%), followed by 40% of poorly suited areas, and 9% of highly suitable areas. The spatial distribution shows a strong correlation between favorable areas and sectors with gentle slopes, low infiltration soils, and higher rainfall. Model validation (AUC = 0.83) confirms its predictive performance. The results provide a robust basis for guiding water planning, supporting territorial resilience, and prioritizing intervention areas in sustainable water management strategies.
Keywords : Water management; Stormwater collection; AHP–GIS; Semi-arid zones; Khémisset; Multi-criteria decision-making; Territorial planning.

INTEGRATION OF HIERARCHICAL PROCESS ANALYSIS AND GIS FOR MAPPING POTENTIAL STORMWATER HARVESTING SITES IN A SEMI-ARID CONTEXT: APPLICATION TO THE PROVINCE OF KHÉMISSET, MOROCCO

Aziz BOURASS
Geosciences Laboratory, Faculty of Sciences, Ibn Tofail University, Morocco

Miloud CHAKIT
National School of Public Health, Morocco

Rajaa KADDAR
Geosciences Laboratory, Faculty of Sciences, Ibn Tofail University, Morocco

Sanae EL HARCHE
Department of Natural Resources and Environment, Hassan II Institute of Agronomy and Veterinary Medicine, Morocco

Mohamed MANAOUCH
Laboratory of Environment, Societies and Territories, Department of Geography, Faculty of Humanities and Social Sciences, Ibn Tofail University, Morocco

Mohamed AGHAD
Laboratory of Environment, Societies and Territories, Department of Geography, Faculty of Humanities and Social Sciences, Ibn Tofail University, Morocco

Mohamed SADIKI
Geosciences Laboratory, Faculty of Sciences, Ibn Tofail University, Morocco

ABSTRACT
Water scarcity in semi-arid zones necessitates the adoption of innovative methods to optimize water resource management. This study proposes an integrated approach combining hierarchical analytical processing (HPA) and geographic information systems (GIS) to identify the most suitable stormwater harvesting sites in the province of Khémisset, Morocco. Twelve environmental and socio-economic criteria were selected, including rainfall, slope, land use, geology, soil texture, and distance to roads, faults, and watercourses. Each parameter was weighted according to the HPA method, with satisfactory consistency (CR = 0.010). The spatial integration of thematic layers enabled the production of a stormwater harvesting potential map classified into five levels. The results show that 48% of the study area has moderate suitability, while 9% has highly favorable suitability, located mainly in the eastern and northeastern sectors. Validation, based on comparison with existing hydraulic structures and a ROC curve (AUC = 0.83), confirms the model's reliability. This reproducible approach constitutes a useful decision-making tool for the sustainable planning of water resources in water-stressed environments.
Keywords: Analytic Hierarchy Process; Geographic Information System; Rainwater Collection; Semi-arid Zones; Khémisset; Multi-criteria Model.

ADVANCED PHYSICO-CHEMICAL TREATMENT OF AGRO-FOOD INDUSTRY EFFLUENTS

PhD Student Mohamed EL MORSY
Ibnou Zohr University, Faculty of Sciences, Department of Chemistry, Laboratory of Materials and Environment (LME), Morocco
ORCID: 0009-0005-3979-1940

Prof. Dr. Laila AFIA
Ibnou Zohr University, Faculty of Sciences, Department of Chemistry, Laboratory of Materials and Environment (LME), Morocco
ORCID: 0009-0003-6324-8396

ABSTRACT

Agro-industrial wastewaters are characterized by high organic loads, elevated turbidity, and the presence of refractory and toxic compounds that limit the effectiveness of conventional treatment technologies. In this context, physico-chemical processes represent robust and efficient solutions for the advanced treatment of effluents generated by the food processing industry, particularly when strict discharge or reuse standards must be met.

This study focuses on the evaluation of physico-chemical treatment processes, including advanced oxidation processes (ozonation, Fenton, and photo-Fenton), coagulation–flocculation, and membrane filtration, for the removal of organic matter, suspended solids, and persistent pollutants from agro-industrial wastewaters. The performance of each process is assessed in terms of chemical oxygen demand (COD) reduction, turbidity removal, color abatement, and operational efficiency.

Advanced oxidation processes showed a strong ability to degrade recalcitrant organic compounds through the generation of highly reactive hydroxyl radicals, leading to significant mineralization of pollutants. Coagulation–flocculation proved effective as a primary treatment step, enhancing solid–liquid separation and improving the efficiency of downstream membrane filtration processes. Membrane technologies, such as ultrafiltration and nanofiltration, enabled the production of high-quality treated effluents, suitable for potential reuse applications.

Finally, the implementation of hybrid physico-chemical treatment schemes is discussed as a promising approach to maximize treatment efficiency while reducing chemical consumption and operational constraints. The results highlight the relevance of physico-chemical processes as reliable and adaptable technologies for sustainable agro-industrial wastewater management.

Keywords: agro-industrial wastewater, physico-chemical treatment, advanced oxidation processes, coagulation–flocculation, membrane filtration, hybrid processes.

IMPACT OF CLIMATE CHANGE ON GROUNDWATER STORAGE VARIATIONS IN THE JEL AQUIFER (EASTERN MOROCCO): CONTRIBUTIONS OF IN SITU DATA AND REMOTE SENSING

Dr. Soufiane ZIANI
Laboratory of Applied Geosciences, Department of Geology, Faculty of Sciences, Mohammed I University, Morocco
ORCID: 0000-0003-3302-3973

Dr. Driss KHATTACH
Laboratory of Applied Geosciences, Department of Geology, Faculty of Sciences, Mohammed I University, Morocco

Mr. Anass AYNAOU
Laboratory of Applied Geosciences, Department of Geology, Faculty of Sciences, Mohammed I University, Morocco

ABSTRACT
Climate change exerts significant pressure on global water resources through alterations in precipitation regimes, increased frequency and intensity of extreme events such as droughts and floods, and changes in water availability and quality. Recent hydrological research increasingly integrates advanced geo-scientific modeling and remote sensing techniques to monitor hydrological variability and assess future water resource sustainability. The Jel aquifer, covering more than 650 km², represents the primary source of drinking water for the Guercif Province in eastern Morocco. However, under the region's semi-arid climate, current groundwater reserves are insufficient to meet the growing demands for domestic and agricultural water use. In this context, the present study aims to analyze the spatio-temporal variations in groundwater storage and to assess the impact of climate change on groundwater resources over the period 2002–2023. An improved filtering of GRACE (Gravity Recovery and Climate Experiment) data was implemented, combined with a hybrid approach integrating in situ rainfall and soil moisture measurements, as well as FLDAS (Land Data Assimilation System) and IMERG (Integrated Multi-satellite Retrievals for GPM) products. This methodology enabled the estimation of groundwater storage (GWS) variation rates in the Jel aquifer. The results reveal a generalized depletion of groundwater resources at an average rate of −1.02 cm/year, corresponding to an annual volumetric loss of approximately -6.63×10^8 m³. This depletion is closely synchronized with well-documented drought periods in the region. These findings enhance the understanding of regional groundwater dynamics and provide valuable insights for anticipating challenges related to sustainable groundwater management under changing climatic conditions.
Keywords: Climate change; Jel aquifer; GRACE; Remote sensing; Groundwater storage; Hydrological modeling.

COMPARATIVE ASSESSMENT OF WATER QUALITY FROM BOREHOLES AND SHALLOW WELLS IN DIFFERENT LAND USE AREAS IN MAKURDI METROPOLIS, BENUE STATE, NIGERIA

Ipu Michael OGWUMA
Department of Environmental Sustainability, Joseph Sarwuan Tarka University, Nigeria

Jonathan A. OGWUCHE
Department of Geography, Benue State University, Nigeria

Edache Ernest EKOJA
Department of Crop and Environmental Protection, Joseph Sarwuan Tarka University, Nigeria

Idikwu Onwe UGBEM
Department of Physics, Joseph Sarwuan Tarka University, Nigeria

ABSTRACT
This study compared water quality from boreholes and shallow wells across different selected land uses in Makurdi Metropolis, Benue State, Nigeria. Eight boreholes and eight shallow wells were purposively selected within the land use Areas with the respective controls outside the land uses. water samples were collected and analyzed for pH, Temperature (), turbidity (NTU), E.C (s/cm), TDS (ppm), TSS (mg/L), Taste, Colour and, heavy metals Mn (mg/L), Cu (mg/L), and Fe (mg/L). Descriptive statistics and inferential statistics (t-test, ANOVA) were used to compare the water quality parameters between boreholes and shallow wells in the land uses. The results showed no significant difference in water quality parameters between boreholes and shallow wells as their -values are greater than α-values (0.05), thus, commercial (0.974), industrial (0.7211), auto-mechanic (0.1820), and residential (0.6583) unlike in Kanshio where the p-value is (0.0060), indicating significant difference indicating the pollution from the nature of land use(auto mechanic). Also, a comparison with the Nigeria water quality standards shows that values were within the acceptable range for all the parameters. All these indicate that water quality in those areas is safe except the water quality in Kanshio irrespective of depth. The study suggests regular monitoring of underground water, especially within the mechanic mobile workshop.
Keywords: Water quality, Boreholes, Shallow wells, Land use, Heavy metals

RARE EARTH ELEMENTS IN WATERBERG COALFIELD: MINERALOGY, EXTRACTION, AND ICP-MS ANALYSIS OF RUN-OF-MINE AND DISCARD COAL

Ahmed EL-BOUZIDI
University of Hassan II – Casablanca, FSTM, Morocco
REMINEX Research Center, MANAGEM Group, Morocco

Chaimaa ELABBARI
Mohammed V University in Rabat, Faculty of Sciences of Rabat, Morocco

Brahim ACHIOU
University of Hassan II – Casablanca, FSTM, Morocco

Dounia BEQQOUR
University of Hassan II – Casablanca, FSTM, Morocco

Younes ABROUKI
Mohammed V University in Rabat, Faculty of Sciences of Rabat, Morocco

Latifa BEN AKKA
Laboratory of Geosciences, Department of Geology, Faculty of Sciences, Ibn Tofaïl University, Morocco

Hayat LOUKILI
University of Hassan II – Casablanca, FSTM, Morocco

ABSTRACT

Rare earth elements (REEs) are a series of elements that includes the lanthanides through lutetium (Lu), They also contain scandium (Sc) and yttrium (Y), which have similar chemical and physical properties to those in the group La-Lu. In response, many new technologies emerged in order to locate where the resources lay hidden within Earth's crust and ocean depths. The demand for REEs has increased drastically in recent years, as they are essential to emerging technologies. This growth is particularly strong in new electronics and green energy applications but extends even to lesser-known uses like battery alloys, glass additives, and fluidized cracking catalysts in the petroleum industry. This study explores the extraction of rare earth elements (REE) from high ash content crude solid samples and coal tailings. Three distinct methods were considered such as ultrasound-assisted caustic digestion, direct acid leaching and ultrasound-assisted caustic acid leaching. Inductively coupled plasma-mass spectrometry (ICP-MS) was used for the determination of the concentration of rare earths in solid echnatillons and in the leachates obtained. The leaching of coal samples with a 40% NaOH solution at 80 °C combined with sonication at 40 KHz, led to low rare earth recovery rates (less than 2%). However, remarkable enrichment of REE was observed in the raw and rejected coal with respective increases of 17% and 19%. However, acid leaching using 7.5% hydrochloric acid resulted in recovery rates below 11.0% while combining acid leaching (HCl 7.5%) with caustic digestion (NaOH and sonication) achieved notable rare earth element recoveries of 88.8% for crude samples and 80.0% for rejects. A mineralogical characterization was implemented to identify the dominant phases as well as the minerals carrying ETR. X-ray diffraction (XRD) analysis identified kaolinite and quartz as the dominant mineral phases. Scanning electron microscopy (SEM) has demonstrated that monazite and xenotime have been identified as the main mineral phases carrying REE. The characterization also showed that the ETR were found either liberated, attached to, or encapsulated in clay-quartz matrices.

Complementary mineralogical studies confirmed an increase in ETR concentrations in coals after caustic digestion, followed by recovery during acid leaching. This increase is attributed to both the digestion of mineral supports from ETR and the partial dissolution of kaolinite that encapsulates phosphates from rare earth elements. However, the presence of REE-carrying elements that do not undergo caustic acid leaching indicates the need for more favorable leaching conditions in order to further improve REE recovery from these carbon samples.

Keywords: Acid leaching; REE recovery; Caustic digestion; Acid lixiviation; Pre-digestion · Ultrasonic.

EVALUATION OF THE CONTRACT FARMING MODEL BY TOMATO PRODUCERS IN THE SIVEREK DISTRICT OF ŞANLIURFA: OPPORTUNITIES, PROBLEMS, AND SATISFACTION LEVELS

Şirin Dilan GÜLEL
Harran University, Institute of Postgraduate Education, Department of Agricultural Economics, Türkiye
ORCID: 0009-0002-8021-9370

Prof. Dr. Turan BİNİCİ
Harran University, Faculty of Agriculture, Department of Agricultural Economics, Türkiye
ORCID: 0000-0002-2186-513X

ABSTRACT
This study aims to analyze the perspectives, satisfaction levels, and problems faced by tomato producers in the Siverek district of Şanlıurfa, one of Turkey's significant agricultural centers, regarding the increasingly widespread contract farming model in agricultural production. While contract farming has the potential to offer producers market guarantees and income stability, the challenges encountered in its implementation directly affect the model's success. The research reveals these dynamics on a regional scale, presenting concrete findings for policymakers and industry stakeholders. A quantitative approach based on a descriptive and relational survey model was adopted in the research. Data were collected through face-to-face surveys with 59 tomato producers operating in the Siverek district, reached via convenience sampling. In the analysis of the obtained data, the SPSS program was used to employ descriptive statistics such as frequency, percentage, and arithmetic mean, as well as statistical methods like Exploratory Factor Analysis (EFA) to dimension producer problems, and t-test and ANOVA to test for inter-group differences. The research findings indicate that the problems faced by producers are grouped under four main factors: Financial and Cost Pressure, Marketing and Collection Problems, Market Structure Problems, and Price Instability. The "Financial and Cost Pressure" factor, which includes high input costs and difficulties in accessing finance, was identified as the most fundamental problem for producers. Furthermore, it was observed that a significant portion of the producers lack social security and are unorganized, which negatively affects their bargaining power and adaptation to the model. The study reveals that strengthening financial support mechanisms, ensuring fair and transparent contract conditions, and promoting producer organization are of critical importance for enhancing the sustainability of the contract farming model at the regional level.
Keywords: Contract Farming, Tomato Production, Şanlıurfa, Producer Satisfaction, Agricultural Marketing

ŞANLIURFA İLİ SİVEREK İLÇESİNDEKİ DOMATES ÜRETİCİLERİNİN SÖZLEŞMELİ TARIM MODELİNİ DEĞERLENDİRMESİ: FIRSATLAR, SORUNLAR VE MEMNUNİYET DÜZEYLERİ

ÖZET
Bu çalışma, Türkiye'nin önemli tarım merkezlerinden Şanlıurfa'nın Siverek ilçesindeki domates üreticilerinin, tarımsal üretimde giderek yaygınlaşan sözleşmeli tarım modeline yönelik bakış açılarını, memnuniyet düzeylerini ve karşılaştıkları sorunları analiz etmeyi amaçlamaktadır. Sözleşmeli tarım, üreticilere pazar garantisi ve gelir istikrarı sunma potansiyeli taşırken, uygulamada karşılaşılan zorluklar modelin başarısını doğrudan etkilemektedir. Araştırma, bu dinamikleri bölgesel ölçekte ortaya koyarak, politika yapıcılara ve sektör paydaşlarına yönelik somut bulgular sunmaktadır. Araştırmada, betimsel ve ilişkisel tarama modeline dayalı nicel bir yaklaşım benimsenmiştir.

Veriler, Siverek ilçesinde faaliyet gösteren 59 domates üreticisine kolayda örnekleme yöntemiyle ulaşılarak, yüz yüze anket tekniği ile toplanmıştır. Elde edilen verilerin analizinde SPSS programı kullanılarak frekans, yüzde, aritmetik ortalama gibi betimsel istatistiklerin yanı sıra, üretici sorunlarını boyutlandırmak amacıyla Açımlayıcı Faktör Analizi (AFA) ve gruplar arası farklılıkları test etmek için t-testi ve ANOVA gibi istatistiksel yöntemlerden yararlanılmıştır. Araştırma bulguları, üreticilerin karşılaştığı sorunların dört ana faktör altında toplandığını göstermiştir: Finansal ve Maliyet Baskısı, Pazarlama ve Tahsilat Sorunları, Piyasa Yapısı Sorunları ve Fiyat İstikrarsızlığı. Özellikle yüksek girdi maliyetleri ve finansmana erişimdeki güçlükleri içeren "Finansal ve Maliyet Baskısı" faktörünün, üreticilerin en temel sorunu olduğu tespit edilmiştir. Ayrıca, üreticilerin önemli bir kısmının sosyal güvenceden yoksun ve örgütsüz bir yapıda olduğu, bu durumun da pazarlık güçlerini ve modele adaptasyonlarını olumsuz etkilediği görülmüştür. Çalışma, sözleşmeli tarım modelinin bölgesel düzeyde sürdürülebilirliğini artırmak için finansal destek mekanizmalarının güçlendirilmesi, adil ve şeffaf sözleşme koşullarının sağlanması ve üretici örgütlenmesinin teşvik edilmesinin kritik önem taşıdığını ortaya koymaktadır.

Anahtar kelimeler: Sözleşmeli Tarım, Domates Üretimi, Şanlıurfa, Üretici Memnuniyeti, Tarımsal Pazarlama

THE PRINCIPLES OF NON-REPRESENTATIONAL THEORY AND PARADIGM SHIFT

Asst. Prof. Ramazan OKUDUM
Van Yuzuncu Yil University, Art & Science Faculty, Geography Department, Van, Turkey,
ORCİD: ID/0000-0003-2115-997X

ABSTRACT
Non-representational theories (NRT) constitute one of the major fields that have shaped Cultural Geography and intensified paradigm debates within the discipline. Cultural Ecology, which emerged with the Regional Geography School in the early twentieth century, can be regarded as the starting point of paradigm shifts in the field. In the 1950s, with the rise of positivism, Quantitative Geography became the dominant paradigm shaping cultural studies, followed by representational qualitative paradigms led by humanistic approaches. By the 1990s, however, non-representational theories were strengthened through Critical Paradigms and came to dominate the discipline. The principles and foundations articulated by Nigel Thrift played a crucial role in the emergence of non-representational theories. By bringing together social science and art within particular conceptual frameworks, this theory offers an innovative perspective for understanding debates on epistemology, methodology, and approach in Cultural Geography. The aim of this review-based study is to discuss the relationship between the theory's core principles and paradigm shifts from the perspectives of themes, epistemology and methodology. The theory's emphasis on a scientific approach grounded in everyday life and performances has foregrounded performance-oriented knowledge production and measurement methods in cultural research. This process has paved the way for innovations in themes, epistemology, methodology and approaches in culture-related fields.
Keywords: Non-representational Theory (NRT), Paradigm Shift, Cultural Geography.

TEMSİL ÖTESİ TEORİLERİN (TÖT) İLKELERİ VE PARADİGMA DEĞİŞİMLERİ

ÖZET
Temsil ötesi teoriler (TÖT) Kültürel Coğrafya'yı şekillendiren ve paradigma tartışmalarını güçlendiren önemli alanlardan birisidir. 1900'lü yılların başlarında Bölgesel Coğrafya Ekolü'yle ortaya çıkan Kültürel Ekoloji disiplin içerisindeki paradigma değişimlerinin başlangıcı olarak kabul edilebilir. 1950'lerde pozitivizmle birlikte Kantitatif Coğrafya anlayışı kültürel çalışmaları şekillendiren ana paradigma olurken onu Hümanist akımların başını çektiği temsile dayalı nitel paradigmalar takip etmiştir. 1990'lara gelindiğinde ise Eleştirel Paradigmalar'la temsil ötesi teoriler güçlenerek disiplini domine etmiştir. Temsil ötesi teorilerin ortaya çıkışında Nigel Thrift'in ortaya koymuş olduğu ilke ve esasların önemli bir rolü vardır. Sosyal bilimi ve sanatı belirli çerçevelerden birleştiren teori, Kültürel Coğrafya'daki epistemoloji, yöntem ve yaklaşım tartışmalarını anlamada yenilikçi bir perspektif sunmaktadır. Derleme niteliğinde olan bu çalışmanın amacı teorinin ilkeleriyle paradigma değişimleri arasındaki ilişkiyi tema, epistemoloji ve metodoloji perspektifinde tartışmaktır. Teorinin önceledeği gündelik yaşam ve deneyime dayalı bilimsel yaklaşım vurgusu kültür araştırmalarında deneyim odaklı bilgi üretimini ve ölçme yöntemlerini ön plana çıkarmıştır. Süreç kültürle ilişkili alanlarda tema, epistemoloji, metodoloji ve yaklaşım konularında yeniliklerin önünü açmıştır.
Anahtar kelimeler: Temsil Ötesi Teoriler (TÖT), Paradigma Değişimi, Kültürel Coğrafya.

ORKÖY APPLICATIONS IN THE SOCIO-ECONOMIC DEVELOPMENT OF FOREST VILLAGES: THE EXAMPLE OF AFYONKARAHISAR SANDIKLI FOREST ENTERPRISE DIRECTORATE

Emre Can KUYTU
Bursa Technical University, Graduate School, Forest Engineering, Türkiye
ORCID: 0009-0004-7041-4337

Murat KÖSE
Bursa Technical University, Faculty of Forestry, Department of Forest Engineering, Türkiye
ORCID: 0000-0002-7487-9287

ABSTRACT
Forest villages hold a special position within Turkey's forestry policies and rural development approaches, both in terms of sustainable management of natural resources and enhancing the socio-economic well-being of local communities. These settlements, defined under Article 31 of the Forest Law No. 6831, stand out as rural areas that are in direct interaction with forest resources and rely largely on forestry activities for their livelihoods. Therefore, addressing the quality and distribution of forest resources in forest villages, revenues derived from forestry activities, and support provided by public institutions within a holistic approach is crucial for evaluating sustainable forestry and rural development goals. This study aims to evaluate forest resources, forestry activities, socio-economic structure, and institutional supports in forest villages covered by Article 31 of the Forest Law No. 6831. The study examined the forest area within the administrative boundaries of the villages, tree species, working hours in forestry activities, household income derived from forestry, ORKÖY loans, and the fuelwood and timber subsidies provided by the Forest Enterprise Directorate. The entire research area consists of 26 villages located in the Hocalar and Sinanpaşa districts of Afyonkarahisar Province, with the status of 31.-item villages. It has been determined that ORKÖY loans are largely focused on animal husbandry, while renewable energy supports are implemented in a limited number of villages. Consequently, it is evaluated that, despite the forest resources in forest villages, income diversity is limited; and that village-based planning of forestry employment and public institution support is crucial for rural development.
Keywords: Forest villages, forestry activities, ORKÖY loans, Afyonkarahisar

ORMAN KÖYLERİNİN SOSYO-EKONOMİK GELİŞİMİNDE ORKÖY UYGULAMALARI: AFYONKARAHİSAR SANDIKLI ORMAN İŞLETME MÜDÜRLÜĞÜ ÖRNEĞİ

ÖZET
Orman köyleri, Türkiye ormancılık politikaları ve kırsal kalkınma yaklaşımları içerisinde hem doğal kaynakların sürdürülebilir yönetimi hem de yerel halkın sosyo – ekonomik refahının artırılması açısından özel bir konuma sahiptir. 6831 sayılı Orman Kanunu'nun 31. maddesi kapsamında tanımlanan bu yerleşimler, orman kaynaklarıyla doğrudan etkileşim içinde olan ve geçimlerini büyük ölçüde ormancılık faaliyetlerine dayandıran kırsal alanlar olarak öne çıkmaktadır. Bu nedenle, orman köylerinde orman varlığının niteliği ve dağılımı, ormancılık faaliyetlerinden elde edilen gelirler ve kamu kurumları tarafından sağlanan desteklerin bütüncül bir yaklaşımla ele alınması, sürdürülebilir ormancılık ve kırsal kalkınma hedeflerinin değerlendirilmesi açısından önem taşımaktadır. Bu çalışma, 6831 sayılı Orman Kanunu'nun 31. maddesi kapsamında yer alan orman köylerinde orman varlığı, ormancılık faaliyetleri, sosyo – ekonomik yapı ve kurumsal desteklerin değerlendirilmesini amaçlamaktadır.

Çalışmada köylerin mülki hudutları içerisindeki orman alanı büyüklüğü, ağaç türleri, ormancılık faaliyetlerinde çalışma süresi, ormancılıktan elde edilen hane gelirleri ile ORKÖY kredileri ve Orman İşletme Müdürlüğü tarafından sağlanan zati yakacak ve yapacak destekleri incelenmiştir. Araştırma alanının tamamını 31. madde köyü statüsünde Afyonkarahisar İli, Hocalar ve Sinanpaşa ilçelerinde bulunan 26 köy oluşturmaktadır. ORKÖY kredilerinin büyük ölçüde hayvancılık odaklı olduğu, yenilenebilir enerji desteklerinin sınırlı sayıda köyde uygulandığı belirlenmiştir. Sonuç olarak; orman köylerinde orman varlığına rağmen gelir çeşitliliğinin sınırlı olduğu, ormancılık istihdamının ve kamu kurumları desteklerinin köy bazlı planlamasının kırsal kalkınma açısından önem taşıdığı değerlendirilmektedir.

Anahtar kelimeler: Orman köyleri, ormancılık faaliyetleri, ORKÖY kredileri, Afyonkarahisar

FARKLI AMİNOASİT UYGULAMALARININ FASULYE'DE (*Phaseolus vulgaris* L.) MORFOLOJİK ÖZELLİKLER VE VERİME ETKİSİ

Nurettin AYDEMİR
Eskişehir Osmangazi University, Faculty of Agriculture, Department of Field Crops, Türkiye
ORCID: 0000-0001-5244-762X

Res. Asst. Dr. Engin TAKIL
Eskişehir Osmangazi University, Faculty of Agriculture, Department of Field Crops, Türkiye
ORCID: 0000-0002-0076-5949

Prof. Dr. Nihal KAYAN
Eskişehir Osmangazi University, Faculty of Agriculture, Department of Field Crops, Türkiye
ORCID: 0000-0001-7505-0959

ÖZET
Türkiye iklim koşulları nedeniyle küresel ısınmanın potansiyel etkilerinden zarar görebilecek ülkeler arasında yer almaktadır. Küresel ısınmanın etkisiyle ülkemizde zaman zaman yaşanan düşük sıcaklıklar bitkisel üretim üzerinde olumsuz etkiler yaratmakta ve sorunların çözümü için yeni alternatifler geliştirilmektedir. Denemeler 2021 ve 2024 yıllarında Eskişehir Osmangazi Üniversitesi Ziraat Fakültesi deneme alanlarında, farklı ekim zamanı ve aminoasit uygulamalarının kuru fasulyede morfolojik özellikler ve verime etkilerini araştırmak ve düşük sıcaklık gibi stres koşullarında biyostimülantların verime etkisini belirlemek amacıyla yürütülmüştür. Denemeler tesadüf bloklarında bölünmüş parseller deneme desenine göre dört tekrarlamalı olarak kurulmuş, ana parsellere ekim zamanları (10 Nisan, 20 Nisan ve 30 Nisan) alt parsellere ise aminoasit uygulamaları (kontrol; tohum kaplama; yapraktan uygulama; tohum kaplama + yapraktan uygulama) yerleştirilmiştir. İncelenen özellikler bakımından bitki boyu ve ilk bakla yüksekliği üçüncü ekim zamanında en iyi sonuçları gösterirken, ana dal sayısı ve tane verimi ikinci ekim zamanında en iyi sonuçları göstermiştir. Bitki boyu ve tane verimi için tohum kaplama + yapraktan uygulama parsellerinde en yüksek değerlere ulaşılmıştır. Araştırmamızda tane verimi dikkate alındığı zaman aminoasit uygulamalarının düşük sıcaklık stresini belirli düzeyde tolere edebildiği sonucuna ulaşılmıştır. Sonuç olarak; Eskişehir bölgesi için kuru fasulye tarımında Nisan ayı sonunda ekim ve tohum kaplama + yapraktan uygulama şeklindeki aminoasit uygulaması tavsiye edilmektedir.
Anahtar Kelimeler: Amino asit, Ekim zamanı, Fasulye, Verim

EFFECTS OF DIFFERENT AMINO ACID APPLICATIONS ON MORPHOLOGICAL CHARACTERISTICS AND YIELD IN BEAN (*Phaseolus vulgaris* L.)

ABSTRACT
Due to its climate conditions, Türkiye is among the countries that could be negatively affected by the potential impacts of global warming. Due to the effects of global warming, the low temperatures experienced from time to time in our country are having negative effects on plant production, and new alternatives are being developed to solve these problems. The research was carried out in the experimental areas of Eskişehir Osmangazi University Faculty of Agriculture in 2021 and 2024. The aim of the study was to investigate the effects of different sowing times and amino acid application on the morphological characters and yield of beans and determine the effect of biostimulants on yield under stress conditions such as low temperature. The experimental design was split plot with four replicates. Sowing time (10 April, 20 April and 30 April) was in main plots and amino acid applications (control, seed coating, foliar application, seed coating + foliar application) in subplots.

While plant height and first pod height showed the best results at the third planting time, the number of main branches and grain yield showed the best results at the second planting time. For plant height and grain yield, the highest values were reached in seed coating + foliar application plots. Our research concluded that amino acid applications are able to tolerate low-temperature stress. As a result, for dry bean cultivation in the Eskişehir region, at the end of April for sowing time and seed coating + foliar amino acid application is recommended.
Keywords: Amino acid, Bean, Sowing time, Yield.

POPULATION DYNAMICS AND INFESTATION RATE OF Cydia pomonella (L.) IN APPLE ORCHARDS IN THE DISTRICTS OF ÇORLU AND MARMARAEREĞLİSİ, TEKİRDAĞ PROVINCE

Baran ÖNAL
Directorate of Agriculture and Forestry, Türkiye
ORCID: 0009-0007-8985-0050

Asst. Prof. Tolga AYSAL
Tekirdağ Namık Kemal University, Faculty of Agriculture, Department of Plant Protection, Türkiye
ORCID: 0000-0003-4449-4439

ABSTRACT
Apples are one of the most widely cultivated fruits worldwide and in Türkiye, with Türkiye ranking third globally. There are many diseases and pests that cause yield and quality losses in apple cultivation. Among these pests, the codling moth, *Cydia pomonella* (Linnaeus, 1758) (Lepidoptera: Tortricidae), is recognized as the most economically damaging species. The most preferred method of controlling the apple codling moth in Türkiye is chemical control. Success in this control method largely depends on accurately determining the timing of spray applications. In recent years, despite the observed increase in interest in apple cultivation within the fruit production pattern in Tekirdağ Province, there is a lack of information regarding the population dynamics and infestation status of *C. pomonella*, the main pest of apples. Therefore, this study was carried out in four different apple orchards located in the districts of Çorlu and Marmaraereğlisi in Tekirdağ Province, using pheromone traps to determine the population fluctuations and infestation rates of *C. pomonella*. Field observations indicated that the first adults of *C. pomonella* emerged in early april, while the last adults were recorded in late october. Considering the total effective temperatures during this period when the pest was present, it was determined that *C. pomonella* completed three generations per year. The infestation rates in the surveyed orchards ranged from a minimum of 13.60% to a maximum of 70.40%. It was determined that the infestation rates in all orchards where the trials were conducted were above the economic damage threshold. The results indicate that significant yield losses may occur in the region if effective control measures are not implemented against *C. pomonella*. This study provides the first data on determining the appropriate timing and methods for controlling the codling moth in Tekirdağ Province. These data indicate that further studies should focus on monitoring the pest in wider areas and that it is crucial to establish early warning systems by determining thermal constants and adult flight periods.
Keywords: *Cydia pomonella*, Apple, Tekirdağ Province, population dynamics, infestation rate

TEKİRDAĞ İLİ ÇORLU VE MARMARAEREĞLİSİ İLÇELERİ ELMA BAHÇELERİNDE Cydia pomonella (L.)'NIN POPÜLASYON DALGALANMASI VE BULAŞIKLIK ORANI

ÖZET
Elma, dünyada ve Türkiye'de meyve yetiştiriciliğinde üretimi en yüksek miktarda yapılan ürünlerden birisi olup, elma üretiminde Türkiye dünyada üçüncü sırada yer almaktadır. Elma yetiştiriciliğinde verim ve kalite kaybına sebep olan birçok hastalık ve zararlı tür bulunmaktadır. Bu zararlılar arasında en önemli ekonomik kayba neden olan böcek türü *Cydia pomonella* (Linnaeus, 1758) (Lepidoptera: Tortricidae) olarak bilinmektedir. Türkiye'de elma içkurdu ile mücadelede en çok tercih edilen yöntem kimyasal mücadeledir. Bu mücadele yönteminde başarılı olmak, büyük ölçüde ilaçlama zamanının doğru belirlenmesine bağlıdır. Son yıllarda Tekirdağ ilinde meyve üretim deseni içerisinde elma yetiştiriciliğine olan ilginin arttığı gözlenmesine rağmen, elmanın ana zararlısı olan *C. pomonella*'nın popülasyon dinamiği ve bulaşıklık durumu ile ilgili bilgi eksikliği mevcuttur.

Bu çalışma, Tekirdağ ili Çorlu ve Marmaraereğlisi ilçelerinde yer alan dört farklı elma bahçesinde feromon tuzaklar kullanılarak *C. pomonella*'nın popülasyon dalgalanması ve bulaşıklık oranlarının belirlenmesi amacıyla yürütülmüştür. Yapılan gözlemler sonucunda, ilk erginlerin nisan ayı başında, son erginlerin ise ekim ayı sonunda görüldüğü tespit edilmiştir. Zararlının bulunduğu bu süre içerisinde etkili sıcaklıklar toplamı göz önüne alındığında, yılda üç döl verdiği belirlenmiştir. İncelenen bahçelerde bulaşıklık oranı en düşük %13,60, en yüksek %70,40 olarak saptanmıştır. Denemelerin yürütüldüğü tüm bahçelerde bulaşıklık oranlarının ekonomik zarar eşiğinin üzerinde olduğu tespit edilmiştir. Elde edilen bulgular, *C. pomonella* ile etkin bir mücadele yapılmadığı takdirde, bölgede önemli verim kayıplarının meydana gelebileceğini göstermektedir. Bu çalışma, Tekirdağ ilinde elma içkurdu ile mücadelede uygun zaman ve yöntemlerin belirlenmesine yönelik ilk verileri sunmaktadır. Bu veriler, ilerleyen çalışmalarda zararlının daha geniş alanlarda izlenmesinin gerektiği, termal konstantlarının ve ergin uçuş zamanlarının belirlenerek erken uyarı sistemlerinin oluşturulmasının büyük önem taşıdığı sonuçlarına ulaştırmıştır.
Anahtar kelimeler: *Cydia pomonella*, Elma, Tekirdağ, popülasyon dinamiği, bulaşıklık oranı

COCCINELLIDAE FAUNA IN AGRICULTURAL AND NON-AGRICULTURAL AREAS IN TEKİRDAĞ PROVINCE

Tolga SÜNTER
Zeytursan Food Industry and Trade Inc., Türkiye
ORCID: 0000-0002-1179-223X

Asst. Prof. Tolga AYSAL
Tekirdağ Namık Kemal University, Faculty of Agriculture, Department of Plant Protection, Türkiye
ORCID: 0000-0003-4449-4439

ABSTRACT
The Coccinellidae family includes predatory species that play an important role in suppressing pests in crop production. For this reason, they are widely used in biological and integrated pest management programs. The regional distribution and habitat preferences of species belonging to this family are of great importance for sustainable agriculture and the conservation of biodiversity. However, detailed and up-to-date data on the Coccinellidae fauna of Tekirdağ Province are limited. This study was conducted to identify Coccinellidae species occurring in agricultural and non-agricultural areas in Tekirdağ Province and to reveal their distribution. Surveys were conducted in 2020-2021 in the districts of Malkara, Saray, Süleymanpaşa, and Şarköy in Tekirdağ Province, in agricultural production areas and non-agricultural areas. As a result of the surveys, a total of 39 species belonging to 20 genera were identified. *Coccinella septempunctata* (Linnaeus, 1758) and *Harmonia axyridis* (Pallas, 1773) were determined to be the most abundant species. *Coccinella undecimpunctata* (Linnaeus, 1758), *Hyperaspis quadrimaculata* (Redtenbacher, 1844), *Scymnus* (*Pullus*) *haemorrhoidalis* Herbst, 1797, and *Subcoccinella vigintiquatuorpunctata* (Linnaeus, 1758) were sampled only once. It was determined that species richness and individual abundance were higher in non-agricultural areas compared to agricultural production areas. This situation suggests that intensive chemical control methods used in agricultural areas may have potential negative effects on natural enemies. The findings reveal that planning integrated pest management programs (IPM) to protect natural enemies and regulating chemical control applications accordingly is important for the sustainability of the region's existing biodiversity. Furthermore, the high numbers of *H. axyridis*, an invasive species known to have recently entered Türkiye, detected throughout the province necessitate research into the ecological effects of this species on the local Coccinellidae fauna.
Keywords: Coccinellidae, Tekirdağ Province, fauna, *Harmonia axyridis*

TEKİRDAĞ İLİNDE TARIM VE TARIM DIŞI ALANLARDA COCCINELLIDAE FAUNASI

ÖZET
Coccinellidae familyası, bitkisel üretimde zararlıların baskılanmasında önemli rol oynayan predatör türleri içerir. Bu nedenle biyolojik ve entegre mücadele programlarında etkin olarak kullanılmaktadırlar. Bu familyaya ait türlerin bölgesel dağılımı ve habitat tercihleri, sürdürülebilir tarım ve biyoçeşitliliğin korunması açısından büyük önem taşımaktadır. Ancak Tekirdağ ili Coccinellidae faunası hakkında ayrıntılı ve güncel veriler sınırlıdır. Bu çalışma, Tekirdağ ilinde tarım ve tarım dışı alanlarda bulunan Coccinellidae türlerinin belirlenmesi ve dağılımlarının ortaya konulması amacıyla yürütülmüştür. Sörvey çalışmaları 2020-2021 yıllarında Tekirdağ ilinin Malkara, Saray, Süleymanpaşa ve Şarköy ilçelerinde, tarımsal üretim alanları ile tarım dışı alanlarda gerçekleştirilmiştir. Yapılan sörveyler sonucunda 20 cinse ait toplam 39 tür tespit edilmiştir. *Coccinella septempunctata* (Linnaeus, 1758) ve *Harmonia axyridis* (Pallas, 1773) en bol bulunan türler olarak belirlenmiştir.

Coccinella undecimpunctata (Linnaeus, 1758), *Hyperaspis quadrimaculata* (Redtenbacher, 1844), *Scymnus* (*Pullus*) *haemorrhoidalis* Herbst, 1797 ve *Subcoccinella vigintiquatuorpunctata* (Linnaeus, 1758) türleri ise yalnızca birer adet örneklenmiştir. Tür zenginliği ve birey yoğunluğunun tarım dışı alanlarda, tarımsal üretim alanlarına kıyasla daha yüksek olduğu saptanmıştır. Bu durum, tarım alanlarında uygulanan yoğun kimyasal mücadele yöntemlerinin doğal düşmanlar üzerindeki olası olumsuz etkileriyle ilişkili olabileceğini düşündürmektedir. Elde edilen bulgular, entegre mücadele programlarının doğal düşmanları koruyacak şekilde planlanmasının ve kimyasal mücadele uygulamalarının bu doğrultuda düzenlenmesinin, bölgedeki mevcut biyoçeşitliliğin sürdürülebilirliği açısından önem taşıdığını ortaya koymaktadır. Ayrıca Türkiye'ye yakın dönemde giriş yaptığı bilinen istilacı bir tür olan *H. axyridis*'in il genelinde yüksek sayılarda tespit edilmesi, bu türün yerel Coccinellidae faunası üzerindeki ekolojik etkilerinin araştırılmasını gerekli kılmaktadır.
Anahtar kelimeler: Coccinellidae, Tekirdağ, fauna, *Harmonia axyridis*

EFFECT OF PUTRESCINE APPLICATION ON MISSHAPED FRUIT FORMATION RATE IN STRAWBERRIES

Esma BEKDİKLİ
Ögr., Cukurova University, Faculty of Agriculture, Department of Horticulturae, Adana-Türkiye
ORCİD: 0009-0005-1911-4600

Doç. Dr. Şenay KARABIYIK
Cukurova University, Faculty of Agriculture, Department of Horticulturae, Adana-Türkiye
ORCİD: 0000-0001-8579-6228

Doç. Dr. Mehmet Ali SARIDAŞ
Cukurova University, Faculty of Agriculture, Department of Horticulturae, Adana-Türkiye
ORCİD: 0000-0002-5180-1874

ABSTRACT
Strawberry has been experiencing problems with misshaped and multiple fruits in recent years due to the effect of climate change. In the Rubygem strawberry variety, which is one of the most grown varieties in Türkiye and in the world, such problems occur especially in the first harvests, when the highest income is obtained from the fruits. Studies have reported that this situation is caused by pollination efficiency and the development processes of seed ovules. Increasing pollination efficiency has positive results if pollinator vector insects and pollen quality are good. However, even if pollination efficiency is high, fertilization and therefore good fruit formation cannot be achieved if the ovules are inadequately developed. In this context, by supporting the development of female organs with Putrescine, it can increase the fruit quality of fruits where fruit formation depends on the seed formation. In this study, it was aimed to determine the effect of putrescine application on the rate of misshaped fruit formation, fruit yield and pollen quality in cold period.
In the study, 2 ppm Putrescine was applied after the flowers started to form. After the treatment, the differences between the misshaped fruit formation rate, fruit yield per plant, weight of one fruit, pollen viability and germination levels were determined in the fruits in March, when the fruits first started to form.
As a result, it was determined that 2 ppm Putrescine application reduced the rate of misshaped fruit formation from 56.47% to 20.32% compared to the Control application. It was determined that the application did not cause significant changes on fruit yield, fruit weight and pollen quality. As a result, it has been determined that the rate of misshaped fruit formation can be significantly reduced by applying putrescine in the early periods when misshaped fruits are seen.
Keywords: Strawberry, polyamine, quality, ovule

ÇİLEKTE PUTRESİN UYGULAMASININ BOZUK ŞEKİLLİ MEYVE OLUŞUM ORANINA ETKİSİ

ÖZET
Çilek iklim değişikliğinin de etkisiyle son yıllarda bozuk şekilli ve çoklu meyveler ile ilgili problemler yaşamaktadır. Türkiye ve dünyada en çok yetiştirilen çeşitlerden biri olan Rubygem çilek çeşidinde de bu tip problemler özellikle meyvelerin en yüksek gelir elde edildiği ilk hasatlarda daha fazla olmaktadır. Yapılan çalışmalar bu durumun tozlanma etkinliğinden ve tohum taslaklarının gelişim süreçlerinden kaynaklandığı bildirilmektedir. Tozlanma etkinliğinin artırılması tozlayıcı vektör böceklerin ve çiçek tozu kalitesinin iyi olması durumunda olumlu sonuçlanmaktadır. Ancak tozlanma etkinliği yüksek olsa bile tohum taslaklarının yetersiz gelişmiş olması durumunda da döllenme ve dolayısıyla iyi bir meyve oluşumu sağlanamamaktadır. Bu kapsamda Putresin ile dişi organ gelişiminin desteklenmesi sayesinde meyve oluşumunun tohuma bağlı olduğu meyvelerde meyve kalitesini artırabilmektedir.

Bu çalışmada putresin uygulamasının soğuk dönemlerde alınan meyvelerde bozuk şekilli meyve oluşum oranının ve meyve verimi ile çiçek tozu kalitesine etkisinin belirlenmesi amaçlanmıştır.
Çalışmada çiçeklerin oluşmaya başlaması sonrasında 2 ppm Putresin uygulaması yapılmıştır. Uygulama sonrasında meyvelerin ilk oluşmaya başladığı mart ayındaki meyvelerde bozuk şekilli meyve oluşum oranı, bitki başına meyve verimi, bir meyve ağırlığı ile çiçek tozu canlılık ve çimlenme düzeyleri arasındaki farklılıklar belirlenmiştir.
Sonuçta, 2 ppm Putresin uygulamasının Kontrol uygulamasına göre özellikle bozuk şekilli meyve oluşum oranını %56.47'dan %20,32'ye düşürdüğü tespit edilmiştir. Uygulamanın meyve verimi, meyve ağırlığı ve çiçek tozu kalitesi üzerinde önemli değişiklikler oluşturmadığı tespit edilmiştir. Sonuç olarak bozuk şekilli meyvelerin görüldüğü ilk dönemlerde yapılacak putresin uygulaması ile bozuk şekilli meyve oluşum oranının önemli düzeyde azaltılabileceği belirlenmiştir.
Anahtar kelimeler: Çilek, poliamin, kalite, tohum taslağı

ÇİLEKTE ÇİÇEK TOZU DEPOLAMASININ ÇİÇEK TOZU KALİTESİNE ETKİSİ

Esma BEKDİKLİ
Öğr., Çukurova Üniversitesi, Ziraat Fakültesi, Bahçe Bitkileri Bölümü, Adana-Türkiye
ORCİD: 0009-0005-1911-4600

Yaren Hüsne CİRİTCİ
Öğr., Çukurova Üniversitesi, Ziraat Fakültesi, Bahçe Bitkileri Bölümü, Adana-Türkiye
ORCİD 0009-0003-0143-3019

Doç. Dr. Şenay KARABIYIK
Çukurova Üniversitesi, Ziraat Fakültesi, Bahçe Bitkileri Bölümü, Adana-Türkiye
ORCİD: 0000-0001-8579-6228

Doç. Dr. Mehmet Ali SARIDAŞ
Çukurova Üniversitesi, Ziraat Fakültesi, Bahçe Bitkileri Bölümü, Adana-Türkiye
ORCİD: 0000-0002-5180-1874

ÖZET
Çilek dünyada ve Türkiye'de yoğun şekilde üretilen bir meyve olup ıslah süreci hala devam etmektedir. Islah çalışmalarında çiçek tozunun önemi büyük olmakla birlikte çok sayıda dişi organa sahip bir çilek çiçeğinde tohum eldesi sırasında yoğun çiçek tozuna ihtiyaç vardır. Çileklerde çiçek tozunun elde edilebilmesi için uygun koşullarda çilek yetiştiriciliği yapılmalı ve bazı durumlarda verim için ayrılan her bir çiçeğin koparılarak laboratuvar koşullarına taşınması gerekmektedir. Bununla birlikte baba ebeveyne de parsellerde yer verilerek fazla miktarda alan israf edilebilmektedir. Yapılan çalışmada bu gibi olumsuz durumları ortadan kaldırmak için değerli sayılabilecek baba ebeveynlerin çiçek tozlarının -20°C'de 1 yıl saklanması sonucunda çiçek tozu canlılık ve çimlenme düzeylerindeki değişimin değerlendirilmesi amaçlanmıştır.
Yapılan çalışma sonucunda çiçek tozu kalitesinin uygun koşullarda saklanması durumunda canlılık düzeyindeki değişimin %3,88 ile %20,54 arasında değişirken, çimlenme oranında söz konusu değişimin %3,62 ile %34,85 arasında olduğu belirlenmiştir. Çiçek tozu kalitesinde en önemli kriter olan çiçek tozu çimlenme düzeyinde ise depolama sonunda çimlenme oranı en yüksek %63,75 ile Sabrina çeşidinde olmuş, bunu %61,15 ile 36 nolu genotip izlemiştir. Depolama sonrası en düşük çimlenme düzeylerinin ise başlangıçta da çimlenme düzeyi düşük olan 291 nolu genotip (%27,04) ve 112 nolu genotipte (%41,26) bulunduğu tespit edilmiştir.
Sonuç olarak ıslah çalışmalarında iş gücünü azaltmak ve bir yıl öncenin kaliteli çiçek tozlarını kullanabilmek amacıyla çiçek tozlarının 1 yıl boyunca -20°C'de saklanabileceği kanısına varılmıştır.
Anahtar Kelimeler: Islah, Çilek, Çiçek tozu, Depolama

EFFECT OF POLLEN STORAGE ON POLLEN QUALITY IN STRAWBERRY

ABSTRACT
Strawberry is a fruit produced intensively in the world and in Turkey and the breeding process is still ongoing. Although pollen is of great importance in breeding studies, a strawberry flower with many female organs requires intense pollen during seed production. In order to obtain pollen from strawberries, they must be grown under suitable conditions, and in some cases, each flower separated for yield must be plucked and transported to laboratory conditions. However, a lot of space can be wasted by giving space to both parents in the plots. The aim of the study was to evaluate the change in pollen viability and germination levels as a result of storing the pollen of the paternal parents, which can be considered valuable, at -20°C for 1 year in order to eliminate such negative situations.

As a result of the study, it was determined that if the pollen quality was stored under appropriate conditions, the change in the viability level varied between 3.88% and 20.54%, while the change in germination rate was between 3.62% and 34.85%. In terms of pollen germination level, which is the most important criterion in flower pollen quality, the highest germination rate at the end of storage was in the Sabrina variety with 63.75%, followed by genotype no. 36 with 61.15%. It was determined that the lowest germination levels after storage were found in genotype 291 (27.04%) and genotype 112 (41.26%), which also had low germination levels at the beginning.
In conclusion, it was concluded that pollen can be stored at -20°C for 1 year in order to reduce labour force in breeding studies and to use quality pollen from the previous year.
Keywords: Breeding, Strawberry, Pollen, Storage

PROSULFOCARB'A MARUZ KALAN (*Triticum aestivum* L.) BEREKET BUĞDAY ÇEŞİTiNDE STRİGOLAKTON UYGULAMASININ ETKİLERİ

Hatice AKTUĞ
Malatya Turgut Özal University, Graduate School of Education, Department of Biology, Türkiye
ORCID: 0009-0002-5061-7378

Prof. Dr. Gulcin BEKER AKBULUT
Malatya Turgut Özal University, Battalgazi Vocational School, Department of Park and Horticulture Plants, Türkiye
ORCID: 0000-0003-3529-5999

ÖZET
Bitki büyüme düzenleyicilerinden biri olan strigolaktonun (SL), herbisit kaynaklı strese karşı bitkide oluşturduğu yanıtın ortaya konması amacıyla prosulfocarb herbisitine maruz bırakılan *Triticum aestivum* L. cv. Bereket buğdayında fizyolojik ve biyokimyasal etkileri araştırılmıştır. Bu kapsamda SL konsantrasyonu 0.5 µM, prosulfocarb konsantrasyonları ise 1, 5, 10 ve 20 µM olarak belirlenmiştir. Prosulfocarb, özellikle çıkış öncesi dönemde yabancı ot kontrolünde kullanılan; bitkilerde membran bütünlüğü, pigment sistemi ve oksidatif denge üzerinde olumsuz etkilere yol açabilen bir herbisittir. Herbisit uygulamaları, hedef yabancı otları baskılarken kültür bitkilerinde de doza ve maruziyet süresine bağlı olarak reaktif oksijen türleri birikimini artırarak oksidatif stres oluşturabilir; bu durum klorofil yıkımı, fotosentez veriminde düşüş, lipid peroksidasyonu ve antioksidan enzim yanıtlarında değişimlerle kendini gösterebilir. Çalışmada 1., 4. ve 7. günlerde alınan örneklerde pigment analizi, antioksidan sistem parametreleri, lipid peroksidasyonu, total fenolik içerik, oransal su içeriği ve prosulfocarb içeriği analizi gerçekleştirilerek uygulama grupları arasındaki değişimler değerlendirilmiştir. Elde edilen bulgular, SL uygulamasının Bereket çeşidinde klorofil a, klorofil b, karotenoid ve toplam klorofil içeriklerinde belirgin bir iyileştirici etki gösterdiğini ortaya koymuştur. Antioksidan savunma açısından Peroksidaz ve askorbat peroksidaz aktiviteleri SL+prosulfocarb uygulanan gruplarda artarken, süperoksit dismutaz ve katalaz aktiviteleri özellikle 7. günde azalış göstermiş; buna paralel olarak malondialdehid içeriğinin 7. günde azalması SL'nin membran lipid peroksidasyonunu sınırlayarak oksidatif hasarı azaltabildiğini göstermiştir. Ayrıca total fenolik içeriğin artması, SL'nin fenolik bileşikler üzerinden antioksidan kapasiteyi desteklediğine işaret etmiş; oransal su içeriğinin gün ilerledikçe azalması ise stres koşullarında su dengesinin zamanla bozulduğunu göstermiştir. SL uygulamasının bitki dokusundaki prosulfocarb içeriğini azaltması, SL'nin herbisitin alımı, taşınımı ve metabolik detoksifikasyonu gibi süreçleri etkileyebileceğini düşündürmektedir. Sonuç olarak SL'nin prosulfocarb stresine maruz kalan buğdayda oksidatif strese karşı savunmayı güçlendiren ve fizyolojik zararı azaltan önemli bir düzenleyici olabileceğini göstermektedir.
Anahtar kelimeler: Prosulfocarb, strigolakton, herbisit, pigment, total fenolik

EFFECTS OF STRIGOLACTONE APPLICATION ON THE PROSULFOCARB EXPOSED (Triticum aestivum L.) BEREKET WHEAT VARIETY

ABSTRACT
The physiological and biochemical effects of prosulfocarb herbicide on Triticum aestivum L. cv. Bereket wheat, exposed to prosulfocarb herbicide, were investigated to reveal the response of the plant to herbicide-induced stress caused by strigolactone (SL), one of the plant growth regulators. In this context, the SL concentration was set at 0.5 µM, while prosulfocarb concentrations were set at 1, 5, 10, and 20 µM. Prosulfocarb is a herbicide used for weed control, especially during the pre-emergence period, which can cause adverse effects on membrane integrity, pigment system, and oxidative balance in plants.

Herbicide applications can suppress target weeds but also cause oxidative stress in crop plants by increasing the accumulation of reactive oxygen species, depending on the dose and exposure time. This can manifest as chlorophyll degradation, decreased photosynthetic efficiency, lipid peroxidation, and changes in antioxidant enzyme responses. In this study, pigment analysis, antioxidant system parameters, lipid peroxidation, total phenolic content, relative water content, and prosulfocarb content analysis were performed on samples taken on days 1, 4, and 7 to evaluate the changes between the application groups. The findings revealed that the SL application had a significant improving effect on chlorophyll a, chlorophyll b, carotenoid, and total chlorophyll content in the Bereket variety. In terms of antioxidant defense, peroxidase and ascorbate peroxidase activities increased in the SL+prosulfocarb-treated groups, while superoxide dismutase and catalase activities decreased, particularly on day 7. Parallel to this, the decrease in malondialdehyde content on day 7 showed that SL could reduce oxidative damage by limiting membrane lipid peroxidation. Furthermore, the increase in total phenolic content indicated that SL supported antioxidant capacity through phenolic compounds; the decrease in relative water content over time showed that water balance deteriorated over time under stress conditions. The reduction in prosulfocarb content in plant tissue following SL application suggests that SL may affect processes such as herbicide uptake, transport, and metabolic detoxification. In conclusion, SL appears to be an important regulator that strengthens defense against oxidative stress and reduces physiological damage in wheat exposed to prosulfocarb stress.
Keywords: Prosulfocarb, strigolactone, herbicide, pigment, total phenolic

INVESTIGATION OF THE ANTIOXIDANT, ANTI-INFLAMMATORY, AND ENZYME INHIBITION CAPACITIES OF *Aronia melanocarpa* FRUIT EXTRACT

Lect. Dr. Adem DEMİR
Recep Tayyip Erdoğan University, Central Research Laboratory, Türkiye
ORCID: 0000-0002-7805-0302

ABSTRACT

Plant-derived extracts are extensively studied for their antioxidant, anti-inflammatory, and enzyme-inhibiting properties due to the bioactive compounds they contain. In particular, phenol-rich fruits stand out as potential natural sources for regulating biochemical processes associated with oxidative stress and inflammation. In this context, *Aronia melanocarpa* has attracted increasing interest in scientific studies in recent years due to its high antioxidant capacity and functional properties. In this study, the antioxidant activity, anti-inflammatory effect, and inhibition capacity of *Aronia melanocarpa* fruit extract on selected metabolic enzymes were experimentally evaluated. Antioxidant activity was determined using the DPPH and ABTS free radical scavenging methods, and the IC_{50} values for the extract were calculated as 51.45 µg/mL and 91.47 µg/mL, respectively. Anti-inflammatory activity was examined using a bovine serum albumin (BSA) denaturation inhibition test based on protein denaturation, and the IC_{50} value was found to be 60.45 µg/mL. Within the scope of metabolic enzyme inhibition studies, the inhibitory effects of the extract on urease and α-glucosidase enzymes were investigated; the IC_{50} value for urease was determined to be 80.45 µg/mL, and for α-glucosidase, it was determined to be 305.54 µg/mL. The results obtained in the present study indicate that *Aronia melanocarpa* fruit extract has biological effects related to oxidative stress, inflammation, and metabolic enzymes. The findings reveal the antioxidant, anti-inflammatory, and enzyme inhibition potential of the extract and contribute to the detailed evaluation of the plant's bioactive properties in further studies.

Keywords: *Aronia melanocarpa,* Antioxidant activity, Anti-inflammatory activity; α-glucosidase inhibition, Urease inhibition

Aronia melanocarpa MEYVE EKSTRAKTININ ANTİOKSİDAN, ANTİİNFLAMATUAR VE ENZİM İNHİBİSYON KAPASİTELERİNİN İNCELENMESİ

ÖZET

Bitkisel kaynaklı ekstraktlar, içeriklerindeki biyoaktif bileşikler nedeniyle antioksidan, antiinflamatuar ve enzim inhibitör özellikleri bakımından yoğun olarak araştırılmaktadır. Özellikle fenolik açıdan zengin meyveler, oksidatif stres ve inflamasyonla ilişkili biyokimyasal süreçlerin düzenlenmesinde potansiyel doğal kaynaklar olarak öne çıkmaktadır. Bu bağlamda *Aronia melanocarpa*, yüksek antioksidan kapasitesi ve fonksiyonel özellikleri nedeniyle son yıllarda bilimsel çalışmalarda artan ilgi görmektedir. Bu çalışmada, *Aronia melanocarpa* meyve ekstraktının antioksidan aktivitesi, antiinflamatuar etkisi ve seçili metabolik enzimler üzerindeki inhibisyon kapasitesi deneysel olarak değerlendirilmiştir. Antioksidan aktivite, DPPH ve ABTS serbest radikal temizleme yöntemleri kullanılarak belirlenmiş ve ekstrakt için IC_{50} değerleri sırasıyla 51.45 µg/mL ve 91.47 µg/mL olarak hesaplanmıştır. Antiinflamatuar aktivite, protein denatürasyonuna dayalı bovin serum albümini (BSA) denatürasyon inhibisyon testi ile incelenmiş ve IC_{50} değeri 60.45 µg/mL olarak bulunmuştur. Metabolik enzim inhibisyon çalışmaları kapsamında, ekstraktın üreaz ve α-glukozidaz enzimleri üzerindeki inhibitör etkileri araştırılmış; üreaz için IC_{50} değeri 80.45 µg/mL, α-glukozidaz için ise 305.54 µg/mL olarak belirlenmiştir. Mevcut çalışma kapsamında elde edilen sonuçlar, *Aronia melanocarpa* meyve ekstraktının oksidatif stres, inflamasyon ve metabolik enzimlerle ilişkili biyolojik etkilere sahip olduğunu göstermektedir. Bulgular, ekstraktın antioksidan, antiinflamatuar ve enzim inhibisyon potansiyelini ortaya koymakta ve bitkinin biyoaktif özelliklerinin ileri çalışmalarla ayrıntılı biçimde değerlendirilmesine katkı sunmaktadır.

Keywords: *Aronia melanocarpa,* antioksidan aktivite; antiinflamatuar aktivite; α-glukozidaz inhibisyonu; üreaz inhibisyonu

BİYOAKTİF CAM–MİRNA-3613-3P KOMPLEKSİNİN MEME KANSERİ ONKOGENİK AKTİVİTESİ ÜZERİNDEKİ ETKİSİNİN İNCELENMESİ

Başak YERLİKHAN
Graduate School of Natural Sciences, Department of Biotechnology, Faculty of Chemical and Metallurgical Engineering, Yıldız Technical University, Türkiye
ORCID: 0009-0006-6033-4100

Mine KUÇAK
Faculty of Arts and Sciences, Department of Molecular Biology and Genetics, Yıldız Technical University, Türkiye
ORCID: 0000-0003-3991-4953

Cem ÖZEL
Faculty of Chemical and Metallurgical Engineering, Department of Bioengineering, Yıldız Technical University, Türkiye
ORCID: 0000-0002-9495-9321

Sevil YÜCEL
Faculty of Chemical and Metallurgical Engineering, Department of Bioengineering, Yıldız Technical University, Türkiye
ORCID: 0000-0002-9495-9321

ÖZET
Meme kanseri, dünya genelinde kadınlarda en sık görülen kanser türlerinden biri olup, günümüzde hâlâ önemli bir mortalite nedeni olmaya devam etmektedir. Mevcut tedavi yaklaşımlarına rağmen, hedefe özgü ve yan etkileri azaltılmış yeni terapötik stratejilere olan ihtiyaç giderek artmaktadır. Bu çalışma, meme kanseri tedavisinde kullanılabilecek yenilikçi bir biyomalzeme yaklaşımı geliştirmeyi amaçlamaktadır.
Bu kapsamda, sol–jel yöntemi kullanılarak SiO_2–CaO–P_2O_5–ZnO bileşiminde biyoaktif camlar sentezlenmiştir. Biyoaktif camın biyolojik performansını iyileştirmek amacıyla cam yapısına çinko iyonları dahil edilmiştir. Zn katkısının, hücre–malzeme etkileşimlerini güçlendirdiği ve camın yüzey reaktivitesini artırarak biyolojik yanıtı olumlu yönde etkilediği bilinmektedir. Üretilen camların yapısal ve kimyasal özellikleri FTIR, SEM–EDS ve BET analizleri ile karakterize edilmiştir. Elde edilen bulgular, katkı elementlerinin camın morfolojisini ve kimyasal yapısını başarıyla modifiye ettiğini göstermektedir.
Elde edilen biyoaktif cam yapısına, terapötik potansiyeli bulunan miR-3613-3p bağlanarak, onkogen ekspresyonunun baskılanmasına yönelik bir taşıyıcı sistem oluşturulması hedeflenmiştir. miRNA'nın biyoaktif cam yüzeyine bağlanmasıyla, hücre içi alımın artırılması ve kontrollü salımı sağlanması amaçlanmaktadır. Elde edilen sonuçlar, Nanodrop, FTIR ve Zeta potansiyel analizleri ile karakterize edilmiştir.
Sonuç olarak, bu çalışma miRNA yüklü biyoaktif camların meme kanseri tedavisinde potansiyel bir taşıyıcı sistem olarak kullanılabileceğini göstermekte ve ileri aşamada geliştirilecek hedefli yaklaşımlar için güçlü bir temel oluşturmaktadır.
Anahtar Kelimeler: Biyoaktif cam, miR-3613-3p, meme kanseri,

INVESTIGATION OF THE EFFECT OF THE BIOACTIVE GLASS–MIR-3613-3P COMPLEX ON ONCOGENIC ACTIVITY IN BREAST CANCER

ABSTRACT

Breast cancer remains one of the most prevalent malignancies among women worldwide and continues to be a major cause of cancer-related mortality. Despite advances in current treatment modalities, there is still a growing need for targeted therapeutic strategies with reduced side effects. This study aims to develop an innovative biomaterial-based approach for potential application in breast cancer treatment.

Within this scope, bioactive glasses with a SiO_2–CaO–P_2O_5–ZnO composition were synthesized using the sol–gel method. In order to enhance the biological performance of the bioactive glass, zinc ions were incorporated into the glass structure. It is well known that zinc doping strengthens cell–material interactions and positively influences the biological response by increasing the surface reactivity of the glass. The structural and chemical properties of the synthesized glasses were characterized using FTIR, SEM–EDS, and BET analyses. The obtained findings demonstrate that the dopant elements successfully modified the morphology and chemical structure of the glass.

By binding the therapeutically potent miR-3613-3p to the synthesized bioactive glass structure, it was aimed to develop a carrier system for the suppression of oncogene expression. Through the attachment of miRNA to the bioactive glass surface, enhanced cellular uptake and controlled release were targeted. The obtained results were characterized using Nanodrop, FTIR, and Zeta potential analyses.

In conclusion, this study demonstrates the potential of miRNA-loaded bioactive glasses as promising carrier systems for breast cancer therapy and provides a strong foundation for the development of advanced, targeted biomaterial-based treatment strategies.

Keywords: Bioactive glass, miR-3613-3p, breast cancer

Bu çalışma Yıldız Teknik Üniversitesi Bilimsel Araştırma Projeleri Koordinasyon Birimi tarafından FCD-2025-6592 No.lu proje kapsamında desteklenmiştir.
This work has been supported by Yildiz Technical University Scientific Research Projects Coordination Unit under project number FCD-2025-6592

ÜROLOJİK CERRAHİYE GİREN GERİATRİK HASTALARDA SEVOFLURAN ANESTEZİSİ VE PROPOFOL İLE TOTAL İNTRAVENÖZ ANESTEZİNİN VENTRİKÜLER REPOLARİZASYON PARAMETRELERİNE ETKİLERİNİN KARŞILAŞTIRILMASI

Dr. Selda ERSOY
Gaziantep University, Faculty of Medicine, Department of Anesthesiology and Reanimation, Türkiye
ORCID: 0009-0000-2296-3308

Assoc. Prof. Dr. Berna KAYA UĞUR
Gaziantep University, Faculty of Medicine, Department of Anesthesiology and Reanimation, Türkiye
ORCID: 0000-0003-0044-363X

Dr. Osman BÜYÜKÇELEBİ
Gaziantep University, Faculty of Medicine, Department of Cardiology, Türkiye
ORCID: 0009-0008-2489-6135

Asst. Prof. Dr. Ahmet Şenol UYAR
Gaziantep University, Faculty of Medicine, Department of Anesthesiology and Reanimation, Türkiye
ORCID: 0000-0002-6181-226X

Prof. Dr. Ömer BAYRAK
Gaziantep University, Faculty of Medicine, Department of Urology, Türkiye
ORCID: 0000-0001-5542-1572

Prof. Dr. İrfan Veysel DÜZEN
Gaziantep University, Faculty of Medicine, Department of Cardiology, Türkiye
ORCID: 0000-0003-2312-4252

ÖZET

Bu çalışmada, elektif ürolojik cerrahiye alınan geriatrik hastalarda sevofluran ile inhalasyon anestezisi ve propofol ile total intravenöz anestezinin (TİVA) ventriküler repolarizasyon parametreleri üzerindeki etkilerinin karşılaştırılması amaçlanmıştır.

Çalışmamıza, ASA I–II grubunda yer alan, 60–85 yaş arası, elektif ürolojik cerrahi planlanan 57 hasta prospektif gözlemsel olarak dahil edilmiştir. Hastalar sevofluran ile volatil anestezi uygulanan grup ve propofol bazlı TİVA uygulanan grup olmak üzere iki alt grupta incelenmiştir. Tüm hastaların preoperatif ve postoperatif 60. dakikada 12 derivasyonlu EKG kayıtları alınarak QTc, JTc, QTd, JTd, Tpe ve Tpe/QTc parametreleri değerlendirilmiştir.

Çalışmamızda QTc ve JTc süreleri her iki grupta da operasyon süresince artış eğilimi göstermiş, ancak gruplar arasında anlamlı fark bulunmamıştır. Buna karşın, repolarizasyon heterojenitesini yansıtan QTd, JTd, Tpe ve Tpe/QTc değerlerinin sevofluran grubunda daha belirgin arttığı, TİVA grubunda ise daha sınırlı değişim gösterdiği saptanmıştır.

Sevofluran ve propofol bazlı TİVA geriatrik hastalarda ventriküler repolarizasyon sürelerini benzer şekilde etkilerken, heterojenite parametrelerinde TİVA'nın daha dengeli ve öngörülebilir bir repolarizasyon profili sunduğu görülmüştür. Bu bulgu, kardiyak riski yüksek geriatrik hastalarda TİVA'nın daha güvenli bir seçenek olabileceğini düşündürmektedir.

Anahtar Kelimeler: Geriatrik Hasta, sevofluran, propofol, TİVA, ventriküler repolarizasyon.

COMPARISON OF THE EFFECTS OF SEVOFLURANE ANESTHESIA AND TOTAL INTRAVENOUS ANESTHESIA WITH PROPOFOL ON VENTRICULAR REPOLARIZATION PARAMETERS IN GERIATRIC PATIENTS UNDERGOING UROLOGIC SURGERY

ABSTRACT

The aim of this study was to compare the effects of sevoflurane inhalational anesthesia and propofol-based total intravenous anesthesia (TIVA) on ventricular repolarization parameters in geriatric patients undergoing elective urological surgery.

A total of 57 patients, aged between 60 and 85 years and classified as ASA physical status I–II, who were scheduled for elective urological procedures, were included in this prospective observational study. Patients were evaluated in two groups: those who received sevoflurane for volatile anesthesia and those who received propofol-based TIVA. Twelve-lead electrocardiograms were recorded preoperatively and at the 60th postoperative minute to assess QTc, JTc, QTd, JTd, Tpe, and Tpe/QTc parameters.

QTc and JTc intervals showed a tendency to increase during surgery in both groups, but no significant difference was observed between them. In contrast, indices reflecting repolarization heterogeneity—QTd, JTd, Tpe, and Tpe/QTc—were found to increase more prominently in the sevoflurane group, whereas only limited changes were observed in the TIVA group.

While sevoflurane and propofol-based TIVA similarly affected ventricular repolarization intervals in geriatric patients, TIVA provided a more stable and predictable profile with respect to repolarization heterogeneity. This finding suggests that TIVA may represent a safer anesthetic option in geriatric patients with elevated cardiac risk.

Keywords: Geriatric patient, sevoflurane, propofol, TIVA, ventricular repolarization.

DÖVİZ KURU OYNAKLIĞININ EKONOMİK BÜYÜME VE DİĞER MAKROEKONOMİK GÖSTERGELER ÜZERİNDEKİ ETKİSİ: ARJANTİN ÖRNEĞİ

Asst. Prof. Dr. Emre GÖKÇELİ
Kütahya Dumlupınar University, Faculty of Economics and Administrative Sciences, Department of Economics, Türkiye
ORCID: 0000-0002-8454-0041

ABSTRACT
Ülkelerin 1980'li yıllardan itibaren dışa açılmalarıyla beraber sermaye hareketleri serbestleşmiş, döviz kuru, ihracat ve ithalat hacmini belirleyen rolünün ötesine geçerek ekonomik büyümenin yanı sıra enflasyon ve doğrudan yabancı yatırımlar gibi diğer makroekonomik göstergeler üzerinde de etkin rol oynamaya başlamıştır. Döviz kurunun ekonomi üzerindeki etkisinin artmasıyla birlikte, döviz kuru oynaklığının ekonomik göstergeler üzerindeki etkisi birçok araştırmacının dikkatini çeken konular arasına girmiştir. Bu araştırmanın amacı; döviz kuru oynaklığının ekonomik büyüme ve diğer makroekonomik göstergeler üzerindeki etkisini, Arjantin özelinde 1990-2023 yılları dönemi için VAR yöntemini kullanarak analiz etmektir. Döviz kuru oynaklığı verisini elde etmek için aylık nominal döviz kuru kullanılarak standart sapma yönteminden yararlanılmış ve yıllık veri elde edilmiştir. Elde edilen sonuçlara göre döviz kuru oynaklığındaki artış büyüme üzerinde azaltıcı etkiye sahipken, ekonomik büyümedeki artış ise döviz kuru oynaklığını azaltmaktadır. Kontrol değişkenleri arasındaki ilişkiye bakıldığında ise döviz kuru oynaklığının enflasyonu artırıc,; doğrudan yabancı yatırımlar ile dış ticari açıklığı ise azaltıcı etkilere sahip olduğu görülmüştür. Enflasyon döviz kuru oynaklığını artırmakta, doğrudan yabancı yatırımlar ile dış ticaret açıklığı ise azaltmaktadır. Elde edilen bulgular ışığında, fiyat istikrarını önceleyen para politikası uygulamalarının, döviz rezervlerinin güçlendirilmesinin ve doğrudan yabancı yatırımları teşvik edici uygulamaların döviz kuru oynaklığını azaltarak ekonomik büyümeyi de artıracağı öngörülmektedir.
Anahtar Kelimeler: Ekonomik Büyüme, Döviz Kuru Oynaklığı, VAR Yöntemi,

THE IMPACT OF EXCHANGE RATE VOLATILITY ON ECONOMIC GROWTH AND OTHER MACROECONOMIC INDICATORS: THE CASE OF ARGENTINA

ABSTRACT
Along with the liberalization of capital movements following the opening up of countries since the 1980s, the exchange rate has transcended its role in determining export and import volumes, and has begun to play a significant role in other macroeconomic indicators such as inflation and foreign direct investment (FDI), in addition to economic growth. Parallel to the increasing impact of the exchange rate on the economy, the effcet of exchange rate volatility on macroeconomic indicators has become a subject of considerable interest for many researchers. The purpose of this study is to analyze the impact of exchange rate volatility on economic growth and other macroeconomic indicators for Argentina during the 1990-2023 period by employing the VAR methodology. To derive the exchange rate volatility data, the standard deviation method was utilized based on monthly nominal exchange rates to obtain annual data. The results indicate that while an increase in exchange rate volatility has a diminishing effect on growth, an increase in economic growth reduces exchange rate volatility. Regarding the relationship between control variables, it was observed that exchange rate volatility has an increasing effect on inflation, whereas it has a reducing effect on foreign direct investment and trade openness. Conversely, while inflation increases exchange rate volatility, foreign direct investment and trade openness decrease it. In light of these findings, it is envisaged that monetary policy practices prioritizing price stability, the strengthening of foreign exchange reserves, and the prioritization of policies encouraging foreign direct investment will reduce exchange rate volatility and consequently enhance economic growth.
Keywords: Ecoomic Growth, Exchange Rate Volatility, VAR Method

FORECASTING THE DEMAND FOR ELECTRIC VEHICLES IN TURKEY AND MOROCCO

MSc Student Manal LAMSIT
Altınbaş University, Department of MSc Studies, Türkiye
ORCID: 0009-0001-6379-7091

ABSTRACT

The global automotive industry is undergoing a structural transformation as electric vehicles (EVs become central to decarbonization strategies worldwide. While advanced economies have made substantial progress toward large-scale electrification, many emerging markets continue to face constraints related to affordability, charging infrastructure, and industrial capacity. This paper examines two such markets—Turkey and Morocco—and explores their potential EV adoption trajectories through 2030 using methods suited to their respective data environments.

The analysis integrates Diffusion of Innovations theory with quantitative forecasting techniques to capture both social adoption dynamics and economic forces. In Turkey, relatively consistent vehicle registration data from 2015 to 2024 allow for the application of the Compound Annual Growth Rate (CAGR) method to project future EV stock under realistic policy and industrial assumptions. In contrast, Morocco faces limited longitudinal data availability, necessitating a Scenario Analysis approach. Three scenarios—Low, Base, and High—are constructed based on variations in policy commitment, infrastructure development, and investment intensity. All data inputs are drawn from verified sources, including the International Energy Agency, the World Bank, and national statistical authorities.

The findings suggest that Turkey's EV market has moved beyond the earliest adoption stage and is transitioning toward early adopters. This shift is supported by industrial policy measures, domestic manufacturing initiatives such as TOGG, and gradual improvements in charging infrastructure. Although CAGR-based forecasts indicate strong growth potential, outcomes remain highly sensitive to affordability and the continuity of policy support. Morocco, by contrast, remains largely at the innovator stage, with EV adoption concentrated in urban areas and institutional or fleet use. Scenario outcomes vary widely, from stagnation under weak policy enforcement to accelerated growth under stronger European Union–backed investment and emerging local assembly initiatives.

Overall, the study highlights the need for transparency and caution when forecasting EV adoption in emerging markets. Where data are incomplete, complex models may obscure rather than clarify market realities. In such contexts, simpler and replicable methods can still offer valuable insights. These findings align with Sustainable Development Goals 7, 9, and 13, emphasizing the importance of evidence-based policymaking and strategic industrial planning in enabling a more inclusive transition to electric mobility.

Keywords: Electric Vehicles (EVs); Emerging Markets; Forecasting Models; Diffusion of Innovations; CAGR; Scenario Analysis; Sustainable Mobility

15th International
ZEUGMA CONGRESS ON SCIENTIFIC RESEARCH
(THE BOOK OF ABSTRACTS)
January 19-21, 2026 / Gaziantep, Türkiye
www.zeugmakongresi.org/

CONTEMPORARY ECONOMIC PROBLEMS AND THE VALUES OF THE AHI TRADITION

Prof. Dr. Mehmet KARAGÜL
Burdur Mehmet Akif Ersoy University, Institute of Social Sciences, Department of Economics, Türkiye
ORCID: 0000-0003-2589-535X

Master's Student Zeynep Sare YARAŞ
Burdur Mehmet Akif Ersoy University, Institute of Social Sciences, Department of Economics, Türkiye
ORCID: 0009-0006-9615-1293

ABSTRACT
The Ahi organization, which is founded on justice, benevolence, honesty, and solidarity among artisans and craftsmen, emerged as a social and economic system with the institutionalization of the Futuwwa movement during the reign of the Abbasid Caliph al-Nasir li-Din Allah. At the core of the Ahi tradition lies the principle of contentment, which—unlike today's profit-maximizing capitalist mindset—prioritizes social responsibility and equity. This principle reflects a holistic economic approach that places ethical considerations at the center of both production and consumption processes. The Ahi philosophy mandates quality and transparency in production while encouraging a need-based, moderate, and sustainable pattern of consumption. In this respect, its principles are considered to hold the potential for offering lasting solutions to structural issues frequently observed in contemporary economies, such as low-quality goods, violations of consumer rights, insufficient demand, environmental degradation, income inequality, excessive consumption, and unemployment. Revitalizing Ahi principles today could make significant contributions to building a more just, sustainable, and human-centered economic order. Accordingly, integrating these principles into modern economic structures is likely to enhance social welfare and strengthen social justice. This study aims to examine the causes and dimensions of current economic problems—such as income inequality, unemployment, inflation, low-quality production, and insufficient demand—and to discuss how these issues could be addressed if the Ahi economic philosophy were more fully embraced.
Keywords: Ahilism, futuwwa, capitalism, economic thought, economic problems.

GÜNÜMÜZ İKTİSADİ SORUNLARI ve AHİLİK DEĞERLERİ

ÖZET
Esnaf ve zanaatkârlar arasında adalet, yardımseverlik, dürüstlük ve dayanışmayı esas alan Ahilik teşkilatı, sosyal ve ekonomik bir sistem olarak, Abbasi Halifesi Nasır Lidinillah döneminde Fütüvvet hareketinin kurumsallaşmasıyla ortaya çıkmıştır. Ahiliğin merkezinde yer alan kanaatkârlık ilkesi, günümüzün kâr maksimizasyonuna dayalı kapitalist anlayışının aksine, sosyal sorumluluğu ve hakkaniyeti ön plana çıkarır. Bu yaklaşım, üretim ve tüketim süreçlerinde etik kaygıları merkeze alan bütüncül bir iktisadi anlayışı yansıtır. Ahilik düşüncesi, üretimde kaliteyi ve şeffaflığı zorunlu kılarken; tüketimde ihtiyaç temelli, ölçülü ve sürdürülebilir bir talep yapısını teşvik eder. Bu yönüyle Ahilik ilkelerinin, günümüz ekonomilerinde yaygın biçimde görülen kalitesiz ürün arzı, tüketici haklarının ihlali, talep yetersizliği, çevresel sorunlar, gelir dağılımındaki bozulma, aşırı tüketim ve işsizlik gibi yapısal problemlere kalıcı çözümler sunma potansiyeli taşıdığı düşünülmektedir. Günümüzde Ahilik ilkelerinin yeniden etkinleştirilmesi, daha adil, sürdürülebilir ve insan merkezli bir ekonomik düzenin oluşturulmasına önemli katkılar sağlayabilir. Bu bağlamda, söz konusu ilkelerin çağdaş iktisadi yapılara uyarlanmasının hem toplumsal refahı artıracağı hem de sosyal adaletin güçlenmesine hizmet edeceği açıktır.

Bu çalışma, günümüzde sıkça karşılaşılan gelir dağılımı eşitsizliği, işsizlik, enflasyon, düşük kaliteli ürün arzı ve talep yetersizliği gibi ekonomik sorunların nedenlerini ve boyutlarını ele aldıktan sonra, Ahilik düşünce sisteminin hâkim kılınması hâlinde bu sorunlara nasıl çözüm üretebileceğini tartışmayı amaçlamaktadır.
Anahtar Kelimeler: Ahilik, fütüvvet, kapitalizm, ekonomik yaklaşımlar, iktisadi sorunlar.

İNSAN KAYNAKLARI UYGULAMALARININ İŞTEN AYRILMA NİYETİNE ETKİSİNDE ÖRGÜTSEL ÖZDEŞLEŞMENİN ROLÜNE YÖNELİK BİR MODEL

Yeşim ÇELİKKOL
Yüksek Lisans Öğrencisi, Yıldız Teknik Üniversitesi Sosyal Bilimler Enstitüsü, İşletme Ana Bilim Dalı, İstanbul, Türkiye
ORCID: 0009-0000-5407-9138

Prof. Dr. Serdar BOZKURT
Yıldız Teknik Üniversitesi İİBF, İşletme Bölümü, İstanbul, Türkiye
ORCID: 0000-0002-4745-9965

ÖZET

İnsan Kaynakları (İK) uygulamaları, bir organizasyonun işgücünü etkin biçimde yönetmeye yönelik stratejik yaklaşımının temel bileşenlerinden biridir. İK uygulamaları ise çalışanları kuruma çekmeyi, geliştirmeyi, motive etmeyi ve elde tutmayı amaçlayan çok boyutlu faaliyet, politika ve prosedürler bütünü olarak karşımıza çıkmaktadır. Bu uygulamalar, olumlu bir çalışma ortamının oluşturulması, çalışan bağlılığının güçlendirilmesi ve nihayetinde örgütsel başarının sürdürülebilir kılınmasında kritik bir rol oynamaktadır. Temel İK uygulamaları arasında işe seçme ve yerleştirme, eğitim ve geliştirme, performans yönetimi, ücret yönetimi, çalışan ilişkileri ile İK bilgi sistemleri yer almaktadır. Her bir uygulama, yetenekli çalışanların organizasyona kazandırılmasından başlayarak örgüt içindeki gelişim ve ilerlemelerinin desteklenmesine kadar uzanan çalışan yaşam döngüsünün belirli bir aşamasına hizmet etmektedir (Sonar ve Pandey, 2023). Araştırmanın bir diğer değişkeni olan örgütsel özdeşleşme (ÖÖ) ise, çalışanların kendilerini ne ölçüde örgütsel üyelikleri üzerinden tanımladıklarını ifade etmektedir. Çalışanlar, İK uygulamalarına yönelik algıları doğrultusunda, organizasyonlarının kendilerini ve iyi oluşlarını ne ölçüde önemsediğine örgütsel özdeşleşme düzeylerini artırarak karşılık vermektedirler. Artan örgütsel özdeşleşme ile ilişkili aidiyet duygusu, çalışanların organizasyonlarının hedeflerine katkı sağlayan tutumlar geliştirmelerini sağlamaktadır. Bu doğrultuda, İK uygulamalarının çalışanlar arasında daha yüksek düzeyde örgütsel özdeşleşmeye yol açtığı görülmektedir (Traeger ve Alfes, 2019).

Araştırmanın bağımlı değişkeni olan işten ayrılma niyeti (İAN), çalışanın mevcut işinden daha iyisini bulmak amacıyla bir örgütten ayrılma ya da başka bir yere geçme isteğini ifade etmektedir ve fiilen işten ayrılmanın önemli bir göstergesi olarak nitelendirilmektedir. Bir çalışanın İAN niyeti, istifa ya da iş sözleşmesinin feshi yoluyla gerçekleşen ayrılma sürecinin son aşamasını oluşturmaktadır (Saufi vd., 2023).

Bu araştırmanın amacı, İK uygulamaları ile çalışanların İAN'leri arasındaki ilişkiyi incelemek ve bu ilişkide ÖÖ'nün rolünü ortaya koymaktır. Çalışma, Sosyal Değişim Teorisi (SDT) ve Sosyal Kimlik Teorisi (SKT) çerçevesinde kurgulanmıştır. SDT bağlamında, organizasyonun adil ve destekleyici İK uygulamaları sunması durumunda çalışanların örgüte karşı karşılık verme yükümlülüğü hissetmeleri beklenmektedir. Bu karşılık, yalnızca performans artışı şeklinde değil; örgütle kurulan psikolojik bağın güçlenmesi ve örgüt ile özdeşleşmenin artması biçiminde de ortaya çıkabilmektedir. Diğer yandan SKT perspektifinden bakıldığında, İK uygulamaları örgütün değerlerini, çalışanına verdiği önemi sembolik sinyaller aracılığıyla çalışanlara iletmektedir. Bu sinyaller, çalışanın örgütsel kimliği algılamasını güçlendirmekte ve bu kimliği benlik kavramı içine dâhil etmesini kolaylaştırmaktadır. Bu doğrultuda İK uygulamaları, örgüt ile özdeşleşmenin öncülü olarak; işten ayrılma niyeti ise bu sürecin davranışsal sonucu olarak konumlandırılmaktadır.

Anahtar Kelimeler: İnsan Kaynakları Uygulamaları, Örgütsel Özdeşleşme, İşten Ayrılma Niyeti

A MODEL FOR THE ROLE OF ORGANIZATIONAL IDENTIFICATION IN THE EFFECT OF HUMAN RESOURCES PRACTICES ON INTENTION TO LEAVE

ABSTRACT

Human Resources (HR) practices are a fundamental component of an organization's strategic approach to managing its workforce effectively. HR practices encompass a multi-dimensional set of activities, policies, and procedures aimed at attracting, developing, motivating, and retaining employees. These practices play a critical role in supportive work environment, strengthening employee commitment, and ultimately ensuring the sustainability of organizational sustainability. Core HR practices include recruitment and selection, training and development, performance management, compensation and rewards, employee relations, and HR information systems. Each practice serves a specific stage of the employee life cycle, from attracting talented employees to supporting their development and advancement within the organization (Sonar and Pandey, 2023).

Another variable in this research, organizational identification (OI), refers to the extent to which employees define themselves through their organizational membership. Employees respond to their perceptions of HR practices by increasing their organizational identification, reflecting the extent to which their organization values them and their well-being. The sense of belonging associated with greater organizational identification enables employees to develop attitudes that support their organizations' goals. Accordingly, HR practices are associated with higher levels of organizational identification among employees (Traeger and Alfes, 2019).

The dependent variable in the research, intention to leave (ITL), reflects an employee's desire to leave an organization or move elsewhere to find a better job and is considered the most important indicator of actual leaving behavior. An employee's ITL constitutes the final stage of the departure process, which occurs through resignation or termination of the employment contract (Saufi et al., 2023).

The aim of this research is to examine the relationship between HR practices and employees' OI's and to reveal the role of organizational awareness in this relationship. The study is structured within the framework of Social Exchange Theory (SET) and Social Identity Theory (SITH). In the context of SET, employees are expected to feel an obligation to reciprocate when the organization offers fair and supportive HR practices. This reciprocation is not only in the form of increased performance; it can also manifest as a strengthening of the psychological bond with the organization and an increase in identification with it. On the other hand, from a CBT perspective, HR practices communicate the organization's values and the importance it places on its employees through symbolic signals. These signals strengthen the employee's perception of organizational identity and facilitate its inclusion in their self-concept. Accordingly, HR practices are positioned as a precursor to identification with the organization, while the intention to leave the job is positioned as the behavioral outcome of this process.

Keywords: HR Practices, Organizational İdentification, Intention to leave

15th International
ZEUGMA CONGRESS ON SCIENTIFIC RESEARCH
(THE BOOK OF ABSTRACTS)
January 19-21, 2026 / Gaziantep, Türkiye
www.zeugmakongresi.org/

THE USE OF DIGITAL TECHNOLOGIES IN GREEN LOGISTICS FROM A SUSTAINABLE DEVELOPMENT PERSPECTIVE

Esin AKSOY
İskenderun Teknik Üniversitesi, Lisansüstü Eğitim Enstitüsü, Ekonomi ve Finans Anabilim Dalı, Hatay, Türkiye,
ORCID ID/0009-0003-2156-4710

Prof. Dr. Yunus AÇCI
İskenderun Teknik Üniversitesi, İşletme ve Yönetim Bilimleri Fakültesi, Hatay, Türkiye,
ORCID ID/0000-0002-3385-9087

ABSTRACT
Sustainable development is a comprehensive approach that evaluates economic growth together with the principles of environmental protection and social welfare. Globalization, the increase in trade, and complex supply chains have brought the issue of sustainability in logistics to the forefront. In particular, the high levels of energy consumption and greenhouse gas emissions resulting from transportation, warehouse management, and distribution activities make it necessary to reduce the environmental impacts of logistics processes. In this context, green logistics practices aim to minimize the negative environmental effects of logistics activities.
In recent years, rapid advances in digital technologies have become important factors enhancing the effectiveness of green logistics practices. Technologies such as the Internet of Things, big data analytics, artificial intelligence, and blockchain enable more efficient use of resources by providing transparency, traceability, and efficiency in logistics processes. Through these technological developments, route planning, fuel management, and inventory control can be carried out more effectively, and the carbon footprint can be significantly reduced.
The aim of this study is to examine the use of digital technologies in green logistics within the perspective of sustainable development and to evaluate their contributions to environmental, economic, and social sustainability. The study is based on a qualitative research method and relies on a literature review. The findings reveal that digital technologies strengthen green logistics practices and play a strategic role in achieving sustainable development goals. Accordingly, the study offers recommendations for policymakers and logistics sector stakeholders regarding digitalization-centered sustainability strategies.
Keywords: Sustainable development, green logistics, digital technologies, digitalization in logistics

SÜRDÜRÜLEBİLİR KALKINMA PERSPEKTİFİNDEN YEŞİL LOJİSTİKTE DİJİTAL TEKNOLOJİLERİN KULLANIMI[1]

ÖZET
Sürdürülebilir kalkınma, ekonomik büyümeyi çevre koruma ve sosyal refah ilkeleri ile birlikte değerlendiren kapsamlı bir yaklaşım biçimidir. Küreselleşme, ticaretin artışı ve karmaşık tedarik zincirleri, lojistik alanında sürdürülebilirlik konusunu ön plana çıkarmıştır. Özellikle taşımacılık, depo yönetimi ve dağıtım faaliyetleri sebebiyle meydana gelen yüksek enerji tüketimi ile sera gazı salınımları, lojistik süreçlerin çevresel etkilerinin azaltılmasını zorunlu hale getirmektedir. Bu çerçevede, yeşil lojistik uygulamaları, lojistik faaliyetlerin çevreye olumsuz etkilerini azaltmayı hedeflemektedir.
Son dönemlerde dijital teknolojilerdeki hızlı ilerlemeler, yeşil lojistik uygulamalarının etkinliğini artıran önemli unsurlar haline gelmiştir. Nesnelerin İnterneti, büyük veri analizi, yapay zekâ ve blok zincir gibi

[1] Çalışma, İskenderun Teknik Üniversitesi Lisansüstü Eğitim Enstitüsü Ekonomi ve Finans Anabilim Dalı öğrencisi Esin Aksoy'un yayımlanmamış tezinden türetilmiştir.

teknolojiler, lojistik süreçlerde şeffaflık, izlenebilirlik ve verimlilik sağlayarak kaynakların daha verimli kullanılmasına olanak tanımaktadır. Bu teknolojik gelişmeler sayesinde rota planlaması, yakıt yönetimi ve stok kontrolü daha etkili bir şekilde gerçekleştirilebilmekte ve karbon ayak izi önemli ölçüde düşürülebilmektedir.

Bu araştırmanın amacı, sürdürülebilir kalkınma perspektifi içinde yeşil lojistikte dijital teknolojilerin kullanımını ele almak ve bu teknolojilerin çevresel, ekonomik ve sosyal sürdürülebilirliğe olan katkılarını değerlendirmektir. Çalışma, nitel bir araştırma yöntemi ile literatür taramasına dayanmaktadır. Elde edilen bulgular, dijital teknolojilerin yeşil lojistik uygulamalarını güçlendirdiğini ve sürdürülebilir kalkınma hedeflerine ulaşmada stratejik bir rol oynadığını ortaya koymaktadır. Bu doğrultuda, araştırma, politika yapıcılar ve lojistik sektörü paydaşları için dijitalleşme merkezli sürdürülebilirlik stratejilerine yönelik öneriler sunmaktadır.

Anahtar Kelimeler: Sürdürülebilir kalkınma, yeşil lojistik, dijital teknolojiler, lojistikte dijitalleşme

AUGUST 8 – WASHINGTON AGREEMENTS IN THE WORLD MEDIA

Kenan NOVRUZOV
Baku State University, Faculty of Journalism, Department of New Media and Communication Theories, Azerbaijan

ABSTRACT
On August 8, 2025, in Washington, under the mediation of U.S. President Donald Trump, agreements were reached between Azerbaijani President Ilham Aliyev and Armenian Prime Minister Nikol Pashinyan. These agreements became one of the most significant events of 2025. With the agreements, peace effectively came to the South Caucasus. Of course, this was not only of interest to Azerbaijan or Armenia, but also to the global media. Media outlets in Turkey, Russia, the United States, the United Kingdom, Georgia, and Iran prepared materials of different genres and content regarding the agreements and the signed documents. Naturally, the content of these materials was not identical. This is understandable. Considering that journalism in one way or another shapes public consciousness, it should be noted that the materials presented also reflected the attitudes of these countries toward the Washington agreements and, indirectly, toward the prospect of peace in the South Caucasus. Therefore, in these materials, the factor of objectivity was, to some extent, compromised. Some media presented the process as a success for Azerbaijan, others for Armenia, and still others for the United States. This, from time to time, caused certain confusion in public perception.
Keywords: USA, Azerbaijan, Armenia, Media, Washington

THE NECESSITY OF A DIGITAL APPROACH TO PHYSICAL EDUCATION IN GENERAL EDUCATION SCHOOLS

Maya Zahir HEYDAROVA
Associate Professor of the Azerbaijan Sports Academy,
PhD in Pedagogy
ORCID ID: 0009-0006-36-42-4894

Elnara KHEYRADDIN MAMMADOVA
Associate Professor of the Azerbaijan Sports Academy,
PhD in Pedagogy
ORCID ID: 0009-0004-0051-4746

ABSTRACT

As the modern education system rapidly undergoes digitalization, the traditional mechanisms of physical education in schools also require restructuring. Since a significant part of students' daily life is connected with mobile devices, online platforms, and digital tools, it becomes essential to adapt physical education lessons to this new reality. The integration of digital tools not only enhances the quality of teaching but also transforms students' attitudes toward the learning process.

Firstly, the digital approach significantly increases student motivation. Interactive applications, digital competitions, pedometers, and fitness trackers make physical activities more game-like and engaging for students. This, in turn, boosts participation and contributes to the development of consistent physical activity habits.

Secondly, digital systems ensure accurate monitoring of individual progress. Digital tracking tools automatically record each student's pulse, physical load level, step count, and other indicators. This data enables teachers to create personalized training programs, analyze development dynamics, and conduct objective assessments.

Thirdly, digital resources make the teaching process more efficient and visually rich. Video analysis, 3D movement models, and slow-motion technologies help students master sport techniques more accurately. By seeing their movements on the screen, students can more quickly recognize and correct their mistakes.

Fourthly, digital teaching tools increase accessibility. Distance learning opportunities allow physical education lessons to be effectively continued not only at school but also at home. This was particularly important during the pandemic period.

In conclusion, the digitalization of physical education in modern schools is a crucial process that enhances teaching quality, increases student engagement, strengthens individualized learning, and promotes a healthy lifestyle. Therefore, this topic holds high pedagogical and social relevance.

Keywords: digital approach, digital platform, physical education, digital resources, student motivation, digital transformation.

TAILORING THE STRUCTURAL, PHYSICOCHEMICAL, OPTICAL, THERMAL, AND PHOTOLUMINESCENT PROPERTIES OF EUROPIUM DOPED STRONTIUM PHOSPHATE GLASSES SYNTHESIZED VIA MELT-QUENCHING FOR PHOTONIC AND PHOTOVOLTAIC APPLICATIONS

Prof. Dr. El Mahdi BOUABDALLI
Laboratory of Computer Science and Interdisciplinary Physics (LIPI), Higher Normal School of Fes (ENS-Fes), Sidi Mohamed Ben Abdellah University, Morocco
Laboratory of Engineering Sciences for Energy (LabSIPE), National School of Applied Sciences, Chouaib Doukkali University, Morocco

Mohamed EL JOUAD
Laboratory of Engineering Sciences for Energy (LabSIPE), National School of Applied Sciences, Chouaib Doukkali University, Morocco

Samira TOUHTOUH
Laboratory of Engineering Sciences for Energy (LabSIPE), National School of Applied Sciences, Chouaib Doukkali University, Morocco

Ilyass EL KADMIRI
Laboratory of Computer Science and Interdisciplinary Physics (LIPI), Higher Normal School of Fes (ENS-Fes), Sidi Mohamed Ben Abdellah University, Morocco
Laboratory of Materials, Waves, Energy and Environment, Team of Acoustic, Photonic and Materials, Faculty of Sciences, University Mohamed First Oujda, Morocco

Nathalie GAUMER
Laboratory of Photonics of Angers (LPhiA – EA 4464), University of Angers, France

Mostapha SINITI
CUR'EnR&SIE, Faculty of Sciences El Jadida, Chouaib Doukkali University, Morocco

Abdelowahed HAJJAJI
Laboratory of Engineering Sciences for Energy (LabSIPE), National School of Applied Sciences, Chouaib Doukkali University, Morocco

ABSTRACT
Europium-doped strontium phosphate glasses (PSrEux) were synthesized using the conventional melt-quenching technique with Eu_2O_3 concentrations of 0.0, 0.5, 1.0, and 1.5 mol. at. % to investigate the impact of Eu^{3+} incorporation on their structural, thermophysical, and photoluminescent properties. X-ray diffraction (XRD) confirmed that all compositions were fully amorphous. Fourier-transform infrared (FTIR) spectroscopy revealed the characteristic vibrational modes of the phosphate network, including symmetric and asymmetric P–O–P stretching, symmetric stretching of $(PO_3)^{2-}$, and P=O bending vibrations. Physical measurements indicated a slight increase in density (from 2.059 to 2.082 g/cm^3) alongside a decrease in molar volume (from 62.441 to 62.083 cm^3/mol), suggesting progressive structural densification with increasing Eu_2O_3 content. Differential thermal analysis (DTA) demonstrated comparable thermal stability across the series, confirming that these materials are suitable for high-temperature and optoelectronic applications. Photoluminescence (PL) spectra displayed the characteristic emission lines of Eu^{3+}, prominently featuring the intense red $^5D_0 \rightarrow {}^7F_2$ transition. Judd–Ofelt (J–O) analysis provided key intensity parameters (Ω_λ) and asymmetry ratios (R).

The observed increases in Ω_2 and R-values indicated enhanced local structural asymmetry and stronger Eu^{3+}–O^{2-} covalent interactions. Radiative properties, including transition probabilities (A), stimulated emission cross-sections (σ_e), branching ratios (β), and radiative lifetimes, were derived using the J–O formalism. All samples exhibited single-exponential decay curves of the $^5D_0$ level, confirming homogeneous emission behavior. The CIE 1931 chromaticity coordinates ($x \approx 0.660$, $y \approx 0.340$) closely align with the standard red-emission target (0.67, 0.33). Overall, these findings demonstrate that Eu^{3+}-doped strontium phosphate glasses possess strong and stable red photoluminescence, combined with robust structural and thermal performance, making them promising candidates for next-generation photonic devices such as solid-state lasers, optical amplifiers, and advanced display technologies.

Keywords: Strontium phosphate glasses; Europium oxide; Melt-quenching technique; Structural characterization; FTIR spectroscopy; Photoluminescence properties; Thermophysical properties; Judd–Ofelt analysis; Radiative properties; CIE chromaticity; Red-emitting materials.

INFLUENCE OF YTTRIUM DOPING ON THE STRUCTURAL, PHYSICAL, AND OPTICAL PROPERTIES OF SOL–GEL SILICOPHOSPHATE GLASSES FOR ENHANCED PHOTONIC APPLICATIONS

Prof. Dr. El Mahdi BOUABDALLI
Laboratory of Computer Science and Interdisciplinary Physics (LIPI), Higher Normal School of Fes (ENS-Fes), Sidi Mohamed Ben Abdellah University, Morocco
Laboratory of Engineering Sciences for Energy (LabSIPE), National School of Applied Sciences, Chouaib Doukkali University, Morocco

Mohamed EL JOUAD
Laboratory of Engineering Sciences for Energy (LabSIPE), National School of Applied Sciences, Chouaib Doukkali University, Morocco

Samira TOUHTOUH
Laboratory of Engineering Sciences for Energy (LabSIPE), National School of Applied Sciences, Chouaib Doukkali University, Morocco

Nathalie GAUMER
Laboratory of Photonics of Angers (LPhiA – EA 4464), University of Angers, France

Abdelowahed HAJJAJI
Laboratory of Engineering Sciences for Energy (LabSIPE), National School of Applied Sciences, Chouaib Doukkali University, Morocco

ABSTRACT
Yttrium-doped silicophosphate glasses have garnered considerable interest for their promising applications in photonics, optoelectronics, lasers, biomedical devices, and light-emitting diodes (LEDs). In this study, pure and yttrium-incorporated silicophosphate glasses were synthesized using the sol-gel method to investigate the influence of yttrium doping on their structural, physical, and optical properties. A combination of X-ray diffraction (XRD), Fourier-transform infrared (FTIR) spectroscopy, and UV–visible spectroscopy was employed to characterize the prepared samples. XRD analysis confirmed the amorphous nature of all synthesized glasses. Optical measurements revealed that the incorporation of trivalent yttrium ions resulted in an increased refractive index and a reduction in the optical band-gap energy. FTIR spectroscopy identified various vibrational modes, including the symmetric and asymmetric stretching of P–O–P linkages, bending vibrations of P–O in PO_4 units, as well as stretching and bending modes of OH groups and P–O–H bonds associated with water absorption. These spectral features strongly support the role of yttrium oxide as a network modifier within the silicophosphate glass matrix. Theoretical calculations showed an increase in optical basicity (Λ_{th}) from 0.465 to 0.472 and a slight decrease in the interaction parameter (A) from 0.218 $Å^{-3}$ to 0.215 $Å^{-3}$ with yttrium addition. Overall, yttrium-doped silicophosphate glasses exhibit enhanced optical properties, underscoring their potential in advanced optoelectronic devices and optical filtering systems.
Keywords: Yttrium-doped silicophosphate glasses; Sol–gel synthesis; Rare-earth doping; Amorphous materials; Structural characterization; Optical properties; Refractive index; Optical bandgap; X-ray diffraction (XRD); FTIR spectroscopy; UV–Vis spectroscopy; Optical basicity; Network modifiers; Optoelectronic materials; Optical filter applications.

SYNERGISTIC MULTIPHYSICAL AND JUDD–OFELT ANALYSIS OF EUROPIUM-DOPED SILICOPHOSPHATE SOL–GEL GLASSES FOR OPTIMIZED RED EMISSION IN PHOTONIC APPLICATIONS

Prof. Dr. El Mahdi BOUABDALLI
Laboratory of Computer Science and Interdisciplinary Physics (LIPI), Higher Normal School of Fes (ENS-Fes), Sidi Mohamed Ben Abdellah University, Morocco
Laboratory of Engineering Sciences for Energy (LabSIPE), National School of Applied Sciences, Chouaib Doukkali University, Morocco

Mohamed EL JOUAD
Laboratory of Engineering Sciences for Energy (LabSIPE), National School of Applied Sciences, Chouaib Doukkali University, Morocco

Samira TOUHTOUH
Laboratory of Engineering Sciences for Energy (LabSIPE), National School of Applied Sciences, Chouaib Doukkali University, Morocco

Nathalie GAUMER
Laboratoire POMA – UMR CNRS 6136, University of Angers, France

El Kebir HLIL
Institut Néel, CNRS and Université Grenoble Alpes, France

Abdelowahed HAJJAJI
Laboratory of Engineering Sciences for Energy (LabSIPE), National School of Applied Sciences, Chouaib Doukkali University, Morocco

ABSTRACT

Europium-doped silicophosphate glasses have emerged as highly promising materials for next-generation photonic technologies, such as light-emitting diodes (LEDs), optoelectronic components, and laser systems. This study systematically investigates the effects of trivalent europium (Eu^{3+}) incorporation on the structural, physical, and optical properties of silicophosphate glasses synthesized through the sol-gel method. Both undoped and Eu^{3+}-doped compositions were thoroughly characterized using techniques including X-ray diffraction (XRD), Fourier-transform infrared (FTIR) spectroscopy, UV–visible absorption spectroscopy, steady-state photoluminescence (PL), and time-resolved luminescence decay measurements. XRD analysis confirmed that all prepared samples exhibited a fully amorphous structure. FTIR spectroscopy indicated that the incorporation of Eu^{3+} modifies the silicate phosphate network by disrupting Si–O–Si linkages, resulting in an increased optical band gap. Photoluminescence spectra displayed the characteristic $^5D_0 \rightarrow {}^7F_J$ (where J = 0–4) transitions of Eu^{3+} ions, with broadened emission bands typical of amorphous glass matrices. Judd–Ofelt (J-O) analysis facilitated the determination of optical intensity parameters (Ω_2 and Ω_4) and crucial radiative properties, including spontaneous emission probabilities (A), stimulated emission cross-sections (σ_e), calculated radiative lifetimes (τ_{cal}), and branching ratios (β_R). Notably, the high branching ratio of 52.71% for the hypersensitive $^5D_0 \rightarrow {}^7F_2$ transition underscores the strong potential of these glasses for red-emitting laser applications. Moreover, the calculated CIE 1931 chromaticity coordinates (x = 0.63, y = 0.36) are situated close to the ideal red-emission point (0.67, 0.33), affirming the generation of bright and spectrally pure red light. Overall, these findings demonstrate that Eu^{3+}-doped silicophosphate sol-gel glasses exhibit excellent structural integrity alongside enhanced luminescent performance, rendering them highly suitable for red-emitting photonic devices and solid-state laser applications.

Keywords: Europium; Silicophosphate glasses; Sol–gel process; Optical properties; Structural properties; XRD; FTIR spectroscopy; Band gap energy; Photoluminescence; Luminescence decay; Judd–Ofelt analysis; Radiative properties; Photonic technologies.

ENGINEERED ERBIUM-DOPED SILICOPHOSPHATE GLASSES: NOVEL SYNTHESIS AND TAILORED OPTICAL PROPERTIES FOR HIGH-PERFORMANCE PHOTONIC APPLICATIONS

Prof. Dr. El Mahdi BOUABDALLI
Laboratory of Computer Science and Interdisciplinary Physics (LIPI), Higher Normal School of Fes (ENS-Fes), Sidi Mohamed Ben Abdellah University, Morocco
Laboratory of Engineering Sciences for Energy (LabSIPE), National School of Applied Sciences, Chouaib Doukkali University, Morocco

Mohamed EL JOUAD
Laboratory of Engineering Sciences for Energy (LabSIPE), National School of Applied Sciences, Chouaib Doukkali University, Morocco

Samira TOUHTOUH
Laboratory of Engineering Sciences for Energy (LabSIPE), National School of Applied Sciences, Chouaib Doukkali University, Morocco

Nathalie GAUMER
Laboratory of Photonics of Angers (LPhiA – EA 4464), University of Angers, France

Abdelowahed HAJJAJI
Laboratory of Engineering Sciences for Energy (LabSIPE), National School of Applied Sciences, Chouaib Doukkali University, Morocco

ABSTRACT
Erbium-incorporated silicophosphate glasses are highly sought after in key sectors such as photonics, optoelectronics, lasers, and light-emitting diodes. This investigation focuses on understanding how the erbium dopant influences the optical, physical, and structural characteristics of silicophosphate-based glasses. Using a sol-gel process, we synthesized both pure silicophosphate glasses and those doped with varying concentrations of erbium. X-ray diffraction (XRD) patterns confirmed the non-crystalline nature of the synthesized glasses. Optical measurements revealed that the introduction of trivalent erbium ions increased the refractive index of the samples while simultaneously decreasing their energy band gap values. Additionally, the presence of P–O–P linkage stretching vibrations, both symmetrical and asymmetrical, as well as P–O bending vibrations in PO_4 units, were identified. We also observed vibrations associated with hydroxyl (OH) groups and water absorption (P–O–H) in the glasses. The theoretical values of optical basicity (Λ_{th}) increased from 0.465 to 0.472, while the interaction parameter (A) decreased from 0.218 to 0.214 $Å^{-3}$. The enhanced properties of silicophosphate glasses doped with trivalent erbium ions position them as promising materials for optoelectronic devices and optical filter systems.

Keywords: Erbium-Doped Silicophosphate Glasses; Sol-Gel Synthesis; Rare-Earth Doping; Optical Properties; Structural Characteristics; X-Ray Diffraction (XRD); FTIR Spectroscopy; Amorphous Materials; Photonics; Optoelectronic Materials; Optical Filters.

ACADEMIC LIBRARIES, SOCIAL RESPONSIBILITY, AND COMMUNITY – BASED EDUCATION IN THE 21ST CENTURY

Gbemisola Morolayo ADEGBUYI
College Library, Federal College of Education (Special), Nigeria

Tosin Abimbola AYODELE
College Library, Federal College of Education (Special), Nigeria

Temitope Aramide ADARAMOLA
College Library, Federal College of Education (Special), Nigeria

ABSTRACT
Academic libraries are increasingly expected to demonstrate value beyond their traditional academic functions, particularly in relation to societal engagement and public demand. Amid growing discourse on social responsibility within higher education, the role of academic libraries in advancing community-based education remains under-studied. The study examined the evolving social mandate of academic libraries in the 21st century, arguing that community engagement constitutes a central dimension of contemporary academic librarianship. Based on relevant literature, this paper presents the major social responsibilities and community based education of academic libraries in the 21st century, academic libraries as institutional intermediaries that connect universities with surrounding communities through inclusive educational practices. It explores how outreach initiatives, collaborative partnerships, and open access strategies enable libraries to support lifelong learning, reduce informational inequities, and translate scholarly knowledge into socially relevant forms. The paper contribute to Emerging Technologies & Trends in Academic Libraries in 21st also, debates on academic library value, accountability, and the redefinition of librarianship in a changing institutions landscape by reframing community-based education as integral to library mission and practice. The study recommends Institutional Integration of Community Engagement, Policy and Governance Support, Strengthening institution–Community Partnerships, Leveraging Digital Technologies for Inclusion and Sustainable Funding and Resource Allocation.
Keywords: Academic Libraries, Social Responsibility, and Community-Based Education in the 21st Century

SEISMIC PERFORMANCE EVALUATION OF MULTI-STORY REINFORCED CONCRETE FRAMES WITH VARYING PLAN ASPECT RATIOS USING PUSHOVER ANALYSIS

PhD Student Mohammed OUALI
Khemis Miliana University, Faculty of Science and Technology, Department of Civil Engineering, Laboratory of Acoustics and Civil Engineering, Algeria

Dr. Mahfoud TOUHARI
Khemis Miliana University, Faculty of Science and Technology, Department of Civil Engineering, Laboratory of Acoustics and Civil Engineering, Algeria

ABSTRACT
The rapid vertical expansion of urban areas has led to an increase in the seismic vulnerability of multi-story buildings, particularly in seismically active regions such as Algeria. In recent earthquakes, reinforced concrete structures have exhibited unsatisfactory seismic performance, highlighting deficiencies in current design practices, especially regarding the consideration of building geometry. Among geometric parameters, the plan aspect ratio plays a crucial role in influencing seismic response and overall structural performance. This study evaluates the seismic performance of multi-storey reinforced concrete frame buildings with varying plan aspect ratios using nonlinear static (pushover) analysis within a performance-based assessment framework. Three building models with different floor plan configurations are analyzed to investigate the influence of lateral plan proportions on key seismic response parameters, including displacement capacity, base shear demand, and global structural behavior. The results demonstrate that plan aspect ratio has a significant impact on seismic performance. Structures with elongated plan configurations exhibit higher lateral displacements, reduced stiffness, and less favorable seismic behavior compared to more compact layouts. These findings confirm that neglecting plan geometry effects may lead to inaccurate seismic performance predictions. The study emphasizes the importance of incorporating plan aspect ratio considerations into performance-based seismic design and assessment to enhance the safety and resilience of reinforced concrete frame structures in seismic regions.
Keywords: RPA99/2003-2024, earthquake resistance, building stability, seismic performance, nonlinear pushover analysis, plan aspect ratio

HYBRID MACHINE LEARNING–DRIVEN FORECASTING AND NEUTROSOPHIC OPTIMIZATION OF CRYPTOCURRENCY MARKETS

Nabil Ahmed KHAN
Department of Statistics and Operations Research, Aligarh Muslim University, India

Rehan KHAN
Department of Mathematics, IIT Hyderabad, India

Mohd KHALID
Department of Statistics and Operations Research, Aligarh Muslim University, India

Mohammad PARVEJ
Department of Statistics and Operations Research, Aligarh Muslim University, India

Ahmad Yusuf ADHAMI
Department of Statistics and Operations Research, Aligarh Muslim University, India

ABSTRACT
Fluctuations in cryptocurrency markets present a significant problem to the accuracy of forecasting trends and prices in this field. This paper proposes a new method of improving cryptocurrency forecasting by applying machine learning algorithms to a hybrid model. The framework integrates, a neural network model, with auto regressive integrated moving average (ARIMA) and trigonometric, Box-Cox, ARMA, Trend, Seasonal (TBATS) to capture the intricate relationship and dynamics in the data. Because most aspects affecting the cryptocurrency's price are uncertain, we propose that fuzzy parameters be used to reflect this uncertainty in the market. Furthermore, we apply neutrosophic programming to optimize predictions where the indeterminacy of the data is considered. The hybrid model thus incorporates short-term market volatility and long-term market trends, making the model rigid and accurate. Here, we compare this approach's performance with other forecasting models using actual cryptocurrency data. The results indicate that the hybrid model developed achieves better predictive accuracy and is more flexible than the conventional models. To sum up, this research offers significant knowledge of applying the newest machine learning methods to enhance cryptocurrency prediction and improve its efficiency for investors, traders, and financial institutions.
keywords: Hybrid modeling, Machine learning, Neural networks, Time series forecasting, Neutrosophic programming.

GAMIFICATION AND DIGITAL REWARD APPROACH IN TRANSFORMING COMPLIANT TAXPAYER PROGRAMS FOR OPTIMIZING INCOME TAX REVENUE IN INDONESIA

Sindi Karmila
University of Lampung, Faculty of Economics and Business, Diploma Program in Taxation, Indonesia

Putri Marshella
University of Lampung, Faculty of Economics and Business, Diploma Program in Taxation, Indonesia

Divva Zalfa Nazwa KUSUMA
University of Lampung, Faculty of Economics and Business, Diploma Program in Taxation, Indonesia

Meisy Nabila Mutia SARI
University of Lampung, Faculty of Economics and Business, Diploma Program in Taxation, Indonesia

ABSTRACT
This study examines the implementation of gamification strategies and digital reward systems within compliant taxpayer programs to enhance voluntary compliance and optimize income tax revenue. The research evaluates how game-design elements such as points, badges, leaderboards, and instant digital incentives can be integrated into tax administration frameworks to motivate taxpayers, increase engagement, and foster a culture of sustained compliance. By utilizing a mixed-method approach, including surveys and behavioral analysis, the study assesses the effectiveness of these interventions in improving taxpayer understanding, timely reporting, and payment morale. The findings suggest that a well-structured gamified digital approach can significantly contribute to revenue optimization by transforming taxpayer behavior, reducing administrative costs, and increasing overall tax compliance rates. This research offers practical insights for tax authorities seeking innovative, technology-driven solutions to modernize taxpayer education and encouragement programs.
Keywords: Tax compliance, gamification, digital rewards, income tax revenue, taxpayer behavior, behavioral economics.

ADDITIVE MANUFACTURING IN BIOMEDICAL ENGINEERING: A VALIDATED WORKFLOW FOR CUSTOM PROSTHETICS AND MRI/CT-BASED ANATOMICAL MODELING

Md. Shahporan RIMON
Department of Mechanical Engineering, Chittagong University of Engineering and Technology (CUET), Bangladesh

Dr. Sajal Chandra BANIK
Department of Mechanical Engineering, Chittagong University of Engineering and Technology (CUET), Bangladesh

Dr. Jamal Uddin AHAMED
Department of Mechanical Engineering, Chittagong University of Engineering and Technology (CUET), Bangladesh

ABSTRACT
Additive manufacturing (3D printing) is becoming an everyday tool in hospitals, enabling patient-specific devices and lifelike anatomical models that aid planning, training, and communication. In this work we tested a practical clinical workflow for two uses: making custom prosthetic parts and turning MRI/CT scans into physical anatomical replicas. For prosthetics, we captured residual-limb shape with 3D scanning, cleaned and optimized the mesh, then printed parts using fused deposition modeling (FDM). For anatomical models, clinical imaging was segmented, converted into printable 3D meshes, refined, and printed. We evaluated the outputs by measuring geometric fidelity, testing representative prosthetic assemblies for function, and tracking operational measures such as turnaround time, per-unit cost, and clinician usability. The findings show that 3D printing delivers fast, well-fitting solutions and high anatomical accuracy, and that printed models significantly improve preoperative planning and team communication. Remaining hurdles include material biocompatibility, surface finish and post-processing effort, and regulatory requirements. We offer practical steps to help clinics adopt these methods safely and affordably.
Keywords: Additive manufacturing, Prosthetics, Medical imaging, Anatomical models, Clinical validation

USER-CENTERED ADAPTIVE USABILITY MODEL FOR ACCESSIBLE E-TRANSPORTATION PLATFORMS

Samar Jamal Hassan MAHMOUD
Faculty of Computer Science and Mathematics, Universiti Malaysia Terengganu, Malaysia

Prof. Ts. Dr. Noor Maizura Binti MOHAMAD NOOR
Faculty of Computer Science and Mathematics, Universiti Malaysia Terengganu, Malaysia

Assoc. Prof. Ts. Dr. Zuriana Abu BAKAR
Faculty of Computer Science and Mathematics, Universiti Malaysia Terengganu, Malaysia

ABSTRACT

Introduction and Purpose:
In the modern digital era, the integration of computer science and information systems plays a vital role in creating technologies that enhance user experiences, especially for individuals with visual impairments. Although e-transportation services are increasingly adopted worldwide, many of their mobile applications do not adequately meet the accessibility needs of this user group, thereby restricting their independence and confidence in using such services. This study examines how visual design, navigation design, and information design influence the competitive advantage of e-transportation mobile applications.

Materials and Methods:
A questionnaire was distributed to 400 visually impaired individuals in Jordan to explore how these design elements affect the applications' market position and overall effectiveness. The research is divided into two major parts: the first focuses on identifying the challenges, preferences, and needs of visually impaired users, while the second applies these findings to develop an accessible, intuitive, and user-friendly e-transportation application.

Results:
The findings revealed that visual design had the greatest effect on competitive advantage ($\beta = 0.328$, $p = 0.000$), followed by navigation design ($\beta = 0.268$, $p = 0.001$) and information design ($\beta = 0.213$, $p = 0.001$). Additionally, the inclusion of the Technology Acceptance Model (TAM) enhanced the model's explanatory power ($\beta = 0.472$, $p = 0.000$) and moderated the relationship between user interface design and competitive advantage ($\beta = 0.170$, $p = 0.028$).

Discussion and Conclusion:
The study concludes that visual, navigation, and information design significantly contribute to strengthening the competitive advantage of e-transportation applications, with visual design being the most influential factor. Supported by TAM analysis, the results emphasize that improving usability and accessibility through structured interfaces, voice-assisted features, and clear navigation cues enhances user satisfaction, loyalty, and independence, particularly among visually impaired users.

Keywords: E-Transportation; Accessibility; Visually Impaired Users; User-Centered Design; Mobile Application Competitiveness

ADVANCED MULTI-TECHNIQUE METHODS FOR MIXED RADIATION SEPARATION

Imane AHNOUZ
Mohammed V University in Rabat, Department of physics, faculty of sciences, Rabat, Morocco.

ABSTRACT
Neutron spectrometry using scintillation detectors has gained widespread adoption in radiation detection and medical science, particularly in radiation diagnosis and radiation therapy. These detectors are highly efficient in detecting neutrons across a broad energy spectrum, cost-effective, and feature a straightforward design that facilitates maintenance and operation. Despite these advantages, a critical challenge remains in accurately distinguishing neutron signals from accompanying gamma radiation, which is essential for precise radiation diagnosis and effective radiation therapy treatment planning. Addressing this challenge, various techniques have been proposed to differentiate neutrons from gamma radiation. This work reviews neutron-gamma discrimination methods using different types of scintillators and compares these methods based on their accuracy and the type of detector used. Additionally, potential recommendations for the research community are provided.
Keywords: Neutron-gamma discrimination, Unsupervised Learning, Pulse Shape discrimination, Scintillation detectors.

INTERPRETABLE DEEP LEARNING WITH NEURO-SYMBOLIC AI FOR EARLY DETECTION OF RAPID EYE MOVEMENT SLEEP BEHAVIOR DISORDER

Akshay R.
School of Computer Science and Engineering, Vellore Institute of Technology, India

Anand MAHENDRAN
School of Computer Science and Engineering, Vellore Institute of Technology, India

ABSTRACT
Rapid Eye Movement Sleep behavior Disorder (RBD) is one of the early indicators of neurodegenerative disorders, and its early detection through Polysomnographic signals (PSG) has gained clinical importance in the recent days. This paper offers an interpretable deep learning framework for the automated detection of RBD using the spectral and muscle atonia features that are extracted from the EEG, EOG and Chin EMG channels of the CAP Sleep database. Two different frameworks were developed, namely a basic feature attention-based neural network, the InterpretableRBDNet and a hybrid model that combines the deep learning with the symbolic reasoning that is derived from the domain-specific rules, the NeurosymbolicRBDNet. The Neurosymbolic AI integrates the data-driven neural network model with a human-understandable logic, thus facilitating transparency in decision making whilst retaining its predictive power. Both these models were evaluated using the stratified 60-20-20 train-validation-test split to overcome the imbalance in datasets and to avoid bias. The NeurosymbolicRBDNet model demonstrated a very high classification performance by achieving an accuracy of 97.42% and an AUC-ROC of 97.16%. The major advantage of this model, apart from high accuracy, is that it provides clinically traceable explanations that are aligned with the RBD diagnostic criteria. This paper highlights the promising potential of Neurosymbolic AI in enhancing the reliability, interpretability and clinical relevance of deep learning models in sleep medicine, which is still underexplored.

Keywords: Rapid Eye Movement Sleep Behavior Disorder, Polysomnography, Interpretable deep learning, Neurosymbolic AI, Sleep signal analysis

SENTIMENT ANALYSIS OF PUBLIC OPINION TEXTS BASED ON LARGE LANGUAGE MODEL

Md Saiful ISLAM
School of cyberspace of security, Zhongyuan University of Technology, China
ORCID: 0009-0008-9819-3897

ABSTRACT
Sentiment analysis, which involves identifying and categorizing emotions in textual data, has advanced significantly with the development of large language models (LLMs). This research focuses on optimizing sentiment analysis techniques for public opinion texts using LLMs, specifically evaluating models with 7 billion parameters, such as Qwen-7B, ChatGLM2-6B, and Aquila-7B. The study assesses their performance in tasks like emotion detection, humor recognition, and metaphor identification across seven datasets, providing insights into their ability to handle various sentiment analysis tasks. To further enhance model performance, the research introduces optimization techniques, including prompt optimization to refine task understanding and fine-tuning using methods like LoRA and P-Tuning to improve sentiment analysis accuracy. The innovative aspects of this research are the evaluation of smaller-scale LLMs for sentiment analysis, alongside the exploration of prompt-based optimization and efficient fine-tuning methods. By enhancing these models, the research contributes to more effective sentiment analysis in public opinion mining, which has significant implications for businesses, governments, and society. The ultimate goal is to establish a robust sentiment analysis framework for LLMs, leading to a comprehensive academic paper and potentially a patent submission.
Keywords: Sentiment Analysis, Large Language Models (LLMs), Public Opinion Mining.

PREDICTING EXTREME EVENTS CAUSED BY CLIMATE CHANGE IN NIGERIA USING MACHINE LEARNING AND REANALYSIS OF CLIMATE DATA

ALIU, Olaniyi Habib
Federal Polytechnic Ilaro, Department of Computer Engineering, Ogun State, Nigeria
ORCID: 0009-0000-4116-1159

OLAYIWOLA, Joy Oluwabukola
Federal Polytechnic Ilaro, Department of Computer Engineering, Ogun State, Nigeria
ORCID: 0000-0001-6580-2432

ABSTRACT
Several extreme reactions to climatic conditions, such as high rain and heat waves, have been increasing in the past decades, putting immense pressure on the lives of people and infrastructure as well as the socio-economic stability of the people in Nigeria. The high rate of urbanization, alterations in the land-atmosphere interactions, and the fluctuation in climate have only made the country more susceptible to weather hazards. This paper presents a machine learning model to forecast extreme weather in Nigeria with an artificial climate analysis-based dataset. The data will comprise 7,000 observations every day of major atmospheric characteristics, including near-surface temperature, total precipitation, wind speed, surface pressure, relative humidity, dewpoint, and cloud cover, on the geographical territory of Nigeria. The identification of extreme events was performed based on climatologically applicable thresholds, which put the problem in a binary classification format (extreme vs. non-extreme). A balance between interpretability and predictive performance was achieved by applying three baseline machine learning models, i.e., logistic regression, decision tree, and random forest. Standard classification metrics, such as accuracy, precision, recall, F1-score, and confusion matrices, were used as model evaluation techniques. The findings suggest that the Random Forest model is better than the Logistic Regression and Decision Tree classifiers, with a better ability to represent nonlinear relationships and complex relationships among climate variables. The analysis of the feature importance shows that in Nigeria, the occurrence of the extreme events is the most important driver of precipitation and the temperature-related variables. The suggested framework is efficient in computation and is scalable; therefore, it can be deployed by climate scientists, disaster management officers, and policy formulators. This paper highlights the opportunities provided by machine learning and reanalysis datasets towards the scientific progress and innovation in climate risk forecasting and resilience planning in Nigeria.
Keywords: Climate-Induced Extreme Events, ERA5 Reanalysis Dataset, Machine Learning Classification, Random Forest, Nigeria

SAHARAN ACTINOMYCETES AS PROMISING AGENTS FOR SUSTAINABLE CROP PROTECTION

Fedwa BEGHDADI
Laboratory of Molecular Biology, Genomics and Bioinformatics (LBMGB), Faculty of Natural Sciences and Life (SNV), Hassiba Benbouali University of Chlef, Algeria

El-Hadj DRICHE
Laboratory of Molecular Biology, Genomics and Bioinformatics (LBMGB), Faculty of Natural Sciences and Life (SNV), Hassiba Benbouali University of Chlef, Algeria

ABSTRACT
The search for environmentally safe alternatives to chemical pesticides has become a pressing concern in modern agriculture. In this context, actinomycetes isolated from Algerian Saharan soils represent an underexplored microbial resource with considerable potential for sustainable crop protection. These bacteria are well known for their ability to produce a wide range of secondary metabolites with antimicrobial properties, making them ideal candidates for biological control applications.
Recent studies have demonstrated that Saharan actinomycetes exhibit strong antagonistic activity against a variety of economically significant phytopathogenic bacteria and fungi, particularly during the stationary phase of growth. This inhibitory effect is largely due to the synthesis of bioactive molecules, including antibiotics, lytic enzymes, and other antimicrobial compounds. Optimization of cultural conditions and physicochemical parameters was shown to significantly enhance metabolite production, improving their efficacy against plant pathogens.
Beyond pathogen inhibition, several isolates also display traits characteristic of plant growth-promoting rhizobacteria (PGPR). These activities include phosphate solubilization, siderophore production, and phytohormone synthesis, which collectively enhance plant growth, nutrient uptake, and resilience against stress. Such multifunctional properties highlight the dual role of these microorganisms in promoting crop productivity while simultaneously providing biological control.
These findings underscore the untapped potential of Saharan actinomycetes as eco-friendly alternatives to synthetic pesticides. Their deployment in agricultural systems can contribute to sustainable crop management, reducing environmental impact and improving soil health. Future research should focus on large-scale cultivation, formulation of microbial bioproducts, and field trials to validate their efficiency under natural conditions.
Keywords: Saharan actinomycetes; Biological control; Phytopathogens; Secondary metabolites; Plant growth-promoting rhizobacteria; Sustainable agriculture

APPLICATIONS OF MATRICES AND CALCULUS IN SCIENTIFIC AND ENGINEERING PROBLEMS

Devesh R
RMK Engineering College, Department of Electrical and Electronics Engineering, India

Rohit R
RMK Engineering College, Department of Electrical and Electronics Engineering, India

Akash R
RMK Engineering College, Department of Electrical and Electronics Engineering, India

ABSTRACT

Matrices and calculus are important subjects studied by first-year engineering students, as they provide the basic mathematical foundation required for understanding engineering concepts. These topics are widely used in various branches of engineering, especially in Electrical and Electronics Engineering, for analyzing systems, solving equations, and understanding physical phenomena. This paper presents a simple and clear overview of the basic concepts of matrices and calculus and explains how they are useful in engineering applications.

Matrices help in organizing and solving systems of linear equations in an efficient manner. Concepts such as matrix operations, eigenvalues, eigenvectors, and diagonalization are useful in simplifying complex calculations and analyzing linear systems. These ideas are commonly applied in circuit analysis, network theory, and system modeling. Matrix methods make it easier to represent large systems in a compact mathematical form.

Calculus helps in understanding how quantities change with respect to one another. Topics such as functions of several variables are used when a system depends on more than one variable, like temperature, pressure, or voltage. Partial differentiation and total derivatives help in analyzing such systems. Taylor series expansion is useful in approximating functions, while methods like maxima, minima, and Lagrange multipliers are used to find optimal values in engineering problems.

Multiple integrals are used to calculate areas and volumes of different regions, which is important in applications involving physical dimensions and spatial analysis. Double and triple integrals help in finding the area enclosed by curves and the volume of solids. Vector calculus introduces concepts such as gradient, divergence, and curl, which are helpful in understanding vector fields related to electric and magnetic fields. The basic ideas of Green's theorem, Gauss divergence theorem, and Stokes' theorem show the relationship between different types of integrals.

This study helps in understanding how matrices and calculus form the foundation for higher-level engineering subjects. Learning these concepts in the first semester builds strong analytical and problem-solving skills, which are essential for future engineering studies and practical applications.

Keywords: Matrices, Calculus, Engineering Mathematics, Multiple Integrals, Vector Calculus

EFFECT OF PIGEON-PEA (*CAJANUS CAJAN* L.) MIXED CROPPING ON FARMER'S YIELD IN SAMARU-KATAF AGRICULTURAL ZONE, KADUNA STATE, NIGERIA

M. Y. ABDULLAHI
Division of Agricultural Colleges, Ahmadu Bello University, Nigeria

B. I. BALOGUN
Federal University of Education, Zaria, Nigeria

J. I. IBEH
Division of Agricultural Colleges, Ahmadu Bello University, Nigeria

H. M. YAKUBU
Forestry Research Institute of Nigeria (Samaru Station), Nigeria

Y. U. OLADIMEJI
Department of Agricultural Economics, Ahmadu Bello University, Nigeria

ABSTRACT
Legume-based mixed cropping is increasingly promoted as a sustainable intensification strategy for smallholder farmers in sub-Saharan Africa (sSA). This study evaluated the effect of pigeon-pea (*Cajanus cajan* L.) mixed cropping on maize yield among smallholder farmers in the Samaru-Kataf Agricultural Zone of Kaduna State, Nigeria. A total of 166 farmers comprising adopters and non-adopters of mixed cropping were selected through two stage sampling during the 2024 cropping season. Structured questionnaires captured yield data, cropping practices and production constraints. Descriptive statistics and standard normal (Z) tests were used to compare mean grain yields. Results showed that adopters of pigeon-pea mixed cropping achieved significantly higher mean yields (893.5 kg/ha) than non-adopters (504.8 kg/ha), with a yield difference of 388.7 kg/ha ($Z=7.83$; $p<0.01$). Mixed cropping improved yield stability, resource use efficiency, and soil fertility through nitrogen fixation. Key constraints included limited finance (18.1%), weed infestation (15.1%), land shortages (14.5%) and inadequate extension support (13.9%). The study concluded that pigeon-pea mixed cropping enhances smallholder productivity and recommends scaling integrated cropping approaches alongside supportive policies, credit access, and extension interventions to promote sustainable intensification in the region.
Keywords: Cajanus cajan, mixed cropping, smallholder farmers, yield, intercropping, Kaduna State

MATRIX APPROACH TO ELECTRICAL CIRCUIT ANALYSIS

BHAVANA B
Department of Electrical and Electronics Engineering, RMK Engineering College, India

DEEPIKA R
Department of Electrical and Electronics Engineering, RMK Engineering College, India

DIVYADHARSHINI R
Department of Electrical and Electronics Engineering, RMK Engineering College, India

KARTHIKA H
Department of Electrical and Electronics Engineering, RMK Engineering College, India

ABSTRACT
Electrical circuit analysis is a fundamental part of electrical and electronic engineering. As circuit complexity increases, traditional manual methods become time-consuming and difficult to apply. Matrix methods provide a systematic and efficient way to analyze complex electrical circuits by organizing circuit equations in a structured mathematical form.
The objective of this paper is to study the matrix approach to electrical circuit analysis. The study focuses on the application of matrix techniques in analyzing electrical networks using methods such as mesh analysis and nodal analysis. Circuit equations are formulated in matrix form and solved to obtain unknown currents and voltages.
The results show that the matrix approach simplifies the analysis of large and complex circuits and reduces computational effort. It also improves accuracy and makes the analysis suitable for computer-based solutions. This work helps students and beginners understand how matrix methods can be effectively applied to electrical circuit analysis in practical engineering problems.
Keywords: Matrices, Electrical Circuits, Nodal Analysis, Mesh Analysis, Network Analysis

CHRISTIAN RELIGIOUS EDUCATION AND ADOLESCENT PROTECTION: A LITERATURE REVIEW ON SEXUAL VIOLENCE AGAINST ADOLESCENTS IN KUPANG CITY, INDONESIA

Ningsih Diliyanti BENU
Master of Christian Religious Education Program, Universitas Kristen Indonesia, Jakarta, Indonesia

ABSTRACT
Sexual violence against adolescents has become a growing concern in Kupang City, Indonesia driven by increasing digital interaction, low sexual literacy, and inadequate protective environments. The church plays a significant role in safeguarding young people through Christian Religious Education. This study aims to analyze the role of Christian Religious Education in the prevention and handling of sexual violence among adolescents. A literature review method was employed, drawing on books, scholarly journals, credible media reports, and relevant church documents. The findings indicate that Christian Religious Education contributes to the development of critical awareness, understanding of body boundaries, the ability to identify unsafe relationships and the spiritual resilience of adolescents. This study emphasizes the need for holistic, contextual, and child-protection-oriented Christian Religious Education development to strengthen the church's role in preventing and responding to sexual violence against adolescents in Kupang City.
Keywords: Christian Religious Education, Adolescent Sexual Violence, Role of the Church.

ARTIFICIAL INTELLIGENCE–DRIVEN TRANSFORMATION OF THE BUILT ENVIRONMENT: ADVANCED APPLICATIONS AND PERFORMANCE IMPLICATIONS FOR THE CONSTRUCTION INDUSTRY

Aliyu HASSAN
Department of Civil and Environmental Engineering, Air Force Institute of Technology, Nigerian Air Force, Kaduna

ABSTRACT
The construction industry remains characterized by fragmented processes, low productivity growth, and significant inefficiencies across the project lifecycle. The emergence of artificial intelligence (AI) offers a paradigm shift in how the built environment is conceived, delivered, and managed. This paper critically examines the deployment of AI-based technologies—including machine learning algorithms, deep learning–enabled computer vision, natural language processing, robotics, and digital twins—across planning, design, construction, and post-construction phases. Emphasis is placed on AI-enabled applications such as automated design optimization, predictive cost and schedule modeling, real-time site monitoring, safety risk detection, quality assurance, and asset lifecycle management. The study further evaluates the performance implications of AI adoption in terms of productivity enhancement, risk mitigation, resource efficiency, and environmental sustainability. Institutional, technical, and ethical barriers to implementation—such as data interoperability, algorithmic transparency, workforce readiness, and regulatory constraints—are also discussed. The paper concludes by proposing future research directions and policy considerations necessary to mainstream AI-driven innovation in the construction sector and advance a resilient, intelligent, and sustainable built environment.
Keywords: Artificial Intelligence; Construction Informatics; Built Environment; Machine Learning; Digital Twins; Smart Construction Systems; Sustainable Infrastructure

EFFECTS OF JIG-SAW IV STRATEGY ON SENIOR SECONDARY TWO STUDENTS' ATTITUDE IN BIOLOGY IN JOS NORTH, PLATEAU STATE, NIGERIA

Anene Amaka ANULIKA
Department of Science and Technology Education, Faculty of Education, University of Jos, Nigeria

John FRIDAY
Department of Science and Technology Education, Faculty of Education, University of Jos, Nigeria

Agbo Onyemowo FELICIA
Department of Science and Technology Education, Faculty of Education, University of Jos, Nigeria

ABSTRACT
This study investigated the effects of the Jigsaw IV instructional strategy on Senior Secondary School II (SSII) students' attitudes toward Biology in Jos North Local Government Area of Plateau State, Nigeria. A quasi-experimental pre-test–post-test control group design was adopted. The population comprised 1,916 male and female SSII students offering Biology in 22 public senior secondary schools in the study area. Two public senior secondary schools were purposively selected, and two intact classes with a total sample size of 100 SSII students were used for the study. The instrument for data collection was the Nervous System Attitude Questionnaire (NSAQ), developed by the researcher and validated by three experts. The reliability of the instrument was established using the Cronbach's Alpha method, yielding a reliability coefficient of 0.82. Two research questions and two null hypotheses guided the study. Data were analyzed using mean and standard deviation to answer the research questions, while Analysis of Covariance (ANCOVA) was used to test the hypotheses at the 0.05 level of significance. The findings revealed that the Jigsaw IV strategy significantly improved SSII students' attitudes toward Biology, specifically on the concept of the nervous system, compared with the conventional lecture method. However, no significant difference was found in the attitude mean scores of male and female students in the experimental group. The study concluded that the Jigsaw IV strategy is more effective than the lecture method in enhancing students' attitudes toward Biology. It was therefore recommended that relevant educational authorities should empower Biology teachers through professional development and training on the use of the Jigsaw IV strategy to improve students' attitudes toward the subject.
Keywords: Jig-Saw IV Strategy, Students' Attitude, Gender, Nervous System, Biology.

EFFECT OF HIERARCHICAL-CONCEPT-MAPPING STRATEGY ON SENIOR SECONDARY TWO STUDENTS' MOTIVATION AND GENDER IN BIOLOGY IN JOS NORTH, PLATEAU STATE, NIGERIA

Agbefa Maria ABAH
Department of Science and Technology Education, Faculty of Education, University of Jos, Nigeria

Jimwan Christiana SAMUEL
Department of Science and Technology Education, Faculty of Education, University of Jos, Nigeria

Agbo Onyemowo FELICIA
Department of Science and Technology Education, Faculty of Education, University of Jos, Nigeria

ABSTRACT
This study examined the effect of the hierarchical concept-mapping strategy on Senior Secondary School II students' motivation in Biology in Jos North Local Government Area of Plateau State, Nigeria. Two research questions and two hypotheses guided the study. A quasi-experimental research design, specifically a non-randomized pre-test–post-test control group design, was adopted. The population of the study comprised all SSII students offering Biology in the 22 public secondary schools in Jos North Local Government Area, with a total population of 1,916 students. The sample consisted of 110 SSII students offering Biology, drawn from two public senior secondary schools. Simple random sampling technique was used to select the two schools. The Students' Photosynthesis Motivation Questionnaire (SPMQ) was used for data collection. The instrument was validated by three experts, and a reliability coefficient of 0.83 was obtained. The research questions were answered using mean and standard deviation, while the hypotheses were tested at the 0.05 level of significance using Analysis of Covariance (ANCOVA). The findings revealed that students taught using the hierarchical concept-mapping strategy demonstrated higher motivation than their counterparts taught using the lecture method. The results also showed that there was no significant difference in the motivation of male and female SSII students taught using the hierarchical concept-mapping strategy. The study therefore recommended, among other things, that since hierarchical concept-mapping has been found to be an effective strategy for enhancing students' motivation and is suitable for both genders, Biology teachers should adopt it as one of the strategies for teaching and learning Biology.
Keywords: Hierarchical-Concept-Mapping (HCM) Strategy, Students' Motivation, Students' Gender, Photosynthesis, Biology.

İLETİŞİMDE SEMİYOTİK YAPIBOZUM: GÖSTERGELER VE ANLAMIN POLİTİKASI

Dr. Ferhat ATIK
Girne American University, Faculty of Communication, Department of Communication and Media Management, Turkish Republic of Northern Cyprus
ORCID: 0009-0008-9089-9051

ÖZET
İletişim, basit bir mesaj aktarım süreci olmanın ötesinde, anlamın sürekli olarak üretildiği, müzakere edildiği ve çoğu zaman çarpıştığı karmaşık bir semiyotik, yani göstergebilimsel alandır. Ferdinand de Saussure'ün gösteren/gösterilen ayrımı ve Roland Barthes'ın mit kavramı ile temelleri atılan bu anlayış, Jacques Derrida'nın "yapıbozum" (deconstruction) kavramı ile daha da radikal bir boyut kazanmıştır. Bu çalışma, iletişim süreçlerini, semiyotiğin yapıbozuma uğratıcı lensinden analiz etmeyi amaçlamaktadır. Yapıbozum, herhangi bir metnin, imgenin veya iletişimsel eylemin, sabit ve nihai bir anlam taşımadığını, aksine içsel çelişkiler ve ikilikler (binary oppositions) barındırdığını ve bağlama bağlı olarak sürekli anlam kaymasına uğradığını öne sürer. Örneğin, bir reklam görseli veya bir siyasi söylem, yüzeysel anlamının altında, iktidar ilişkilerini, ideolojik önyargıları ve toplumsal cinsiyet normlarını yeniden üreten bir dizi kod taşıyabilir. Bu analiz, iletişimin politik doğasını ortaya koyar; anlamın politikası, gücün kimin hangi göstergelere anlam yükleyebileceğini ve bu anlamı nasıl dayatabileceğini kontrol etme mücadelesidir. Medya metinleri, marka iletişimi ve dijital içerikler, bu anlam mücadelelerinin en yoğun yaşandığı sahalardır. Çalışma, iletişim profesyonellerinin ve tüketicilerin, bu yapıbozumsal süreci anlayarak, iletişim mesajlarını daha eleştirel bir şekilde okuyabilmeleri ve anlamın tekeline karşı direnç geliştirebilmeleri için kuramsal bir çerçeve sunmayı hedefler. Sabit anlamların olmadığı, sadece sürekli bir anlam oyununun olduğu bu iletişimsel evrende, yapıbozum bir analiz yöntemi olmanın ötesinde, bir özgürleşme pratiği olarak da değerlendirilebilir.
Anahtar Kelimler: Semiyotik, Yapıbozum, Gösterge, Anlamın Politikası, Roland Barthes, Jacques Derrida, İdeoloji, Gösteren ve Gösterilen, Metinlerarasılık, Eleştirel İletişim Çalışmaları.

SEMIOTIC DECONSTRUCTION IN COMMUNICATION: THE POLITICS OF SIGNS AND MEANING

ABSTRACT
Communication is beyond a simple message transmission process; it is a complex semiotic field where meaning is constantly produced, negotiated, and often contested. This understanding, founded on Ferdinand de Saussure's signifier/signified distinction and Roland Barthes' concept of myth, gained a more radical dimension with Jacques Derrida's concept of "deconstruction." This study aims to analyze communication processes through the deconstructive lens of semiotics. Deconstruction proposes that any text, image, or communicative act does not carry a fixed and final meaning; instead, it contains internal contradictions and binary oppositions and is subject to constant slippage of meaning depending on context. For instance, an advertisement visual or a political discourse may carry a set of codes beneath its surface meaning that reproduce power relations, ideological biases, and gender norms. This analysis reveals the political nature of communication; the politics of meaning is the struggle to control who can assign meaning to which signs and how this meaning can be imposed. Media texts, brand communication, and digital content are the fields where these struggles over meaning are most intense. The study aims to provide a theoretical framework for communication professionals and consumers to read communication messages more critically and develop resistance against the monopoly of meaning by understanding this deconstructive process. In this communicative universe where there are no fixed meanings, only a continuous play of meaning, deconstruction can be considered not only as an analytical method but also as a practice of emancipation.
Keywords: Semiotics, Deconstruction, Sign, Politics of Meaning, Roland Barthes, Jacques Derrida, Ideology, Signifier and Signified, Intertextuality, Critical Communication Studies.

KAREN HORNEY VE DİJİTAL NEVROZLAR: SOSYAL MEDYADA KAYGI, ONAY VE KİMLİK

Dr. Ferhat ATIK
Girne American University, Faculty of Communication, Department of Communication and Media Management, Turkish Republic of Northern Cyprus
ORCID: 0009-0008-9089-9051

Rümeysa KELEŞ
Ankara Medipol University, Department of Psychology, Türkiye
ORCID: 0009-0005-9101-273X

ÖZET
Sosyal medyanın hızlı biçimde yaygınlaşması, yalnızca iletişim pratiklerini değil, aynı zamanda çağdaş bireyin psikolojik yapılanmasını da derinden dönüştürmüştür. Sosyal medya platformları, görünürlük, onay ve sürekli benlik sunumunun gündelik yaşamın temel düzenleyicileri hâline geldiği iletişim ortamları olarak işlev görmektedir. Bu makale, sosyal medyada ortaya çıkan kaygı, onay bağımlılığı ve kimlik performansını Karen Horney'nin nevroz kuramı çerçevesinde incelemektedir. Horney'nin temel kaygı, nevrotik ihtiyaçlar, gerçek benlik ile ideal benlik arasındaki çatışma ve kişilerarası yönelimler kavramlarından hareketle, sosyal medya bağımlılığı bireysel bir patoloji ya da salt davranışsal bir bağımlılık olarak değil, "dijital nevroz" olarak kavramsallaştırılmaktadır.
Psikodinamik kuram ile iletişim çalışmalarını birleştiren bu çalışma, sosyal medya platformlarının beğeni, takipçi ve görünürlük gibi ölçütler aracılığıyla özdeğeri dışsallaştırdığını ve nevrotik başa çıkma stratejilerini yapısal olarak yeniden ürettiğini savunmaktadır. Dijital kimlik, sürekli değerlendirmeye açık, performatif bir yapı olarak ele alınmakta; bu yapının sosyal görünüm anksiyetesi ve iletişimsel kaygıyı yoğunlaştırdığı gösterilmektedir. Makale, sosyal medyanın yalnızca mevcut psikolojik kırılganlıkları yansıtmadığını, aynı zamanda dijital kültür içinde nevrotik uyum biçimlerini normalleştiren aktif bir iletişim düzeni kurduğunu ileri sürmektedir. Bu çalışma, sosyal medya kaynaklı kaygıyı kültürel ve iletişimsel bağlamda yeniden ele alarak iletişim bilimine disiplinler arası ve eleştirel bir katkı sunmaktadır.
Anahtar Kelimeler: Karen Horney; dijital nevroz; sosyal medya kaygısı; onay ekonomisi; dijital kimlik; iletişimsel kaygı.

KAREN HORNEY AND DIGITAL NEUROSES: ANXIETY, APPROVAL, AND IDENTITY IN SOCIAL MEDIA

ABSTRACT
The rapid expansion of social media has transformed not only communication practices but also the psychological foundations of contemporary subjectivity. Social media platforms function as environments in which visibility, approval, and continuous self-presentation become central organizing principles of everyday life. This article examines social media–related anxiety, approval dependency, and identity performance through the theoretical framework of Karen Horney's theory of neurosis. Drawing on Horney's concepts of basic anxiety, neurotic needs, the conflict between the real self and the idealized self, and interpersonal orientations, the study conceptualizes social media dependency as a form of *digital neurosis* rather than an individual pathology or mere behavioral addiction.
By integrating psychodynamic theory with communication studies, the article argues that social media platforms structurally reproduce neurotic coping strategies by externalizing self-worth through metrics such as likes, followers, and visibility. Digital identity is analyzed as a performative and continuously evaluated construction that intensifies social appearance anxiety and communication-related distress.

The discussion demonstrates that social media does not simply reflect existing psychological vulnerabilities but actively normalizes and amplifies neurotic patterns of adaptation within digital culture. The study contributes to communication research by offering a theoretically grounded, interdisciplinary perspective that reframes social media anxiety as a culturally and communicatively produced phenomenon embedded in contemporary digital environments.
Keywords: Karen Horney; digital neurosis; social media anxiety; approval economy; digital identity; communication anxiety

THE EFFECT OF SOCIAL MEDIA AND WORK ENGAGEMENT ON INNOVATIVE WORK BEHAVIOUR OF ACADEMIC STAFF IN HIGHER EDUCATION INSTITUTIONS

Prof. Dr. Fatma Gülruh GÜRBÜZ
Fatih Sultan Mehmet Vakıf University, Faculty of Economics and Administrative Sciences, Department of Management, Türkiye
ORCID: 0000-0002-0719-3410

Lect. Dr. Sema GÜNDÜZ
Marmara University, Innovation and Technology Transfer Application and Research Center, Türkiye
ORCID: 0000-0003-0613-7019

ABSTRACT

This study aims to examine academicians' innovative work behaviour (IWB) by analysing the effects of work engagement and social media usage. Emphasising the growing importance of IWB in achieving organisational competitiveness, the study extends prior research by explicitly addressing the role of social media usage in fostering innovative behaviours among academicians.

Grounded in Social Exchange Theory (SET), the study conceptualises academicians as organisational partners engaged in reciprocal social relationships, where perceived benefits stimulate positive work-related behaviours. Data were collected through a survey administered to academicians working at higher education institutions in Türkiye, yielding 517 valid responses. Structural equation modelling (SEM) was employed to test the proposed research model and hypotheses.

The findings reveal significant positive relationships between social media usage and innovative work behaviour, as well as work engagement and innovative work behaviour. However, the results indicate no mediating effect of work engagement on the relationship between social media usage and innovative work behaviour.

This study contributes to the literature on innovative work behaviour and Social Exchange Theory by highlighting the importance of reciprocity and by demonstrating the critical roles of social media usage, and work engagement in academic contexts. The findings also offer practical implications for policymakers and university administrators, suggesting that enabling social media usage and fostering sustainable work engagement may promote higher levels of innovative work behaviour in higher education institutions.

Keywords: innovative work behaviour, social media, usage, work engagement, social exchange theory

KAYNAK TEMELLİ YAKLAŞIM PERSPEKTİFİNDEN BİLGİNİN KÜRESEL REKABETTE STRATEJİK ÖNEMİ

Emin KIRMIZISAÇ
Toros University, Institute of Business Sciences, Department of Business, Türkiye
ORCID: 0000-0002-9944-1580

ÖZET
Küresel rekabet ortamında işletmeler, varlıklarını sürdürülebilir kılmak için Kaynak Temelli Yaklaşım çerçevesinde bilgiyi stratejik bir kaynak olarak görmektedir. İçinde bulunduğumuz yüzyılda örgütler için en önemli yönetim stratejilerinden biri, aynı pazardaki rakiplerine karşı sürdürülebilir bir rekabet avantajı elde etmektir. Örgütlerin bu üstünlüğü sağlayabilmeleri için öncelikle işletme içindeki temel yetenek ve varlıklarını doğru yönetmeleri gerekmektedir. Bu bağlamda, küresel ortamda etkin bir başarı elde edebilmek adına işletmelerin sahip oldukları kaynakları doğru ve etkili bir şekilde kullanmaları önem taşımaktadır. İşletmelerde rekabet üstünlüğü, büyük ya da küçük tüm faaliyetlerin başarısına bağlıdır. Örgütlerin küresel ölçekte başarıyı devam ettirebilmeleri ve rekabet avantajı sağlamaları için ürün ve hizmetlerini; nadir, taklit edilmesi zor, değerli ve ikamesi olmayan stratejik bilgi ile desteklemeleri gerekmektedir. Özellikle kodlanması ve aktarılması güç olan örtük bilgi, sosyal karmaşıklık ve nedensel belirsizlik bariyerleri nedeniyle rakipler açısından önemli bir taklit engeli oluşturmaktadır. Bu durum, firmaların değişen koşullara uyum sağlamasını mümkün kılan dinamik yeteneklerin ve entelektüel sermayenin temelini oluşturur. Ayrıca Büyük Veri ve Yapay Zeka çağında ham veriyi stratejik bilgiye dönüştürme kapasitesinin, yeni nesil bir rekabet avantajı alanı oluşturduğu da görülmektedir. Bu kapsamda yapılan araştırmada da tespit edildiği üzere, işletmeler ancak bu şekilde sahip oldukları varlık ve yetenekleri, bilginin stratejik gücü ve etkili yönetim süreci ile sürdürülebilir bir avantaja dönüştürebilirler.
Anahtar Kelimeler: Kaynak Temelli, Bilgi, Stratejik Bilgi, Bilgi Yönetimi, Sürdürülebilir Rekabet Avantajı, Küresel Rekabet

THE STRATEGIC IMPORTANCE OF INFORMATION IN GLOBAL COMPETITION FROM THE RESOURCE-BASED APPROACH PERSPECTIVE

ABSTRACT
In the global competitive environment, businesses view knowledge as a strategic resource within the framework of the Resource-Based View to ensure their sustainability. One of the most crucial management strategies for organizations in this century is to gain a sustainable competitive advantage against rivals in the same market. To achieve this superiority, organizations must first manage their core internal competencies and assets correctly. In this context, it is essential for businesses to use their resources accurately and effectively to achieve meaningful success in the global arena. Competitive advantage in enterprises depends on the success of all activities, whether large or small. For organizations to sustain success globally and secure a competitive edge, they must support their products and services with strategic knowledge that is rare, difficult to imitate, valuable, and non-substitutable. Particularly, tacit knowledge—which is hard to codify and transfer—creates a significant imitation barrier for competitors due to social complexity and causal ambiguity. This situation forms the foundation of dynamic capabilities and intellectual capital, enabling firms to adapt to changing conditions. Moreover, in the age of Big Data and Artificial Intelligence, the capacity to transform raw data into strategic knowledge is observed to create a new-generation domain of competitive advantage. As identified within the scope of this research, only in this way can businesses transform their assets and capabilities into a sustainable advantage through the strategic power of knowledge and an effective management process.
Keywords: Resource-Based View, Knowledge, Strategic Knowledge, Knowledge Management, Sustainable Competitive Advantage, Global Competition

THE USE OF RHETORICAL EXPRESSION IN PUBLIC RELATIONS: AN EXAMINATION OF RHETORICAL ELEMENTS IN BANKS' SUSTAINABILITY ADVERTISEMENTS

Asst Prof. Mevlüde Canan CAN
Recep Tayyip Erdoğan University, Fındıklı School of Applied Sciences, Department of Banking and Finance, Rize-Türkiye
ORCID: 0000-0002-0342-2714

ABSTRACT
Public relations is a management function that involves continuous and planned activities, fundamentally centered on communication, aimed at establishing and developing a bond of mutual understanding, empathy, and trust between an organization and its target audience. These activities also aim to persuade the target audience to positively influence their attitudes and behaviors in favor of the organization. In this context, the language, expression, and visual tools used in public relations are supported by persuasive rhetorical methods. Messages prepared using rhetorical expression, also known as the art of effective discourse, one of the oldest forms of communication, possess powerful, impressive, and persuasive qualities. Indeed, the inclusion of rhetorical elements in messages given to the target audience in public relations increases the effectiveness of corporate communication and strengthens the organization's image.On the other hand, sustainability has become an important concept for the financial sector, as it is for many other sectors today, not only in an economic context but also in terms of environmental and social responsibility. Public awareness of environmental and sustainability issues is steadily increasing. This situation influences consumer decisions, directing their purchasing behavior towards businesses sensitive to these issues. Indeed, in this context, banks today are giving more prominence to environmental and social responsibility concepts in their policies and are trying to highlight these policies in their public relations practices and advertising campaigns to communicate them to the public. In these practices, banks primarily utilize strong persuasive and influential rhetorical techniques. This study examines the public relations aspects of rhetorical elements used in banks' sustainability advertisements. The study also emphasizes how sustainability presentations incorporate rhetorical elements such as industry, values, emotions, and logos into banks' corporate communication advertisements. The study's universe consists of the sustainability advertising campaigns of major banks operating in Turkey. A qualitative research methodology was employed. The findings indicate that the use of rhetorical narrative elements in banks' sustainability advertisements is an effective tool in enhancing corporate reputation, corporate image, social responsibility, and brand credibility.
Keywords: Public Relations, Banks, Rhetoric, Sustainability, Advertising

HALKLA İLİŞKİLERDE RETORİK ANLATIMIN KULLANIMI: BANKALARIN SÜRDÜRÜLEBİLİRLİK REKLAMLARINDA RETORİK UNSURLAR ÜZERİNE BİR İNCELEME

ÖZET
Halkla ilişkiler bir kuruluş ile hedef kitlesi arasında karşılıklı anlayışa, sempatiye ve güvene dayalı bir bağ oluşturmak ve geliştirmek üzere yapılan özünde iletişimin yer aldığı sürekli ve planlı faaliyetleri içeren bir yönetim fonksiyonudur. Bu faaliyetler aynı zamanda hedef kitlenin tutum ve davranışlarını kuruluş lehine olumlu yönde etkilemek üzere ikna etme amacını da taşır. Bu bağlamda halkla ilişkilerde kullanılan dil, ifade ve görsel araçlar ikna edici retorik anlatım yöntemleriyle desteklenir. En eski iletişim formlarından biri olan etkili söylem sanatı da denilen Retorik Anlatım ile hazırlanan mesajlar, etkileyici ve ikna edici güçlü özellikler taşır. Nitekim halkla ilişkilerde hedef kitleye verilen mesajların retorik unsurlar içermesi kurumsal iletişimin etkisini artırırken, kurumun imajını da güçlü kılar. Öte yandan sürdürülebilirlik, günümüzde pek çok sektörde olduğu gibi finans sektörü için de sadece ekonomik bağlamda değil, çevre ve sosyal sorumluluk bakımından da önemli bir kavram haline gelmiştir. Zira kamuoyunun çevre ve sürdürülebilirlik konusunda farkındalığı giderek artmaktadır.

Bu durum, tüketicilerin kararlarını etkileyerek satın alma davranışlarını bu konuya duyarlı işletmelere yönlendirmektedir. Nitekim bu bağlamda bankalar, günümüzde çevre ve sosyal sorumluluk kavramlarına politikalarında daha fazla yer vermekte ve halkla ilişkiler uygulamaları ve reklam kampanyalarında bu politikalarını kamuoyuna aktarmak üzere ön plana çıkarmaya çalışmaktadır. Bankaların söz konusu uygulamalarında güçlü ikna ve etkileyici yönleri ile retorik anlatım teknikleri ağırlıklı olarak kullanılmaktadır. Bu çalışmanın amacı, bankaların sürdürülebilirlik reklamlarında kullanılan retorik unsurların halkla ilişkiler bağlamında incelenmesidir. Çalışmada ayrıca, sürdürülebilirlik kavramının bankaların kurumsal iletişiminde nasıl kullanıldığı ve ethos, pathos, logos gibi retorik unsurların reklamlarda nasıl yer aldığı da belirlenmesi amaçlanmıştır. Çalışmanın evrenini Türkiye'de faaliyet gösteren büyük bankaların sürdürülebilirlik reklam kampanyaları oluşturmaktadır. Çalışmada nitel araştırma yöntemi kullanılmıştır. Elde edilen bulgular kapsamında bankaların sürdürülebilirlik reklamlarında retorik anlatım unsurlarının kullanılmasının bankaların kurumsal itibar, kurumsal imaj, sosyal sorumluluk ve marka güvenilirliğinin oluşturulması bağlamında etkili bir araç olduğu sonucuna varılmıştır.
Anahtar Kelimeler: Halkla İlişkiler, Bankalar, Retorik, Sürdürülebilirlik, Reklamlar

THE INVISIBILITY OF LIMITED REAL RIGHTS IN REAL ESTATE VALUATION REPORTS: A SYSTEMIC PROBLEM AREA

Dr. Abdurrahman TURSUN
Ankara University, Faculty of Applied Sciences, Department of Real Estate Development and Management, Ankara, Türkiye
ORCİD: 0000-0002-6566-2158

ABSTRACT
Real estate valuation reports serve as a fundamental reference for credit allocation, investment decisions, expropriation processes, and legal disputes in the property market. However, in current practices in our country, the effects of limited real rights (usufruct, right of habitation, superficies, easement rights, etc.) on property value are often insufficiently analyzed and are treated as secondary or largely invisible elements within valuation reports. This situation reflects not merely individual procedural errors but a systemic problem arising from the risk that existing approaches to the valuation of limited real rights are based on flawed assumptions. Examinations indicate that, particularly in the valuation of usufruct and right of habitation, the ratios outlined in Article 64 of the Turkish Fees Law No. 492-originally intended for the calculation of fees, specifying that one-third of the registered value applies to bare ownership and two-thirds to the usufruct right-have been applied directly in valuation calculations without scientific justification. However, these ratios cannot be directly linked to the market value of real estate or the economic value of limited real rights. This approach leads to inaccurate outcomes in valuation reports and often renders the real economic effects of limited real rights invisible. Given that the value of limited real rights is shaped by the economic benefits they provide to the rights holder and the duration over which these benefits occur, the valuation process should rely on income- and time-based analyses rather than solely ownership-focused approaches. In this context, the income approach and discounted cash flow methods outlined in the International Valuation Standards (IVS) provide a scientific and transparent framework for valuing limited real rights. The present study highlights the limitations of current practices and discusses the need for a methodological transformation to make the effects of limited real rights visible in real estate valuation reports.
Keywords: Limited Real Rights, Real Estate Valuation, Valuation Reports, Income Approach, Systemic Issue

GAYRİMENKUL DEĞERLEME RAPORLARINDA SINIRLI AYNİ HAK ETKİLERİNİN GÖRÜNMEZLİĞİ: SİSTEMSEL BİR SORUN ALANI

ÖZET
Gayrimenkul değerleme raporları, taşınmaz piyasasında kredi tahsisi, yatırım kararları, kamulaştırma süreçleri ve hukuki uyuşmazlıklar açısından temel bir referans belgesi niteliği taşımaktadır. Ancak ülkemizdeki değerleme uygulamalarında, taşınmaz üzerindeki sınırlı ayni hakların (intifa, sükna, üst hakkı, mecra hakkı vb.) değere olan etkilerinin çoğunlukla yeterince analiz edilmediği ve rapor içeriklerinde tali ya da görünmez bir unsur olarak ele alındığı gözlemlenmektedir. Bu durum, yalnızca uygulamaya ilişkin bireysel hatalardan değil, sınırlı ayni hakların değerlemesine ilişkin mevcut yaklaşımın hatalı bir temele dayanma riski taşımasından kaynaklanan sistemsel bir sorun alanına işaret etmektedir. Yapılan incelemelerde, özellikle intifa ve oturma (sükna) hakkı değerlemelerinde, 492 sayılı Harçlar Kanunu'nun 64. maddesinde yer alan ve harç hesaplamasına yönelik olarak düzenlenmiş "çıplak mülkiyet-intifa hakkı" oranlarının, bilimsel bir gerekçeye dayanmaksızın doğrudan değerleme hesaplamalarına uyarlandığı görülmektedir. Oysa söz konusu oranların gayrimenkul değeri veya sınırlı ayni hakların ekonomik değeriyle doğrudan ilişkilendirilmesi mümkün değildir. Bu yaklaşım, değerleme raporlarında hatalı sonuçlara yol açmakta ve sınırlı ayni hakların gerçek ekonomik etkilerinin çoğunlukla görünmez kalmasına neden olmaktadır.

Sınırlı ayni hakların değerinin, hak sahibine sağladığı ekonomik fayda ve bu faydanın gerçekleştiği süre üzerinden şekillendiği dikkate alındığında, değerleme sürecinin mülkiyet odaklı yaklaşımlardan ziyade gelir ve zaman temelli analizlere dayanması gerekmektedir. Bu bağlamda Uluslararası Değerleme Standartları'nda (UDS) yer alan gelir yaklaşımı ve indirgenmiş nakit akımları yöntemi, sınırlı ayni hakların değerlemesinde bilimsel ve şeffaf bir çerçeve sunmaktadır. Yapılan çalışma, mevcut uygulamaların sınırlarını ortaya koymakta ve değerleme raporlarında sınırlı ayni hak etkilerinin görünür kılınmasına yönelik metodolojik bir dönüşüm ihtiyacını tartışmaktadır.
Anahtar kelimeler: Sınırlı Ayni Haklar, Gayrimenkul Değerlemesi, Değerleme Raporları, Gelir Yaklaşımı, Sistemsel Sorun

THE DIMENSIONS OF HATE SPEECH: THE CASE OF THE STREET ANIMALS LAW DEBATE

Dr. İbrahim YILDIZ
İstanbul Medeniyet University, Turkey
ORCID NO: 0000-0002-2542-389X

ABSTRACT
Hate speech materializes not only as expressions of individual anger in areas of social conflict, but also as a systematic practice that is produced through specific discourse patterns and legitimizing frameworks. Public debates surrounding legal regulations provide a critical context for the visibility and intensification of these discourses. The present study aims to examine hate speech produced in digital discussions shaped around legal regulations concerning street animals in 2024. The present study focuses on content shared on the X (Twitter) platform under the hashtag #KatliamYasasınaHayır. A descriptive mixed-methods approach was adopted; the 30 posts with the highest interaction level, determined by purposive sampling, and a total of 450 user comments on these posts were examined using quantitative and qualitative discourse analysis techniques. The analysis was conducted within the framework of the target categories of hate speech, discourse types, emotional tones, and intensity levels. The findings demonstrate that hate speech is produced as a variable discursive practice that is sensitive to the social and political context. It has been determined that hate speech is largely produced under the guise of criticism and accusation rather than overt aggression; it mostly circulates at medium and low intensity levels. The discourse's orientation towards vague and ABSTRACT targets signifies the capacity for the construction of hate speech alongside moral judgments and legitimising frameworks. Moreover, discourse that is directed at animals has been shown to contain hate speech that is directed at non-human entities. These findings contribute to the extant literature on the manifestations of hate speech in the digital public sphere in the context of non-human targets and speciesist discourse.
Keywords: Hate Speech, Street Animals, Social Media, X (Twitter), Discourse Analysis.

NEFRET SÖYLEMİNİN BOYUTLARI: SOKAK HAYVANLARI YASASI TARTIŞMALARI ÖRNEĞİ

ÖZET
Nefret söylemi, toplumsal çatışma alanlarında yalnızca bireysel öfke ifadeleri olarak değil, belirli söylem kalıpları ve meşrulaştırıcı çerçeveler aracılığıyla sistematik biçimde üretilen bir pratik olarak ortaya çıkmaktadır. Yasal düzenlemeler etrafında gelişen kamusal tartışmalar ise bu söylemlerin görünürlük kazanması ve yoğunlaşması açısından kritik bir bağlam sunmaktadır. Bu çalışma, 2024 yılında sokak hayvanlarına ilişkin yasal düzenleme ile ilgili dijital tartışmalarda üretilen nefret söylemini incelemeyi amaçlamaktadır. Araştırma, X (Twitter) platformunda #KatliamYasasınaHayır etiketi altında paylaşılan içeriklere odaklanmaktadır. Betimleyici nitelikli karma yöntemin benimsendiği araştırmada amaçlı örnekleme yöntemiyle belirlenen etkileşim düzeyi en yüksek 30 gönderi ve bu gönderilere yapılan toplam 450 kullanıcı yorumu nicel ve nitel söylem analizi teknikleriyle incelenmiştir. Analiz, nefret söyleminin hedef kategorileri, söylem türleri, duygusal tonları ve yoğunluk düzeyleri çerçevesinde gerçekleştirilmiştir. Bulgular, nefret söyleminin toplumsal ve siyasal bağlama duyarlı, değişken bir söylemsel pratik olarak üretildiğini göstermektedir. Nefret söyleminin büyük ölçüde açık saldırganlık yerine eleştiri ve suçlama görünümü altında üretildiği; çoğunlukla orta ve düşük yoğunluk düzeylerinde dolaşıma girdiği tespit edilmiştir. Söylemin belirsiz ve soyut hedefler etrafında yoğunlaşması, nefret söyleminin ahlaki değerlendirmeler ve meşrulaştırıcı çerçeveler eşliğinde kurulabildiğine işaret etmektedir. Ayrıca hayvanların doğrudan hedef alındığı söylemler, nefret söyleminin insan-dışı varlıklara da yöneldiğini ortaya koymaktadır. Bu bulgular, nefret söyleminin dijital kamusal alandaki görünümlerine ilişkin literatüre, insan-dışı hedefler ve türcü söylemler bağlamında katkı sunmaktadır.
Anahtar Kelimeler: Nefret Söylemi, Sokak Hayvanları, Sosyal Medya, X (Twitter), Söylem Analizi

REVITALIZING ARCHAEOLOGICAL SITES FOR MUSEUM KIOSKS AND DISPLAYS USING AI-POWERED VISUALIZATION TECHNIQUES: THE KANISH KARUM EXAMPLE

Lec. Dr. Onur Toprak
Erciyes University, Faculty of Fine Arts, Graphic Design Department, Kayseri , Turkey,
ORCİD: ID/0000-0002-1267-362X

ABSTRACT
This study focuses on the reconstruction of representative visual content for archaeological sites using artificial intelligence–supported image generation, animation, and visualization techniques designed for museum kiosks and promotional screens. Within this framework, Kaniš Karum, one of the most significant centers of the Assyrian Trade Colonies Period in Anatolia, was selected as a case study, and static and animated visual content representing daily life, spatial organization, and cultural practices of the period was produced.
In the research process, archaeological findings, written sources, and relevant literature on Kaniš Karum were first examined. Based on these data, AI-based visual generation tools were employed to create historically coherent representative scenes. The generated visuals were subsequently animated and enhanced through digital visualization software to meet the technical and narrative requirements of museum kiosk environments. The study was conducted using a **practice-based qualitative research** approach, and the resulting visual outputs were evaluated in terms of historical consistency, visual storytelling effectiveness, and user experience.
The findings indicate that AI-supported visualization and animation techniques are effective in transforming fragmented and limited archaeological data into coherent and comprehensive visual narratives. In the case of Kaniš Karum, the produced visual and animated content contributed to a clearer and more engaging understanding of the historical context for museum visitors. These digital reconstructions facilitated the perception of ABSTRACT archaeological information by making it more accessible and experiential.
In conclusion, this study demonstrates that AI-supported digital reconstructions offer a valuable and contemporary tool for museum and heritage presentation practices. The proposed approach provides an applicable model for digital museology by enhancing the educational and experiential transmission of archaeological knowledge through visualization and animation technologies.
Keywords: Artificial Intelligence, Museum Education, Smart Museum, Graphic Design, Animation

YAPAY ZEKÂ DESTEKLİ GÖRSELLEŞTİRME TEKNİKLERİYLE ARKEOLOJİK ALANLARIN MÜZE KİOSK VE EKRANLARI İÇİN YENİDEN CANLANDIRILMASI: KANİŞ KARUM ÖRNEĞİ

ÖZET
Bu çalışma, müze kioskları ve tanıtım ekranlarında kullanılmak üzere arkeolojik alanların temsili görsellerinin yapay zekâ destekli üretim, animasyon ve görselleştirme teknikleriyle yeniden canlandırılmasını konu edinmektedir. Araştırma kapsamında, Anadolu'da Asur Ticaret Kolonileri Dönemi'nin en önemli merkezlerinden biri olan Kaniş Karum ele alınmış; dönemin gündelik yaşamını, mekânsal düzenini ve kültürel pratiklerini temsil eden statik ve hareketli görsel içerikler üretilmiştir.
Çalışmada öncelikle Kaniş Karum'a ilişkin arkeolojik bulgular, yazılı kaynaklar ve literatür incelenmiş; elde edilen veriler doğrultusunda yapay zekâ tabanlı görsel üretim araçları kullanılarak tarihsel bağlamla uyumlu temsili sahneler oluşturulmuştur. Üretilen görseller, müze kullanımına uygun olacak şekilde animasyon ve dijital görselleştirme yazılımları aracılığıyla hareketlendirilmiş ve kiosk ekranlarına entegre edilebilecek bir anlatım yapısına dönüştürülmüştür. Araştırma, **uygulama temelli nitel araştırma** yaklaşımıyla yürütülmüş; ortaya çıkan içerikler tarihsel tutarlılık, görsel anlatım gücü ve kullanıcı deneyimi açısından değerlendirilmiştir.

Elde edilen bulgular, yapay zekâ destekli görselleştirme ve animasyon tekniklerinin arkeolojik verilerin sınırlı ve parçalı yapısını bütüncül bir anlatıya dönüştürmede etkili olduğunu göstermektedir. Kaniş Karum örneğinde geliştirilen görsel ve hareketli içeriklerin, ziyaretçilerin tarihsel dönemleri daha somut ve anlaşılır biçimde algılamasına katkı sağladığı belirlenmiştir.

Sonuç olarak bu çalışma, yapay zekâ destekli dijital canlandırmaların müze ve ören yerlerinde çağdaş sergileme pratiklerine önemli bir katkı sunduğunu ortaya koymakta; arkeolojik bilginin eğitsel ve deneyimsel aktarımı için dijital müzecilik alanında uygulanabilir bir model önermektedir.

Anahtar kelimeler: Yapay Zeka, Müze Eğitimi, Akıllı Müze, Grafik Tasarım, Animasyon

METAFORUN GÖRSEL DİLİ: NOMA BAR'IN MİNİMALİST İLLÜSTRASYONLARI ÜZERİNE BİR İNCELEME

Doç. Dr. Özlem KUM
Tokat Gaziosmanpaşa Üniversitesi, Erbaa Meslek Yüksekokulu, Grafik Tasarım Bölümü, Türkiye,
ORCID ID: 0000-0002-6567-7974

ÖZET
Bu çalışma, Noma Bar'ın minimalist illüstrasyonlarındaki metaforları ve bu metaforların toplumsal, politik ve etik meseleleri nasıl görselleştirdiğini incelemektedir. Araştırma, Bar'a ait 7 farklı illüstrasyonu biçim, renk, kompozisyon gibi tasarım öğeleriyle birlikte ele alarak metaforların ilettiği anlamları analiz etmektedir. Nitel araştırma yöntemi ile yürütülen çalışmada ele alınan illüstrasyonlar, doküman analizi ve görsel analiz yöntemiyle çözümlenmiş; her bir illüstrasyon, toplumsal sorunları güçlü bir metaforik eleştiriyle dile getirirken izleyiciyi düşündürmeye teşvik ettiği sonucuna ulaşılmıştır. Nitel araştırma yöntemiyle yürütülen bu çalışmada ele alınan illüstrasyonlar, görsel analiz yöntemiyle incelenmiş ve her bir illüstrasyonun, toplumsal sorunları güçlü bir metaforik eleştiriyle sunduğu ve izleyiciyi düşündürmeye teşvik ettiği sonucuna varılmıştır. Örneğin, "MSI Reproductive Choices x Uncommon Creative Studio" kampanyasında, kadın figürünün etrafındaki dikey çizgiler özgürlüğün kısıtlanmasını simgelerken, "Drugs and Doping in Professional Cycling" afişi, doping kullanımının etik sorunlarını vurgulamaktadır. Benzer şekilde, "Voice Your View "afişinde, silahın ucundan çıkan kırmızı renk, şiddetin ve ölümün simgesi olarak kullanılarak toplumsal bir eleştiriyi gözler önüne sermektedir. Her bir tasarımda, Bar'ın minimalist yaklaşımı ve renk kontrastları, metaforların derinliğini artırarak toplumsal farkındalık yaratma gücüne sahip görseller ortaya koymaktadır. Bu bağlamda, Noma Bar'ın illüstrasyonları, grafik tasarımın toplumsal adaletsizlikleri ve etik ikilemleri sorgulayan etkili araçlar olarak kullanıldığını göstermektedir.
Anahtar Kelimeler: Noma Bar, Minimalist İllüstrasyon, Metafor, Grafik Tasarım, Görsel İletişim

THE VISUAL LANGUAGE OF METAPHOR: AN ANALYSIS OF NOMA BAR'S MINIMALIST ILLUSTRATIONS

ABSTRACT
This study examines the metaphors in Noma Bar's minimalist illustrations and how these metaphors visualise social, political, and ethical issues. The research analyses the meanings conveyed by the metaphors by examining seven different illustrations by Bar, considering design elements such as form, colour, and composition. Conducted using qualitative research methods, the illustrations were analysed using document analysis and visual analysis techniques. The study concluded that each illustration addresses social issues through powerful metaphorical criticism, encouraging the viewer to reflect. The illustrations examined in this qualitative research study were analysed using visual analysis methods, and it was concluded that each illustration presents social issues with powerful metaphorical criticism and encourages the viewer to think. For example, in the 'MSI Reproductive Choices x Uncommon Creative Studio' campaign, the vertical lines around the female figure symbolise the restriction of freedom, while the 'Drugs and Doping in Professional Cycling' poster highlights the ethical issues surrounding doping. Similarly, in the 'Voice Your View' poster, the red colour emerging from the tip of the gun is used as a symbol of violence and death, revealing a social critique. In each design, Bar's minimalist approach and colour contrasts enhance the depth of the metaphors, creating visuals with the power to raise social awareness. In this context, Noma Bar's illustrations demonstrate how graphic design can be used as an effective tool to question social injustices and ethical dilemmas.
Keywords: Noma Bar, Minimalist Illustration, Metaphor, Graphic Design, Visual Communicatio

AYETULLAH SÜMER ÖRNEĞİ: GÜZEL SANATLAR ÜNİVERSİTELERİNDE FRESK ATÖLYESİ KURULUMU VE İŞLEYİŞİNE DAİR MODEL BİR İNCELEME

Asst. Prof. Dr. Devrim KARAKUŞ
Mimar Sinan Fine Arts University, Faculty of Fine Arts, Türkiye
ORCID: 0009-0000-3625-1918

ÖZET

Bu bildiri, Türkiye'deki sanat eğitimi tarihinde önemli bir dönüm noktası olan Mimar Sinan Güzel Sanatlar Üniversitesi Fresk Atölyesi'nin kuruluşunu, teknik altyapısını ve tarihsel gelişimini incelemeyi amaçlamaktadır. Çalışmanın odak noktası, 1933 yılında Ayetullah Sümer tarafından temelleri atılan bu atölyenin, Türkiye'de akademik düzeyde kurulan ilk fresk atölyesi olmasıdır. Bildiri kapsamında, atölyenin kuruluş sürecinde karşılaşılan teknik gereklilikler, mekân düzenlemeleri, malzeme ihtiyaçları ve uygulama yöntemleri hem tarihsel hem de güncel veriler ışığında analiz edilecektir. Fresk uygulamasının geleneksel teknikleri — buon fresco, fresco secco, sgraffito — çok detaylı ele almadan bunların uygulanmasında gerekli olan malzeme ve gereçlerin kullanımı ele alınmaktadır. Aynı zamanda, atölyenin eğitim programında zaman içinde gerçekleşen pedagojik ve teknik dönüşümler incelenmiş; çağdaş gereksinimlere göre yapılan güncellemeler örneklerle açıklanmıştır. Bu çalışmada ayrıca, Türkiye'de fresk eğitiminin kurumsallaşması örneği üzerinden günümüzde yeni bir fresk atölyesi kurmak isteyen üniversiteler için yol gösterici olacak öneriler sunulmuştur. Literatür taramasında başta Ayetullah Sümer'in duvar resmi uygulamaları, MSGSÜ Fresk Atölyesi kayıtları, tez çalışmaları, atölyenin emekli olan eski hocaları ile yapılan görüşmeler ve sanat tarihi kaynakları kullanılmış; teknik malzeme listeleri ve mekânsal gereksinimler sahadan elde edilen bilgilerle desteklenmiştir. Bu bağlamda bildirinin amacı, sanat eğitimi kurumlarında fresk uygulamasına yeniden dikkat çekmek, teknik bilgi birikimini belgelemek ve bu alanda nitelikli bir eğitim ortamı kurmak isteyen akademik kurumlara model oluşturabilecek somut bir çerçeve sunmaktır.

Anahtar kelimeler: Fresk, Eğitim, Ayetullah Sümer, MSGSÜ

THE AYATOLLAH SÜMER EXAMPLE: A MODEL STUDY ON THE ESTABLISHMENT AND OPERATION OF FRESCO WORKSHOPS IN FINE ARTS' UNIVERSITIES

ABSTRACT

This paper aims to examine the establishment, technical infrastructure and historical development of the Mimar Sinan Fine Arts University Fresco Workshop, which is an important turning point in the history of art education in Turkey. The focus of the study is that this workshop, the foundations of which were laid by Ayatullah Sumer in 1933, is the first fresco workshop established at the academic level in Turkey. Within the scope of the paper, the technical requirements, space arrangements, material needs and application methods encountered during the establishment process of the workshop will be analyzed in the light of both historical and current data. The traditional techniques of fresco application — buon fresco, fresco secco, sgraffito — are discussed without going into great detail and the use of materials and equipment required for their application is discussed. At the same time, the pedagogical and technical transformations that took place over time in the training program of the workshop were examined; Updates made according to contemporary requirements are explained with examples. In this study, suggestions that will guide universities that want to establish a new fresco workshop today are presented through the example of the institutionalization of fresco education in Turkey. In the literature review, Ayatollah Sumer's mural paintings, MSGSU Fresco Workshop records, thesis studies, interviews with the retired former teachers of the workshop and art history sources were used; technical material lists and spatial requirements were supported by the information obtained from the field. In this context, the aim of the paper is to draw attention to the practice of frescoes in art education institutions, to document technical knowledge and to provide a concrete framework that can serve as a model for academic institutions that want to establish a qualified educational environment in this field.

Keywords: Fresco, Education, Ayetullah Sümer, MSGSU

AN ANALYSIS OF A WORK FOR VIOLIN EDUCATION

Prof. Meltem DÜZBASTILAR
Trabzon University, Fatih Education Faculty, Fine Arts Department, Trabzon, Turkey,
ORCİD: ID/0000-0001-8346-596X

Saliha Melek ÖZCAN
Trabzon University, Fatih Education Faculty, State Conservatory Trabzon, Turkey,
ORCİD: ID/0009-0000-4263-9097

ABSTRACT
This study will analyze the first movement of Oscar Reading's (June 29, 1846 – July 7, 1916), a prominent figure in violin education literature, Violin Concerto in D Major, Opus 25. The aim of the study is to identify the technical difficulties in the first movement of Oscar Reading's Violin Concerto in D Major, Opus 25, and to develop preliminary exercises to overcome these difficulties. At the same time, the study aims to enable students to learn the work in a short time using the preliminary exercises provided, to serve as an example of a working method for similar études and works, and to contribute to the violin education process. The study will be a descriptive study conducted using a qualitative research approach. The universe of the study is all of Oscar Reading's violin concertos, and the sample is the first movement of his Violin Concerto in D Major, Opus 25. The study data will be collected through musical analysis. The technical difficulties in the work will be identified by analyzing the data obtained from the musical analysis, and practice examples will be created to overcome these technical difficulties. As a result of the study, recommendations will be made to guide students in the etude practice process.
Keywords: Violin Education, Analysis, Oscar Reading, Technical Difficulty, Work Analysis.

KEMAN EĞİTİMİNE YÖNELİK BİR ESER ANALİZİ

ÖZET
Bu çalışmada, keman eğitimi literatürünün önemli isimlerinden biri olan Alman kemancı Oscar Reading'in (29 Haziran 1846 – 7 Temmuz 1916) Keman konçertolarından biri olan opus 25 numaralı Re (D) Majör Keman Konçertosunun birinci bölümü analiz edilmiştir Çalışmanın amacı, Oscar Reading'in opus 25 numaralı Re (D) Majör Keman Konçertosunun birinci bölümü içerisinde yer alan teknik güçlükleri belirlemek, bu güçlüklerin giderilmesine yönelik ön alıştırmalar geliştirmektir. Aynı zamanda çalışmada, öğrencilerin yazılan ön çalışmaları kullanarak eseri kısa sürede öğrenmesi, çalışma yönteminin benzer etüd ve eser çalışmalarına örnek oluşturması ve keman eğitimi sürecine katkı sağlaması da amaçlanmıştır. Çalışma, Nitel araştırma yaklaşımı ile yapılacak betimsel bir çalışmadır. Çalışmanın evreni Oscar Reading'in bütün keman konçertoları, örneklemi ise opus 25 numaralı Re (D) Majör Keman Konçertosunun birinci bölümüdür. Çalışma verileri müzikal analiz yapılarak toplanmıştır. Müzikal analiz sonucunda elde edilen verilerin çözümlenmesiyle eserdeki teknik güçlükler belirlenecek ve bu teknik güçlüklerin giderilmesine yönelik alıştırma örnekleri oluşturulmuş, çalışma sonucunda etüdü çalışma sürecinde öğrencilere kılavuz olacak önerilerde bulunulmuştur.
Anahtar Kelimeler: Keman Eğitimi, Analiz, Oscar Reading, Teknik Güçlük, Eser Analizi.

AN ANALYSIS OF A VIOLIN ETUDE FOR VIOLIN EDUCATION

Prof. Meltem DÜZBASTILAR
Trabzon University, Fatih Education Faculty, Fine Arts Department, Trabzon, Turkey,
ORCİD: ID/0000-0001-8346-596X

Saliha Melek ÖZCAN
Trabzon University, Fatih Education Faculty, State Conservatory Trabzon, Turkey,
ORCİD: ID/0009-0000-4263-9097

ABSTRACT
This study analyzes the 56th F Major violin etude from the "Hans Sitt 100 Etudes Op. 32" method, which is widely used in professional music education institutions in our country. The aim of the study is to identify the difficulties in the 56th etude in the "Hans Sitt 100 Etudes Op. 32" violin method and to develop preliminary exercises to overcome these difficulties. At the same time, it is intended to contribute to the work stages of the students who will work on the etude, the violin education processes, and their academic success. The study is descriptive and will be conducted using a qualitative research approach. The universe of the study is all the études in the "Hans Sitt 100 Études Op. 32" method. The sample of the study is etude No. 56, selected from among these etudes. The study data will be collected through musical analysis. The different technical difficulties encountered in the etude will be determined by analyzing the data obtained from the musical analysis, the identified technical difficulties will be shown in a table, and original short exercise examples will be developed for the etude to overcome these difficulties. As a result of the study, recommendations will be made to guide students in the process of working on the etude.
Keywords: Violin education, Hans Sitt, Etude Analysis, Technical Difficulty

KEMAN EĞİTİMİNE YÖNELİK BİR ETÜD ANALİZİ

ÖZET
Bu çalışmada, ülkemizde mesleki müzik eğitimi kurumlarında yaygın biçimde kullanılan "Hans Sitt 100 Etudes Op. 32" metodu içerisinde yer alan 56 numaralı Fa (F) Majör keman etüdünün analizi yapılmıştır. Çalışmanın amacı, "Hans Sitt 100 Etudes Op. 32" keman metodu içinde yer alan 56 numaralı etüd içerisinde yer alan güçlükleri belirlemek, bu güçlüklerin giderilmesine yönelik ön alıştırmalar geliştirmektir. Aynı zamanda etüdü çalışacak olan öğrencilerin çalışma aşamalarına, keman eğitimi süreçlerine ve akademik başarılarına katkıda bulunmak da amaçlanmıştır. Çalışma, betimsel bir çalışma olup Nitel araştırma yaklaşımı ile yapılmıştır. Çalışmanın evreni "Hans Sitt 100 Etudes Op. 32" metodunda bulunan bütün etütlerdir. Çalışmanın örneklemi ise bu etütler içerisinden seçilen 56 numaralı etüttür. Çalışma verileri müzikal analiz yapılarak toplanmıştır. Müzikal analiz sonucunda elde edilen verilerin çözümlenmesiyle etütte karşılaşılan farklı teknik güçlükler belirlenmiş, belirlenen teknik güçlükler tabloda gösterilmiş ve bu güçlüklerin giderilmesi için etüde özgün kısa alıştırma örnekleri geliştirilmiştir. Çalışma sonucunda etüdü çalışma sürecinde öğrencilere kılavuz olacak önerilerde bulunulmuştur.
Anahtar Kelimeler: Keman eğitimi, Hans Sitt, Etüt Analizi, Teknik Güçlük

DİGƏR İNCƏSƏNƏT SAHƏLƏRİNDƏ MİSİQİNİN ETİK SİMVOL KİMİ XİDMƏT EDİLMƏSİ

Prof. Dr. Tamilla BAGIROVA
Azerbaijan State Pedagogical University, Faculty of Arts and Physical Education, Department of Music and Its Teaching Technology, Azerbaijan
ORCID: 0000-0003-3322-9947

Özət
Musiqinin sosial əhəmiyyəti məktəblilərin mənəvi-estetik tərbiyəsində onun hiperkommunikasiya potensialı ilə müəyyən edilir. Bu sənət növü uşağın psixosomatik xüsusiyyətlərini düzəltmək üçün təsirli resurslara malikdir, yalnız evristik genezis və intonasiya xarakteri əsasında onun emosional, bədii və obrazlı məzmununun fərdi yönümlü dərk edilməsinin pedaqoji şəraitində reallaşır. Musiqi kəşflərinin mənəvi və maddi təcəssümü musiqinin seçici, emosional, şüurlu və fəal-praktik dərk edilməsi ilə şərtlənir, estetik tələbatların ödənilməsi, yaradıcılıq prosesinə maraq və bədii fəaliyyətin səmərəliliyi ilə müəyyən edilir, tələbələrin məqsəd qoymasının təcəssümünə səbəb olur. Uşağın duyğuları, təcrübələri, hissləri estetik qiymətləndirmələrdə, ideallarda, təhsil və əmək fəaliyyətinin nəticələrinin tərtibində həyata keçirilir. Onun evristik təfəkkürü ensiklopedik biliklərdə, bənzərsiz bacarıqlarda, universal qabiliyyətlərdə təcəssüm edir. Tələbələrin pedaqoji prosesdə məqsəd qoymasının maddiləşdirilməsi onların estetik tələbatları və musiqi üstünlükləri nəzərə alınmaqla əvvəlcədən müəyyən edilir, onların məmnunluğu fərdi və ya humanist tərbiyənin prioritet məqsədi olan euritmiya (evfoniya), katarsis (mənəvi təmizlənmə), empatiya (rəğbət) hisslərinin yaranmasına və inkişafına səbəb olur.
Açar sözləri: incəsənət, sahə, etik, simvol, təcəssüm

IN OTHER ART FORMS, MUSIC SERVES AS AN ETHICAL SYMBOL

ABSTRACT
The social significance of music in the spiritual and aesthetic education of schoolchildren is determined by its hypercommunication potential. This type of art has effective resources for correcting the psychosomatic characteristics of the child, is realized only in the pedagogical conditions of individually oriented perception of its emotional, artistic and figurative content on the basis of heuristic genesis and intonation character. The spiritual and material embodiment of musical discoveries is conditioned by the selective, emotional, conscious and active-practical perception of music, is determined by the satisfaction of aesthetic needs, interest in the creative process and the effectiveness of artistic activity, leads to the embodiment of goal-setting by students. The child's emotions, experiences, feelings are realized in aesthetic assessments, ideals, in the formulation of the results of educational and labor activities. His heuristic thinking is embodied in encyclopedic knowledge, unique skills, universal abilities. The materialization of students' goal-setting in the pedagogical process is predetermined, taking into account their aesthetic needs and musical preferences, their satisfaction leads to the emergence and development of feelings of eurythmy (euphony), catharsis (spiritual purification), empathy (sympathy), which are the priority goals of individual or humanistic education.
Keywords: art, field, ethics, symbol, embodiment.

THE GENDER-NEUTRALITY OF REASON AND SOCIAL JUSTICE: IBN RUSHD'S PHILOSOPHICAL APPROACH TO GENDER EQUALITY

Asst. Prof. Tanju TOKA
Erzurum Technical University, Faculty of Literature, Department of Philosophy, Erzurum, Türkiye
ORCID: 0000-0002-4368-3740

ABSTRACT
Although the idea of human rights became institutionalized through legal and political documents in the modern period, the fundamental principles on which it rests -such as equality, justice, and human dignity- have been discussed in various forms within different philosophical traditions throughout history. Without anachronistically attributing modern human rights concepts to classical texts, this paper aims to philosophically examine the Andalusian philosopher Ibn Rushd's views on gender equality along the axes of the nature of reason and social justice. In this context, the main argument of the study is that Ibn Rushd's rationalist philosophy, which conceives reason as an element independent of gender, implies -albeit in a limited manner- the equality of women in terms of education, public participation, and political duties. Accordingly, the paper primarily focuses on Ibn Rushd's commentary on Plato's *Republic* (*Jawāmiʿ al-Siyāsa li-Aflāṭūn*). Due to his lack of access to Aristotle's *Politics*, Ibn Rushd reinterprets the Platonic political model and emphasizes that women are equal to men in terms of rational capacities, and that their exclusion from education and public office is philosophically unfounded. For instance, the philosopher explicitly states that women may also be included in the guardian class. This approach conceives gender inequality not as an ontological issue but as a social and historical problem. The paper further demonstrates, by centering on Ibn Rushd's emphasis on education and his argument of social productivity, that leaving women uneducated is regarded not merely as an individual loss but as a structural problem that weakens the competence of the political order. In this framework, equality is grounded not only as a moral ideal but as a necessary principle for the realization of justice and the common good. More explicitly, the study seeks to reveal the original character of Ibn Rushd's thought by discussing the tension between his views and the Islamic legal tradition and social structure of his time. In conclusion, while acknowledging that Ibn Rushd was not a human rights theorist in the modern sense, the study aims to make a modest contribution to human rights debates by demonstrating that his reason -, virtue-, and social justice-oriented philosophy shows that the discourse of equality is not exclusive to the modern Western legal tradition, thereby adding intercultural and historical depth to these discussions.
Keywords: Ibn Rushd, Rational equality, Social justice, Gender equality, Public participation

AKLIN CİNSİYETSİZLİĞİ VE TOPLUMSAL ADALET: İBN RÜŞD'ÜN KADIN-ERKEK EŞİTLİĞİNE DAİR FELSEFÎ YAKLAŞIMI

ÖZET
İnsan hakları düşüncesi modern dönemde hukukî ve siyasal belgelerle kurumsallaşmış olsa da bu düşüncenin dayandığı eşitlik, adalet ve insan onuru gibi temel ilkeler, tarih boyunca farklı felsefî geleneklerde çeşitli biçimlerde tartışılmıştır. Bu çalışma, modern insan hakları kavramlarını anakronik biçimde klasik metinlere atfetmeksizin, Endülüs filozofu İbn Rüşd'ün kadın-erkek eşitliğine ilişkin görüşlerini aklın doğası ve toplumsal adalet ekseninde felsefî olarak incelemeyi hedeflemektedir. Bu bağlamda çalışmanın temel iddiası, İbn Rüşd'ün rasyonalist felsefesinde aklın cinsiyetten bağımsız bir unsur olarak kavranmasının, sınırlı da olsa kadınların eğitim, kamusal katılım ve siyasal görevler bakımından eşitliğini öngördüğüdür. Bu çerçevede bildiride, özellikle İbn Rüşd'ün Platon'un *Devlet* eserine yazdığı şerhi (*Cevâmiʿu Siyâseti Eflâtûn*) esas alınmaktadır. Aristoteles'in *Politika*'sına ulaşamaması nedeniyle Platoncu siyaset modelini yeniden yorumlayan İbn Rüşd, kadınların aklî yetiler bakımından erkeklerle eşit olduğunu ve bu nedenle eğitimden ve kamusal görevlerden dışlanmalarının felsefî açıdan temelsiz bulunduğuna işaret etmektedir.

Örneğin, filozof bekçi sınıfında kadınların da yer alabileceğini açıkça belirtmektedir. Bu yaklaşım biçimi kadın-erkek eşitsizliğini ontolojik değil, toplumsal ve tarihsel bir problem olarak kavrar. Çalışma ayrıca, İbn Rüşd'ün eğitim vurgusunu ve toplumsal verimlilik argümanını merkeze alarak, kadınların eğitimsiz bırakılmasının yalnızca bireysel bir kayıp değil, siyasal düzenin yetkinliğini zayıflatan yapısal bir sorun olarak görüldüğünü göstermektedir. Bu bağlamda eşitlik, yalnızca ahlâkî bir ideal değil, adalet ve ortak iyinin gerçekleşmesi için zorunlu bir ilke olarak temellendirilir. Daha sarih bir ifadeyle çalışma, İbn Rüşd'ün bu görüşlerinin kendi dönemindeki İslâm hukuk geleneği ve toplumsal yapıyla olan gerilimini tartışarak, filozofun düşüncesinin özgün karakterini ortaya koymaya gayret etmektedir. Sonuç olarak bu çalışma, İbn Rüşd'ün modern anlamda bir insan hakları teorisyeni olmadığını kabul etmekle birlikte, onun akıl, erdem ve toplumsal adalet eksenli düşüncesinin eşitlik söyleminin yalnızca modern Batı hukuk geleneğine özgü olmadığını ortaya koymaktadır. Bu çerçevede çalışma, insan hakları tartışmalarına kültürlerarası bir perspektif ve tarihsel derinlik kazandırma yönünde mütevazı bir katkı sunmayı amaçlamaktadır.

Anahtar kelimeler: İbn Rüşd, Aklî eşitlik, Toplumsal adalet, Kadın-erkek eşitliği, Kamusal katılım

ON THE TYPES AND CHARACTERISTICS OF INTERACTION

Asst. Prof. Guluse AKSOY
Bartin University, Humanities Faculty, Philosophy Department, Bartin, Turkey,
ORCİD: ID/0000-0003-3827-9054

ABSTRACT
In this study, the ontological and metaphysical dimensions of the concept of the soul will be examined through interaction concepts developed within a philosophical and interdisciplinary framework. The processes that occur between the parties involved in an interaction are described within the context of different types of interaction and their analysis; the dynamic structure in which each participant simultaneously acts as a stimulus and as a response to the behavior of others is investigated from the perspective of interaction systems.
The study is based on the explanations of Michael White Shaman—born and raised in southern Siberia, known for his work in physics, psychology, and mediumship, and the founder of the Neurosensoric School since 2010—presented in his verbally delivered programs published on digital platforms.
In general, shamans hold that the dimensions in which souls exist solely in the form of energy cannot, in principle, be perceived within the three-dimensional world we inhabit, even though these souls may interact with it. In these dimensions, energy is unlimited; however, it is not the element that directly performs action. According to Michael White Shaman[1], the human being is a creature capable of transcending the boundaries of the physical world—where three-dimensional space and invariant time categories prevail—and of interacting with souls that operate under conditions of multidimensionality and variable (variative) time.
Keywords: Interaction, Souls, Multidimensionality, External Projection.

[1]The name White Shaman Michael will be abbreviated as ‘BSM’ throughout the text.

ON THE METAPHYSICAL WORLD WITHIN US

Asst. Prof. Guluse AKSOY
Bartin University, Humanities Faculty, Philosophy Department, Bartin, Turkey,
ORCİD: ID/0000-0003-3827-9054

ABSTRACT
The United Nations has declared 2025 as the International Year of Quantum Science and Technology in order to raise public awareness about the importance and applications of quantum science. Quantum mechanics is regarded as the most successful field of modern science in terms of the extraordinary precision with which theory and experiment agree. Nevertheless, quantum mechanics operates in a manner reminiscent of an oracle: it produces remarkably accurate predictions, yet often remains silent about how and why these predictions come to pass. In this respect, quantum theory reveals not only the physical reality that surrounds us but also a subtle dimension operating in the depths of our inner world—one that we frequently fail to perceive. This is noteworthy insofar as it exhibits certain parallels with the world of souls systematized by Aristotle. The aim of this study is to reconsider the reality of metaphysical ontology and to demonstrate that souls constitute a force as influential and transformative as subatomic particles. In this context, the soul is approached as a multidimensional essence and evaluated as a layer of reality operating across different planes of existence. The study draws upon the views of physicists concerning quantum phenomena, as well as the explanations of Michael White Shaman[1]—born and raised in southern Siberia, known for his work in physics, psychology, and mediumship, and the founder of the Neurosensoric School since 2010—presented in his verbally delivered programs published on digital platforms. Souls that exist in the form of energy possess unlimited energy under conditions of variable (variative) time and multidimensionality; however, they cannot act directly within the physical world governed by three-dimensional space and invariant time categories in which humans live. For this reason, the neurosensoric training of the human being is of particular importance. The world of souls, which suggests that the metaphysical realm and our ontological existence form a unified whole, is grounded in examples drawn from quantum physics that indicate these realms are not disconnected from one another.
Keywords: The World of Subatomic Particles, Souls, Shamanism, Externalization.

[1]The name White Shaman Michael will be abbreviated as ‘BSM’ throughout the text.

PAIRING TRADITIONAL TURKISH FERMENTED DRINKS WITH FOOD; A COMPILATION ON FOOD PAIRING

Lect. Mert EKER
Acibadem Mehmet Ali Aydinlar University, Vocational School, Department of Culinary, Türkiye
ORCID: 0000-0003-3560-3736

Doctoral Student İzel KOYUNCUOĞLU EKER
Istanbul Gelisim University, Institute of Graduate Studies, Department of Gastronomy and Culinary Arts, Türkiye
ORCID: 0009-0004-7199-2550

ABSTRACT
Fermented products with probiotic properties are known to be beneficial to human health, and for this reason, interest in such products has been increasing steadily. Turkish gastronomy is particularly rich in fermented beverages, many of which are known to originate from Turkic communities in Central Asia. Although numerous beverages have traditionally been produced through fermentation in Turkish society, the number of those that have survived from the past to the present and are still consumed in daily life remains quite limited.

This study aims to pair these beverages, which have historically been consumed alongside various foods, with new flavors, thereby enriching Turkish gastronomy and bringing renewed attention to these traditional drinks. Within the scope of the study, the historical background, production methods, and nutritional values of traditional Turkish fermented beverages—namely ayran, kefir, boza, shalgam juice, hardaliye, and kumis—were examined, and food pairing practices related to these beverages reported in the literature were investigated.

The findings indicate that ayran and shalgam juice are frequently consumed in combination with foods. However, it was determined that food pairings involving boza, hardaliye, kefir, and kumis are quite limited. Finally, food pairing recommendations were proposed for the beverages included in the study by taking flavor compatibility into consideration, with the aim of increasing their perceived value, awareness, and levels of consumption.

Keywords: Fermentation, traditional, beverage, pairing, probiotic

GASTRONOMİK DEĞERLERİN TURİST REHBERLERİNİN ANLATILARINDAKİ YERİ VE ÖNEMİ

Bilgehan KILIÇHAN
PhD Student, Erciyes University, Institute of Social Sciences, Department of Tourism Management, Kayseri-Türkiye
ORCID: 0000-0003-1897-4551

Assoc. Prof. Reha KILIÇHAN
Kayseri University, Faculty of Applied Sciences, Department of Gastronomy and Culinary Arts, Kayseri-Türkiye
ORCID: 0000-0003-2570-5771

ÖZET
Gastronomi, turizm literatüründe destinasyon kimliğinin inşasında, kültürel mirasın aktarımında ve deneyimsel turizmin geliştirilmesinde temel bir unsur olarak ele alınmaktadır. Özellikle yerel mutfaklar, üretim teknikleri, yeme ve içme ritüelleri ile bu unsurların taşıdığı kültürel anlamlar, turist deneyiminin özgünleşmesinde belirleyici bir rol üstlenmektedir. Bu süreçte turist rehberleri, gastronomik değerlerin ziyaretçilere aktarılmasında yalnızca bilgi sunan aktörler değil; kültürel anlamları seçen, yorumlayan ve yapılandıran aracı figürler olarak öne çıkmaktadır. Buna karşın, gastronomi turizmi alanındaki akademik çalışmaların büyük bir bölümü turist algıları, memnuniyet, davranışsal niyetler veya destinasyon pazarlaması gibi sonuç değişkenlerine odaklanmakta; gastronomik değerlerin turist rehberlerinin anlatıları içerisindeki temsili doğrudan ve sistematik biçimde ele alınmamaktadır. Bu çalışmanın amacı, turist rehberlerinin anlatılarında gastronomik değerlerin hangi unsurlar üzerinden temsil edildiğini, anlatı içindeki yerini ve bu temsillerin niteliğini değerlendirmektir. Çalışmada gastronomik değerler yalnızca yemek ve içecek unsurlarıyla sınırlı görülmemiş; üretim teknikleri, sofra kültürü, ritüeller, tarihsel bağlam, kültürel anlamlar ve sürdürülebilirlik boyutlarıyla birlikte ele alınmıştır. Araştırma problemi, turist rehberlerinin anlatılarında gastronomik değerlerin görünürlük, merkezilik ve içerik derinliği açısından nasıl konumlandığı sorusu etrafında şekillenmektedir. Çalışmanın genel çıkarımları, gastronomik değerlerin turist rehberlerinin anlatılarında çoğu zaman tamamlayıcı ve ikincil unsurlar olarak yer aldığını; ancak yorumlayıcı ve hikâyeleştirici anlatı stratejileri benimsendiğinde gastronominin kültürel miras aktarımı ve deneyim zenginleştirme açısından güçlü bir potansiyel sunduğunu ortaya koymaktadır. Bu yönüyle çalışma, turist rehberliği ve gastronomi literatürüne kavramsal katkılar sağlarken, sektör uygulayıcılarına ve gelecek araştırmalara yönelik birtakım öneriler sunmaktadır.
Anahtar Kelimeler: Gastronomik Değer, Turist Rehberi, Anlatı.

THE PLACE AND IMPORTANCE OF GASTRONOMIC VALUES IN THE NARRATIVES OF TOURIST GUIDES

ABSTRACT
Gastronomy is considered a fundamental element in tourism literature for constructing destination identity, transmitting cultural heritage, and developing experiential tourism. Local cuisines, production techniques, eating and drinking rituals, and the cultural meanings associated with these elements play a decisive role in making the tourist experience unique. In this process, tourist guides stand out not only as actors who provide information but also as intermediary figures who select, interpret, and structure cultural meanings in the transmission of gastronomic values to visitors. However, a large portion of academic studies in the field of gastronomic tourism focuses on outcome variables such as tourist perceptions, satisfaction, behavioral intentions, or destination marketing; the representation of gastronomic values within the narratives of tourist guides is not directly and systematically addressed.

This study aims to evaluate the elements through which gastronomic values are represented in the narratives of tourist guides, their place within the narrative, and the quality of these representations. In this study, gastronomic values are not limited solely to food and beverage elements; they are also considered in conjunction with production techniques, table culture, rituals, historical context, cultural meanings, and sustainability dimensions. The research problem revolves around the question of how gastronomic values are positioned in tourist guides' narratives in terms of visibility, centrality, and depth of content. The general conclusions of the study reveal that gastronomic values are often presented as complementary and secondary elements in tourist guides' narratives; however, when interpretive and storytelling strategies are adopted, gastronomy offers strong potential for cultural heritage transmission and experience enrichment. In this respect, the study makes conceptual contributions to the literature on tourist guiding and gastronomy, while offering several suggestions for industry practitioners and future research.
Keywords: Gastronomic Value, Tourist Guide, Narrative.

15th International
ZEUGMA CONGRESS ON SCIENTIFIC RESEARCH
(THE BOOK OF ABSTRACTS)
January 19-21, 2026 / Gaziantep, Türkiye
www.zeugmakongresi.org/

PRESERVATION OF TRADITIONAL RECIPES IN ARTISAN RESTAURANTS IN ANTALYA AND THEIR REFLECTIONS ON GASTRONOMY TOURISM

Eyüp UYANIK
Siirt University, Department of Gastronomy and Culinary Arts, Türkiye
ORCID: 0009-0000-1140-4690

Gül Damla KILIÇ
Antalya Belek University, Department of Gastronomy and Culinary Arts, Türkiye
ORCID: 0000-0002-6564-6385

ABSTRACT

This study investigates the role of esnaf restaurants in Antalya concerning the preservation of traditional gastronomic knowledge and its intergenerational transfer within the context of gastronomy tourism, using a qualitative research methodology. The study conceptualizes esnaf restaurants not merely as venues for local cuisine, but as establishments that maintain a specific culinary tradition over time, recognized by patrons through consistent taste, preparation, and presentation. This study seeks to elucidate the formation of the interaction between esnaf restaurants and the destination through customer ratings.

A qualitative study design was chosen, collecting data exclusively from publicly accessible consumer reviews on digital platforms. The survey comprised twenty esnaf restaurants in Antalya that were noted for maintaining traditional culinary techniques. Customer feedback received from Google Reviews was examined through thematic analysis, adhering to the stages delineated by Braun and Clarke (2006). The coding and subject development processes were executed independently by many academics, resulting in a consensus on the final thematic framework.

The results indicate that customer evaluations rely on five main themes: the preservation of traditional culinary practices and regional traits, intergenerational transmission, authenticity and the connection to the dining environment, taste and satisfaction, and the correlation of esnaf restaurants with destination perception. Recurring phrases like “Antalya style,” “consistent flavor over the years,” and “family-operated restaurant” indicate that the preservation of traditional recipes without modification is a characteristic recognized and appreciated by customers. Furthermore, elements like as the restaurant's physical ambiance, presentation techniques, and service methodology are evaluated alongside the cuisine, strengthening the notion that esnaf restaurants represent a familiar and lasting culinary tradition.

This study corresponds to gastronomy tourism literature that emphasizes the connection between local culinary practices and destination perception; however, it differentiates itself by examining esnaf restaurants not as large-scale or explicitly touristic locations, but as establishments where traditional culinary knowledge is preserved through continuity. The study emphasizes esnaf restaurants not as peripheral elements of gastronomy tourism, but as key contributors to the preservation and dissemination of indigenous culinary knowledge. The study utilizes customer evaluations to offer a contextually relevant contribution to gastronomy tourism literature, demonstrating how traditional culinary traditions are regarded and maintained locally.

Keywords: Traditional Culinary Knowledge, İntergenerational Transmission, Authenticity, Gastronomy Tourism, Destination İmage

ANTALYA'DAKİ ESNAF LOKANTALARINDA GELENEKSEL TARİFLERİN KORUNMASI VE GASTRONOMİ TURİZMİNE YANSIMALARI

ÖZET

Bu çalışma, Antalya'da faaliyet gösteren esnaf lokantalarının geleneksel mutfak bilgisinin korunması ve kuşaklar arası aktarımı bağlamındaki konumunu, gastronomi turizmi literatürü çerçevesinde nitel bir yaklaşımla incelemektedir. Araştırma, esnaf lokantalarını yalnızca yerel yemeklerin sunulduğu işletmeler olarak değil, belirli bir mutfak anlayışının uzun yıllar boyunca değişmeden sürdürüldüğü ve bu sürekliliğin ziyaretçiler tarafından fark edildiği mekânlar olarak ele almaktadır. Bu doğrultuda çalışma, esnaf lokantalarının destinasyonla kurduğu ilişkinin, müşteri değerlendirmeleri üzerinden nasıl şekillendiğini ortaya koymayı amaçlamaktadır.

Araştırmada nitel araştırma yaklaşımı benimsenmiş, veri kaynağı olarak yalnızca dijital platformlarda yer alan kamuya açık müşteri değerlendirmeleri kullanılmıştır. Antalya'da faaliyet gösteren ve geleneksel mutfak uygulamalarını sürdürdüğü gözlemlenen 20 esnaf lokantası çalışma kapsamına alınmıştır. Google Yorumlar platformundan elde edilen müşteri ifadeleri, tematik analiz yöntemiyle incelenmiş ve analiz süreci Braun ve Clarke (2006) tarafından önerilen aşamalar doğrultusunda yürütülmüştür. Kodlama ve tema geliştirme süreci birden fazla araştırmacı tarafından bağımsız biçimde gerçekleştirilmiş ve temalar üzerinde uzlaşı sağlanmıştır.

Analiz sonucunda elde edilen bulgular, müşteri değerlendirmelerinin beş ana tema etrafında yoğunlaştığını göstermektedir. Bu temalar, geleneksel mutfak uygulamalarının sürekliliği ve yöresellik, kuşaklar arası aktarım, otantiklik ve mekânla kurulan ilişki, lezzet ve memnuniyet ile esnaf lokantalarının destinasyon algısıyla ilişkilendirilmesi başlıkları altında toplanmıştır. Müşteri ifadelerinde sıklıkla tekrar eden "Antalya usulü", "yıllardır aynı tat" ve "aile işletmesi" gibi vurgular, geleneksel tariflerin değişmeden sürdürülmesinin ziyaretçiler tarafından fark edilen ve değer verilen bir özellik olduğunu ortaya koymaktadır. Ayrıca mekânın fiziksel düzeni, sunum biçimleri ve hizmet anlayışı, yemeklerle birlikte değerlendirilmekte ve esnaf lokantalarının tanıdık bir mutfak anlayışını temsil ettiği yönündeki algıyı desteklemektedir.

Çalışmanın bulguları, gastronomi turizmi literatüründe yerel mutfak uygulamalarının destinasyonla kurduğu ilişkiyi ele alan çalışmalarla örtüşmekle birlikte, esnaf lokantalarını büyük ölçekli restoranlar ya da turistik işletmeler yerine, geleneksel mutfak bilgisinin sürekliliği üzerinden ele alması bakımından ayrışmaktadır. Bu yönüyle çalışma, esnaf lokantalarının gastronomi turizmi bağlamında ikincil bir unsur olarak değil, yerel mutfak bilgisinin korunması ve aktarımı açısından merkezi bir konuma sahip olduğunu ortaya koymaktadır. Araştırma, müşteri değerlendirmelerini temel alarak esnaf lokantalarının mutfak anlayışının nasıl algılandığını göstermekte ve gastronomi turizmi literatürüne bağlama dayalı bir katkı sunmaktadır.

Anahtar kelimeler: Geleneksel Mutfak Bilgisi, Kuşaklar Arası Aktarım, Otantiklik, Gastronomi Turizmi, Destinasyon İmajı

VITAMIN D AND OBESITY

Lect. Eda BALCI
Istanbul Beykent University, Faculty of Health Sciences, Department of Nutrition and Dietetics
Istanbul-Türkiye
ORCID: 0000-0001-9775-9280

ABSTRACT
Obesity is recognized as a major public health problem due to its steadily increasing prevalence worldwide and the substantial burden of morbidity and mortality associated with it. In recent years, the metabolic and endocrine mechanisms related to obesity have been investigated in greater detail, and vitamin D deficiency has emerged as an important area of interest. Vitamin D is classically associated with calcium–phosphorus metabolism and bone health; however, its effects on adipose tissue, pancreas, skeletal muscle, immune system, and cardiovascular system have linked it to a wide range of chronic diseases. Observational studies have demonstrated that serum 25-hydroxyvitamin D [25(OH)D] concentrations are lower in individuals with obesity compared with those of normal weight, and that the prevalence of vitamin D deficiency is higher among obese populations. However, it remains unclear whether vitamin D deficiency is a cause or a consequence of obesity. This study reviews vitamin D metabolism, its biological effects, and the potential mechanisms underlying its relationship with obesity. In particular, mechanisms such as the sequestration of vitamin D in adipose tissue, parathyroid hormone (PTH)–mediated alterations in calcium metabolism, the effects on lipogenesis and lipolysis, and the suppression of lipid oxidation in skeletal muscle are discussed in detail. Although numerous studies have reported a negative association between vitamin D status and body mass index (BMI), other investigations have failed to confirm this relationship or have suggested that body fat distribution and composition may be more influential determinants. Evidence regarding the effects of vitamin D supplementation on body weight and fat mass remains inconsistent. In conclusion, further well-designed, prospective randomized controlled trials employing standardized measurement methods are required to clarify the relationship between vitamin D and obesity.
Keywords: Vitamin D, obesity, Body Mass Index(BMI), vitamin D deficiency

PROBIOTICS AND PREBIOTICS: FUNCTIONAL EFFECTS ON GUT HEALTH

Lect. Eda BALCI
Istanbul Beykent University, Faculty of Health Sciences, Department of Nutrition and Dietetics, Istanbul, Türkiye
ORCID: 0000-0001-9775-9280

ABSTRACT

Functional foods are a group of foods that contain health-promoting components in addition to their traditional nutrient content and are often confused with terms such as “therapeutic” or “bioactive foods.” This review aims to summarize the fundamental mechanisms and potential health effects associated with gut microbiota, focusing on probiotics and prebiotics as key components of functional foods. The human gastrointestinal tract harbors a large number of microorganisms, including viruses, bacteria, and fungi, and in healthy individuals, the gut microbiota is predominantly composed of the phyla *Firmicutes*, *Bacteroidetes*, and *Actinobacteria*. Under homeostatic conditions, the gut microbiota contributes to the regulation of digestion, metabolism, and immune responses. Probiotics are defined as live microorganisms that confer health benefits to the host when consumed in adequate amounts, with strains belonging to *Lactobacillus* and *Bifidobacterium* being the most commonly used. For a product to be considered probiotic, it is generally required to contain at least 10^6 colony-forming units (CFU)/g of viable microorganisms, while clinical studies have reported daily intake levels of approximately 10^8 CFU. The functional effects of probiotics highlighted in the literature include antimicrobial activity (through the production of organic acids, hydrogen peroxide, and bacteriocins), antioxidant and anti-inflammatory properties, support of lactose metabolism, modulation of immune responses, and potential contributions to lipid metabolism. Prebiotics, on the other hand, are components resistant to digestion in the upper gastrointestinal tract and are selectively fermented by beneficial microorganisms in the colon, particularly promoting the growth of lactobacilli and bifidobacteria. Prebiotics such as galacto-oligosaccharides (GOS), fructo-oligosaccharides (FOS), and inulin have been reported to enhance the production of short-chain fatty acids (acetate, propionate, and butyrate), thereby strengthening intestinal barrier integrity, reducing inflammation, and influencing metabolic responses. In conclusion, probiotics and prebiotics may exert various systemic effects via modulation of the gut microbiota; however, further standardized human studies are required due to variations related to strain specificity, dosage, and duration of use.

Keywords: Probiotics, Prebiotics, Gut microbiota, Functional foods

HISTORICAL DEVELOPMENT OF FOOD LOGISTICS AND MODERN METHODS USED TODAY

Asst. Prof. Elif DEMİRAL
Kayseri University, Safiye Çıkrıkçıoğlu Vocational School, Department of Food Processing Kayseri, Turkey,
ORCİD: ID/0000-0002-5781-8079

Feride DELİCE
Kayseri University Graduate School of Education Department of Organic Production, Kayseri, Turkey,
ORCİD: ID/0000-0001-7857-4352

ABSTRACT
This study aims to provide a comprehensive assessment by examining the historical development of food logistics and the modern methods applied today, focusing on food preservation techniques and digitalization. Due to their composition, foods can easily spoil as a result of microbial activity, physical, and chemical reactions. Preserving the quality, safety, and nutritional value of food throughout the process from production to consumption has made food logistics one of the most critical components of the supply chain. This necessitates basing food logistics processes on scientific and technological foundations. The study primarily focuses on the concept of food preservation, comparing the fundamental mechanisms that cause food spoilage with traditional and modern preservation methods. Traditional methods such as drying, salting, fermentation, and smoking were evaluated against thermal processes, cooling and freezing, drying, chemical and biological preservation methods, and innovative approaches such as high pressure, irradiation, and multi-barrier technologies, which are widely used today. The roles of these methods in extending shelf life and ensuring food safety have been discussed. The study also examined the historical development of food storage and transportation, revealing how simple preservation practices that began in hunter-gatherer societies evolved into systematic storage and logistics activities alongside the development of agricultural activities. In addition, it was determined that industrial production, global trade, and increased consumer demand have broadened the scope of food logistics. The study examines the transformative effects of digitalization and Industry 4.0 applications in food logistics. The contributions of technologies such as the Internet of Things, Sensor Technologies, RFID, Big Data Analytics, Artificial Intelligence, Blockchain, and Cloud Computing to traceability, operational efficiency, food safety, and sustainability have been evaluated. In this context, the study reveals the transformation of food logistics from traditional practices to a technology-focused, integrated, and sustainable structure.
Keywords: Food, Preservation, Storage, Logistics

GIDA LOJİSTİĞİNİN TARİHSEL GELİŞİMİ VE GÜNÜMÜZDE UYGULANAN MODERN YÖNTEMLER

ÖZET
Bu çalışma, gıda lojistiğinin tarihsel gelişimini ve günümüzde uygulanan modern yöntemleri, gıda muhafaza teknikleri ve dijitalleşme ekseninde ele alarak kapsamlı bir değerlendirme sunmayı amaçlamaktadır. Bileşimleri nedeniyle gıdalar, mikrobiyal faaliyetler, fiziksel ve kimyasal reaksiyonlar sonucunda kolaylıkla bozulabilirler. Gıdaların üretimden tüketime kadar geçen süreçte kalite, güvenlik ve besin değerlerinin korunması, gıda lojistiğini tedarik zincirinin en kritik bileşenlerinden biri hâline getirmiştir. Bu durumda, gıda lojistik süreçlerinin bilimsel ve teknolojik temellere dayandırılmasını zorunlu kılmaktadır. Çalışmada öncelikle gıda muhafaza kavramı esas alınarak, gıdalarda bozulmaya yol açan temel mekanizmalar ile geleneksel ve modern muhafaza yöntemleri karşılaştırılmıştır.

Kurutma, tuzlama, fermantasyon ve tütsüleme gibi geleneksel yöntemlere karşı günümüzde yaygın olarak kullanılan ısıl işlemler, soğutma ve dondurma, kurutma, kimyasal ve biyolojik koruma yöntemleri ile yüksek basınç, ışınlama ve çoklu engel teknolojileri gibi yenilikçi yaklaşımlar değerlendirilmiştir. Bu yöntemlerin, raf ömrünün uzatılması ve gıda güvenliğinin sağlanmasındaki rolleri ele alınmıştır. Çalışmada ayrıca, gıda maddelerinin depolanması ve taşınmasının tarihsel gelişimi incelenmiş; avcı-toplayıcı toplumlarda başlayan basit muhafaza uygulamalarının, tarımsal faaliyetlerin gelişimiyle birlikte sistematik depolama ve lojistik faaliyetlere dönüşümü ortaya konulmuştur. Bu dışında endüstriyel üretim, küresel ticaret ve tüketici taleplerindeki artışın, gıda lojistiğinin kapsamını genişlettiği belirlenmiştir. Araştırmada, gıda lojistiğinde dijitalleşmenin ve Endüstri 4.0 uygulamalarının dönüştürücü etkileri ele alınmıştır. Nesnelerin İnterneti, Sensör Teknolojileri, RFID, Büyük Veri Analitiği, Yapay Zekâ, Blokzincir ve Bulut Bilişim gibi teknolojilerin; izlenebilirlik, operasyonel verimlilik, gıda güvenliği ve sürdürülebilirlik üzerindeki katkıları değerlendirilmiştir. Bu bağlamda çalışma, gıda lojistiğinin geleneksel uygulamalardan, teknoloji odaklı, entegre ve sürdürülebilir bir yapıya dönüşümünü ortaya koymaktadır.
Anahtar Kelimeler: Gıda, Muhafaza, Depolama, Lojistik

SOĞUK ATMOSFERİK PLAZMA UYGULAMASI İLE ELDE EDİLEN NOHUT UNUNUN VE AQUAFABASININ KARAKTERİZASYONU VE EKMEĞİN SON ÜRÜN VE BESLENME ÖZELLİKLERİNE ETKİLERİNİN ARAŞTIRILMASI

Esra ACAR
Eskişehir Osmangazi University, Faculty of Agriculture, Department of Food Engineering
ORCID: 0009-0006-1890-0623

Doç. Dr. Yaşar KARADUMAN
Eskişehir Osmangazi University, Faculty of Agriculture, Department of Food Engineering
ORCID: 0000-0003-0907-2724

Dr. Seda KÜLEN
Department of Quality and Technology, Central Research Institute for Field Crops
ORCID: 0000-0002-6140-3079

ÖZET
Bu çalışmanın amacı, buğday ununa farklı oranlarda (%20 ve %40) nohut unu ikamesi uygulanan ekmeklerde, nohut ununda bulunan fitik asidin mineral ve protein biyoyararlılığı üzerindeki olumsuz etkisini azaltmak ve elde edilen yan ürünlerin fonksiyonel kullanım potansiyelini değerlendirmektir. Bu kapsamda, soğuk atmosferik plazma teknolojisi saf suya bir kontrol ve iki farklı süre (30 s ve 60 s) uygulanarak kullanılmış, elde edilen plazma-aktif su ile nohutlar ıslatılmıştır. Islatma sonrası nohutlar haşlanmış ve haşlama suyu sprey kurutucu yardımıyla kurutularak aquafaba elde edilmiştir. Haşlama sonucu elde dilen nohutlar ise etüvde kurutularak ticari ekmek unu ile paçal yapılmıştır. Üretilen aquafabalar, ekmek formülasyonlarında doğal emülgatör ve kabartıcı ajan olarak kullanılmıştır. Çalışma sonucunda, plazma uygulaması sonrası fitik asit miktarında istatistiksel olarak önemli düzeyde ($p<0,05$) azalma gözlenirken, bazı mineral maddelerde, toplam fenolik madde içeriğinde ve antioksidan aktivitede artış tespit edilmiştir. Elde edilen bulgular, soğuk atmosferik plazma teknolojisinin nohut bazlı ürünlerde besin biyoyararlılığını artırmada etkili bir yöntem olduğunu ve aquafabanın ekmek üretiminde fonksiyonel bir bileşen olarak kullanılabileceğini göstermektedir.
Bu çalışma Eskişehir Osmangazi Üniversitesi Fen Bilimleri Enstitüsü Gıda Mühendisliği Anabilim Dalında Esra ACAR'ın Yüksek Lisans tez çalışmasıdır. Çalışma, Eskişehir Osmangazi Üniversitesi Bilimsel Araştırma Projeleri Koordinasyon Birimi tarafından FYL-2025-3272 Proje Kodu ile desteklenmiştir.
Anahtar Kelimeler: Soğuk atmosferik plazma, aquafaba, nohut unu, ekmek.

CHARACTERIZATION OF CHICKPEA FLOUR AND AQUAFABA OBTAINED BY COLD ATMOSPHERIC PLASMA APPLICATION AND INVESTIGATION OF THEIR EFFECTS ON FINAL PRODUCT AND NUTRITIONAL PROPERTIES OF BREAD

ABSTRACT
The aim of this study is to reduce the negative effect of phytic acid in chickpea flour on the bioavailability of minerals and proteins in breads made with different proportions (20% and 40%) of chickpea flour substituted for wheat flour, and to evaluate the functional use potential of the by-products obtained. In this context, cold atmospheric plasma technology was applied to pure water for a control and two different durations, and the chickpeas were soaked with the resulting plasma-activated water.

After soaking, the chickpeas were boiled and the boiling water was dried using a spray dryer to obtain aquafaba. The chickpeas obtained as a result of boiling were dried in an oven and mixed with commercial bread flour. The aquafabas produced were used as natural emulsifiers and leavening agents in bread formulations. The results showed a statistically significant ($p<0.05$) decrease in phytic acid content after plasma treatment, while an increase was observed in some minerals, total phenolic content, and antioxidant activity. The findings indicate that cold atmospheric plasma technology is an effective method for increasing the nutritional bioavailability of chickpea-based products and that aquafaba can be used as a functional ingredient in bread production.
Keywords: Cold atmospheric plasma, aquafaba, chickpea flour, bread

PARAMETRIC DESIGN AND PLANNING: NEW FRONTIERS IN ARCHITECTURE AND MULTIDISCIPLINARY STUDIES

Melik SAMI
Department of Architecture, Mohamed Khider Biskra University, Algeria
LACOMOFA Biskra Laboratory, Algeria

Khelil SARA
Department of Architecture, Mohamed Khider Biskra University, Algeria

Tallal Abdel Karim BOUZIR
Department of Architecture, Mohamed Khider Biskra University, Algeria

ABSTRACT
The research problem that is critical and the subject of this study is the lack of a framework that would allow the implementation of the principles of parametric design in the sphere of architecture and multidisciplinary research and application aimed at the improvement of the efficiency, creativity and collaboration in design. A mixed-method research design, integrating qualitative data analysis of case studies, qualitative data analysis of expert interviews with quantitative data analysis of design performance reveals that the implementation of parametric research findings enhanced the architectural result, thus, resulting in new spatial layouts, efficient utilisation of resources. The results highlight the relevance of these approaches in the healthcare settings and show that well-planned spaces can help to improve patient health outcomes, support the collaboration of healthcare providers, and make operations more sustainable. Furthermore, offering a systematic method of parametric design, this study expands the prospects of interdisciplinary cooperation and the exchange of ideas between architecture and healthcare, which ultimately leads to situations in which the needs of various groups can be better addressed. The application of the research is not limited to the field of architecture and the study can provide important information to policy makers, educators and practitioners who are interested in applying parametric design to enhance spatial experience and effectiveness in other fields. With the healthcare landscape constantly changing, the embrace of the integrated parametric approaches will pose a powerful prospect of shaping future architectural practice, as it relates to the development of flexible, user-oriented healthcare buildings, which are sensitive to the incessant changes of the sector.
Keywords: Parametric Design; Computational Architecture; Multidisciplinary Collaboration; Performance-Based Design; Design Optimization.

COMPUTATIONAL STUDY OF DELETERIOUS MISSENSE SNPS IN THE *USH1G* GENE IMPLICATED IN USHER SYNDROME

Kenza EL KHAIR
Genomics and Human Genetics Laboratory, Institut Pasteur du Maroc, Morocco
Interdisciplinary Laboratory of Biotechnology and Health, Mohammed VI Higher Institute of Biosciences and Biotechnology, Mohammed VI University of Sciences and Health (UM6SS), Morocco
ORCID: 0009-0003-9652-8570

Madoussou TOURÉ
Genomics and Human Genetics Laboratory, Institut Pasteur du Maroc, Morocco

Salaheddine REDOUANE
Genomics and Human Genetics Laboratory, Institut Pasteur du Maroc, Morocco

Kenza SLAOUI
Genomics and Human Genetics Laboratory, Institut Pasteur du Maroc, Morocco

Houda BENRAHMA
Interdisciplinary Laboratory of Biotechnology and Health, Mohammed VI Higher Institute of Biosciences and Biotechnology, Mohammed VI University of Sciences and Health (UM6SS), Morocco

Abdelhamid BARAKAT
Genomics and Human Genetics Laboratory, Institut Pasteur du Maroc, Morocco

ABSTRACT
Usher syndrome is an autosomal recessive disorder causing combined hearing and vision loss, with *USH1G* encoding the scaffold protein SANS playing a critical role in sensory cell function. This study employed a comprehensive computational pipeline to identify and characterize damaging missense single nucleotide polymorphisms (nsSNPs) in *USH1G*. From 499 missense SNPs retrieved from Ensembl, multiple pathogenicity prediction tools (SIFT, PolyPhen-2, Metal.R, BayesDel_addAF, MutationTaster) and stability assessment tools (CUPSAT, DUET, I-Mutant, MUpro, E-SNPs&GO) were used for filtering. Conservation analysis via BLASTP and Clustal Omega highlighted critical residues. Five highly deleterious variants (L396P, L426F, G434W, R436Q, R446Q) located in the sterile alpha motif (SAM) domain were selected for molecular dynamics (MD) simulations using GROMACS. Analyses of root-mean-square deviation (RMSD), root-mean-square fluctuation (RMSF), radius of gyration (Rg), principal component analysis (PCA), and free energy landscape (FEL) revealed significant structural destabilization, altered flexibility, and increased conformational dynamics induced by these mutations, particularly L426F and R446Q. Statistical analysis (Wilcoxon rank-sum test) confirmed significant differences in structural stability between mutants and wild-type. This integrative *in silico* approach identifies potential pathogenic variants in USH1G, elucidates their structural consequences, and provides a prioritization framework for future experimental studies on Usher syndrome type 1G pathogenesis.
Keywords: *USH1G*, missense SNPs, molecular dynamics, SAM domain, Usher syndrome.

WOMEN'S ACCESS TO FINANCIAL AND CREDIT RESOURCES IN DEVELOPING COUNTRIES

Master's Student Najia MOHAMMADI
Ahlul-Bayt International University, Department of Women's Studies, Iran

Dr. Elham VAHIDI
Ahlul-Bayt International University, Iran

ABSTRACT

Access to financial and credit resources for women in developing countries is one of the key challenges for sustainable development and economic justice. Limited access to banking facilities, microloans, and formal credit reduces women's economic power and exacerbates gender inequality. This study reviews scientific sources and international reports to analyze the factors influencing these limitations and their economic and social consequences.

The findings indicate that cultural, social, and legal barriers, lack of financial literacy, and limited access to information significantly restrict women's access to financial resources. Additionally, the absence of collateral, supporting networks, and limited access to microfinance are critical obstacles. The consequences of these restrictions include increased household poverty, reduced female economic participation, limited employment opportunities, and income inequality.

Results show that empowering women through financial education, facilitating access to microcredit, and implementing supportive programs can have positive effects on economic and social development. Enhancing women's access to financial and credit resources not only secures their economic rights but also accelerates sustainable growth and comprehensive development in developing countries. Policymakers and international organizations play a key role in removing barriers and providing practical solutions.

Keywords: Women, Financial Access, Microcredit, Developing Countries, Economic Empowerment Gender Inequality

ETHNOVETERINARY APPROACH FOR THE CONTROL OF SUBCLINICAL MASTITIS IN COWS

Dr. Farrah DEEBA
Department of Clinical Medicine and Surgery, University of Agriculture Faisalabad, Pakistan
ORCID: 0000-0003-2451-2855

Dr. Muhammad ADIL
Department of Clinical Medicine and Surgery, University of Agriculture Faisalabad, Pakistan
ORCID: 0009-0008-0926-4455

Prof. Dr. Anas Sarwar QURESHI
Department of Basic Bioscience, Riphah College of Veterinary Sciences, Riphah International University Lahore, Pakistan
ORCID: 0000-0002-8511-575X

ABSTRACT
Subclinical mastitis (SCM) inflammation of the mammary gland reduces milk quality and farm profitability. Antimicrobial resistance associated with conventional therapies necessitates the exploration of effective alternative approaches including ethnoveterinary treatment strategies. This study evaluated the therapeutic potential of *Centratherum anthelminticum* (CA) in cows. Fifteen California mastitis test-positive cows were randomly allocated into three groups (n = 5/group): Group A received Tylosin® (18 mg/kg, intramuscular), Group B received CA (120 g orally), Group C received combination of Tylosin® and CA. Milk samples were analyzed before and after treatment for somatic cell count (SCC), pH, fat, protein, lactose and solids-not-fat (SNF) content. Hematological parameters, red blood cell count, white blood cell count, hemoglobin concentration, packed cell volume (PCV) and lymphocyte percentage, oxidative stress markers, total antioxidant capacity (TAC) and total oxidative stress (TOS) were estimated. The Tylosin® and CA group showed significant ($P < 0.05$) improvement in lactose, fat, and SNF contents. The CA-treated group exhibited significant increase in TAC and significant reduction in TOS. Hematological evaluation revealed significant ($P < 0.05$) improvement in red blood cell count and PCV and lymphocyte percentages . These findings suggest that CA used as ethnoveterinary treatment by dairy farmers has substantial therapeutic potential in SCM management, particularly with Tylosin® and may improve cow health and milk quality.
Keywords: Ethnoveterinary ,*Centratherum anthelminticum*, subclinical mastitis, oxidative stress.

TOXICITY ASSESSMENT OF *HELICTERES ISORA* WITH BIOLOGICAL ACTIVITIES POTENTIAL

Muhammad Muzammil NAZIR
Department of Zoology, Government College University, Pakistan

Zubair AHMED
Department of Zoology, Government College University, Pakistan

Asma ASHRAF
Department of Zoology, Government College University, Pakistan

ABSTRACT

Toxicity refers to the harmful effects induced in a whole organism or specific biological systems such as cells (cytotoxicity) or organs (e.g., hepatotoxicity, nephrotoxicity). In the present study, the fruit part of *Helicteres isora* was selected to assess its toxicological profile. The aim was to evaluate both acute and subacute toxicity and to investigate potential histopathological alterations in vital organs of Swiss albino rats following oral administration of the ethanolic extract.Plant material was collected, shade-dried, and powdered. Ethanolic extraction was performed using the Soxhlet apparatus. The study was carried out in two distinct phases in accordance with OECD guideline 423 (acute toxicity) and OECD guideline 407 (subacute toxicity).In the acute toxicity study, Swiss albino rats weighing 150–160 g were randomly divided into four groups. Three treatment groups received single oral doses of 2000, 3000, and 5000 mg/kg body weight of the extract, while a control group received distilled water. Animals were monitored for clinical signs of toxicity for 24 hours and mortality for up to 72 hours. No mortality or significant toxic signs were recorded, suggesting that the LD_{50} of the extract is greater than 5000 mg/kg. In the subacute study, fresh groups of rats were assigned to four groups (including control), and administered daily oral doses of 100, 500, and 1000 mg/kg for 28 consecutive days. At the end of the experiment, all animals were sacrificed and vital organs liver, kidney, spleen, and heart were excised, weighed, and preserved for histopathological examination.Statistical analysis of all collected data, including organ weights, hematological, and biochemical parameters, was conducted using GraphPad Prism software. The study concluded that the ethanolic extract of *Helicteres isora* did not produce significant acute or subacute toxic effects, even at high doses, indicating a favorable safety profile for further pharmacological investigation.

Keywords: Acute toxicity, Subacute toxicity, Antimicrobial assessment, Antioxidant assessment, Rat Model, *Helectris isora*

THE HUMAN BRAIN: THE NEW BATTLEGROUND OF COGNITIVE WARFARE

Prof. Dr. Sanae HANINE
Hassan I University, Morocco
ORCID: 0000-0001-6510-524X

ABSTRACT
Sun Tzu hasn't aged a day. His famous adage, "Winning all your battles is not the best thing; the highest excellence is to win without fighting," has become the credo of a next-generation warfare called "cognitive warfare," built primarily on information manipulation and disseminated through social media using artificial intelligence, making it a central element of modern conflicts and strategic competitions. Social media amplifies this effect through orchestrated social pressure, creating shared false narratives that reshape collective interpretations and legitimize strategic narratives.Indeed, war is no longer Clausewitzian, based on physical and geographical confrontation, but shifts to the mental and psychological space of individuals. He who occupies the mental space of a people does not need to cross its physical borders: he redefines its symbolic boundaries and writes its future. The objective is to shape the cognitive and emotional processes of the targets in order to induce them to make predetermined decisions. Cognitive warfare transforms confrontation into influence and replaces coercion with persuasion. Through a blurring of borders, a confusion arises between war and peace, as well as between conflict and influence.
Keywords: Cognitive warfare, Cognition, Strategic culture, Destabilization, Influence, Hybrid warfare, Manipulation, Public opinion, Psychological warfare, Information warfare, GenZ212, Morocco.

EMOTIONAL INTELLIGENCE AND ITS RELATIONSHIP WITH MENTAL HEALTH

Najiba MOHAMMADI
Ahlul-Bayt International University, Iran

Dr. Elham VAHIDI
Ahlul-Bayt International University, Iran

ABSTRACT

The present study aims to provide a comprehensive and systematic synthesis of research findings on the relationship between emotional intelligence (EI), psychological well-being, and academic achievement, drawing on a body of Iranian studies conducted among student and adolescent populations. In recent decades, increasing attention has been paid to non-cognitive constructs such as emotional intelligence, spiritual intelligence, and religious orientation as influential factors in psychological adjustment and academic functioning. Emotional intelligence refers to an individual's ability to perceive, understand, regulate, and utilize emotions in oneself and others, and is widely recognized as a key determinant of psychological and social adaptation.

A review of the existing literature indicates a significant and predominantly inverse relationship between emotional intelligence components and indicators of psychological distress, including depression, anxiety, somatic complaints, and social dysfunction. In other words, higher levels of emotional intelligence are consistently associated with lower levels of psychological problems and better general mental health. This pattern has been observed across diverse groups, including male and female university students, martyr and non-martyr families' students, as well as delinquent and non-delinquent adolescents. Findings derived from standardized measures of emotional intelligence (e.g., Schutte, Bar-On, and Schering inventories) and mental health (Goldberg's General Health Questionnaire) further suggest that specific dimensions of emotional intelligence—such as self-actualization, emotional utilization, empathy, and emotion regulation—possess stronger predictive power for mental health outcomes.

Regarding academic achievement, the findings are less consistent. While some studies report a significant association between emotional intelligence and academic performance as measured by grade point average, others fail to identify a direct relationship. Nevertheless, there is substantial evidence supporting the mediating role of psychological well-being in this relationship, indicating that emotional intelligence may indirectly influence academic success through its positive effects on mental health.

In addition to emotional intelligence, several studies have examined the role of spiritual and religious variables. The results indicate that intrinsic religious orientation and spiritual intelligence are significantly related to psychological well-being and, in some cases, serve as stronger predictors of mental health than emotional intelligence. Religious commitment and a sense of meaning and purpose in life may function as protective resources that enhance individuals' capacity to cope with psychological and academic stressors.

Overall, the accumulated empirical evidence highlights the importance of adopting an integrative approach that simultaneously addresses emotional, psychological, and spiritual dimensions within educational contexts. The development and implementation of educational and counseling interventions aimed at enhancing emotional intelligence and strengthening spiritual resources may contribute substantially to improving mental health, psychological adjustment, and ultimately academic achievement among students and adolescents.

Keywords: Emotional Intelligence; Psychological Well-Being; Mental Health; Academic Achievement; Religious Orientation

BURDEN AND DETERMINANTS OF MATERNAL AND CHILD HEALTH IN PAKISTAN

Abira NADIR
Department of Pathobiology and Biomedical Sciences, MNS University of Agriculture, Pakistan

Muhammad Ahmad SHAKIR
Department of Pathobiology and Biomedical Sciences, MNS University of Agriculture, Pakistan

Muhammad Adnan Sabir MUGHAL
Department of Pathobiology and Biomedical Sciences, MNS University of Agriculture, Pakistan

Noor ZAHRA
Shahida Islam Medical and Dental Complex, Pakistan

Asghar ABBAS
Department of Pathobiology and Biomedical Sciences, MNS University of Agriculture, Pakistan

ABSTRACT
Pakistan is currently facing one of the highest burdens of maternal and child morbidity and mortality worldwide. Although global commitments under the Millennium Development Goals, particularly MDG 4 (reduction of child mortality) and MDG 5 (improvement of maternal health), aimed to accelerate progress, achievements in these areas have remained slow and uneven. This gap is not solely the result of medical or technical shortcomings; rather, it reflects the complex interaction of political instability, recurring natural disasters, and persistent security threats. These challenges have collectively undermined governance, disrupted health service delivery, and limited the development of a stable and responsive healthcare system, especially in marginalized and remote communities. Maternal and newborn health outcomes are strongly influenced by broader structural and social determinants. Frequent shifts in government leadership and policies have contributed to fragmentation and inconsistency in health programs, reducing their long-term effectiveness. At the community level, social factors such as limited access to education, inadequate health awareness, and insufficient empowerment of girls and women continue to restrict the utilization of essential reproductive and nutritional health services. These constraints disproportionately affect rural and low-income populations, where health infrastructure is weakest and preventable risks during pregnancy and childbirth remain high. Evidence from modeling and programmatic analyses suggests that expanding and strengthening community-based health strategies could substantially improve maternal and child health outcomes. Effective implementation of interventions at the community level, particularly in underserved areas, has the potential to address gaps in access, continuity of care, and early prevention. Projections indicate that the large-scale adoption of such strategies could avert approximately 58% of maternal and child deaths, resulting in the preservation of more than 200,000 lives, while also preventing nearly half of all stillbirths. These findings emphasize the urgent need for sustained political commitment, social investment, and community-focused health planning to achieve meaningful and lasting reductions in maternal and child mortality in Pakistan.

Keywords: Maternal and child health; Community-based health interventions; Health system strengthening; Social determinants of health; Pakistan

THE DEVELOPMENT OF THE CONCEPT OF WOUND-RELATED WELL-BEING IN NURSING LITERATURE: A CONCEPTUAL ANALYSIS BASED ON RODGERS' APPROACH

Assoc. Prof. Dr. Sevil Pamuk CEBECI
Eskişehir Osmangazi University, Faculty of Nursing, Department of Fundamentals of Nursing, Türkiye
ORCID: 0000-0002-3788-5784

Hanife KÜÇÜK
Eskişehir Osmangazi University, Faculty of Nursing, Department of Fundamentals of Nursing, Türkiye
ORCID: 0009-0003-1525-0889

ABSTRACT
Chronic wounds represent far more than a disruption of skin integrity; they constitute a multidimensional life experience that profoundly affects an individual's body image, psychological resilience, social connectedness, and overall functional capacity. The far-reaching impact of chronic wounds challenges the traditional biomedical focus of wound care and underscores the need for a broader conceptual framework that foregrounds the notion of well-being. Accordingly, the concept of "wound-related well-being" has gained increasing attention in recent literature as a holistic lens through which the lived experience of individuals with chronic wounds can be understood. However, despite its growing visibility, the concept remains insufficiently defined within nursing, with unclear boundaries, attributes, and theoretical foundations. This study aims to examine the development of the wound-related well-being concept in nursing literature, to identify its essential attributes, and to situate it within a nursing context using Rodgers' evolutionary concept analysis approach. A comprehensive literature review was conducted in PubMed, CINAHL, and Google Scholar databases using keywords such as "wound-related well-being," "chronic wounds," "quality of life," and "nursing." Selected studies were analyzed with respect to their patterns of concept use, contextual variations, antecedents, and consequences.
The analysis revealed that wound-related well-being is a multidimensional construct encompassing physical comfort, reduction of symptom burden, effective pain management, psychological well-being and resilience, body image and self-perception, social participation, experiences of stigmatization, and functional independence. These findings indicate that the concept extends beyond biomedical parameters and represents a dynamic, patient-centered construct aligned with the values of holistic nursing. Clarifying this conceptual structure contributes to the development of comprehensive assessment tools and supports nursing interventions that address not only physical but also psychosocial and functional domains of patient well-being. Future studies are recommended to further integrate the concept into clinical practice and nursing education and to develop valid and culturally adaptable instruments for measuring wound-related well-being.
Keywords: Wound-related well-being, Nursing, Concept analysis, Chronic wounds, Holistic care

WOUND-RELATED WELL-BEING KAVRAMININ HEMŞİRELİK LİTERATÜRÜNDEKİ GELİŞİMİ: RODGERS YAKLAŞIMINA DAYALI BİR KAVRAMSAL ANALİZ

ÖZET
Kronik yaralar, bireyin yalnızca cilt bütünlüğünü değil, yaşamının bütün katmanlarını—beden algısını, psikolojik dayanıklılığını, sosyal bağlarını ve gündelik yaşam işlevselliğini—derinden etkileyen çok boyutlu bir sağlık deneyimi sunar. Yaraya sahip bireylerin yaşadığı bu kapsamlı etkilenme, hemşireliğin sadece biyolojik iyileşmeye odaklanan geleneksel bakış açısını yetersiz bırakarak, iyilik halini merkeze alan daha geniş bir kavramsal çerçevenin gerekliliğini ortaya koymaktadır.

Bu bağlamda son yıllarda literatürde öne çıkan "wound-related well-being" kavramı, kronik yara deneyiminin bütüncül boyutlarını anlamada önemli bir potansiyel taşımakla birlikte, hemşirelik disiplini içerisinde teorik açıdan tam olarak tanımlanmamış, kapsamı ve sınırları yeterince netleştirilmemiş bir kavramdır. Bu literatüre dayalı nitel bir kavramsal analiz çalışması, wound-related well-being kavramının hemşirelik literatüründeki gelişimini incelemek, kavramın temel bileşenlerini ortaya çıkarmak ve kavramı hemşirelik bağlamında konumlandırmak amacıyla Rodgers'ın evrimsel kavram analizi yaklaşımı kullanılarak gerçekleştirilmiştir. PubMed, CINAHL ve Google Scholar veri tabanlarında "wound-related well-being", "chronic wounds", "quality of life" ve "nursing" anahtar kelimeleriyle kapsamlı bir tarama yapılmış; elde edilen çalışmalar kavramın kullanım örnekleri, içerik özellikleri, bağlamsal farklılıkları, öncülleri ve sonuçları açısından değerlendirilmiştir. Analiz sonucunda wound-related well-being kavramının fiziksel rahatlık, semptom yükünün azaltılması, etkili ağrı yönetimi, psikolojik dayanıklılık ve iyilik hali, beden imgesi ve benlik algısı, sosyal katılım, stigmatizasyon deneyimi ve fonksiyonel bağımsızlık gibi çok boyutlu ve birbiriyle ilişkili kavramsal niteliklerden oluştuğu belirlenmiştir. Bu bulgular, wound-related well-being kavramının yalnızca biyomedikal yaklaşımla ele alınamayacak kadar geniş, dinamik ve hasta deneyimini merkezine alan bir yapıya sahip olduğunu göstermektedir. Kavramın hemşirelikte teorik olarak netleştirilmesi, kronik yaraya sahip bireylerin değerlendirilmesinde kullanılabilecek kapsamlı araçların geliştirilmesine katkı sağlamasının yanı sıra, hemşirelik müdahalelerinin fiziksel bakımın ötesine geçerek psikolojik, sosyal ve fonksiyonel alanları da içeren bütüncül bir yaklaşım çerçevesinde yeniden şekillendirilmesine olanak sunmaktadır. Elde edilen bulgular doğrultusunda gelecekte yapılacak çalışmaların wound-related well-being kavramını hem klinik uygulamalarda hem de hemşirelik eğitim programlarında daha görünür kılması, ayrıca kavramı ölçmeye yönelik geçerli ve kültürel açıdan uyarlanabilir ölçeklerin geliştirilmesi önerilmektedir.

Anahtar Kelimeler: Wound-related well-being, hemşirelik, kavramsal analiz, kronik yara, holistik bakım

THE EFFECT OF NURSES' ATTITUDES TOWARD SPECIALIZATION ON THE QUALITY OF CARE THEY PROVIDE

MSc. Mehtap TOPRAK
Seyhan State Hospital, Türkiye
ORCID: 0000-0002-6231-8108

Assoc. Prof. Dr. Zehra ESKİMEZ
Çukurova University, Faculty of Health Sciences, Department of Nursing, Türkiye
ORCID: 0000-0002-8268-835X

ABSTRACT
This study aimed to examine the relationship between nurses' attitudes toward specialization and the quality of nursing care, as well as to identify individual and professional factors influencing this relationship. Designed as a descriptive and correlational study, the research was conducted with 273 nurses working in various hospitals across Turkey. Data were collected using the Nurse Descriptive Information Form, the Attitude Toward Specialization in Nursing Scale, and the Quality Nursing Care Scale. Descriptive statistics, correlation analysis, robust regression, and path analysis using AMOS were employed. The findings showed that the mean score for attitudes toward specialization was 74.65 ± 13.87, while the mean score for quality nursing care was 167.82 ± 23.04, indicating moderate to high levels for both variables. A positive and significant correlation was found between attitudes toward specialization and overall quality of care ($r = 0.525$; $p < 0.001$). Robust regression analysis revealed that individual and professional characteristics explained 16.6% of the variance in nurses' attitudes toward specialization ($R^2 = 0.166$; $p = 0.002$). The model predicting quality nursing care explained 18.7% of the variance ($R^2 = 0.187$; $p < 0.001$). Nurses who perceived the care provided in their units as adequate had significantly higher quality care scores ($\beta = 7.084$; $p = 0.025$). Path analysis demonstrated that attitudes toward specialization had a strong and positive direct effect on overall quality nursing care ($\beta = 0.886$; $p < 0.001$). In addition, attitudes toward specialization significantly influenced all sub-dimensions of care quality, including physical environment, nursing care activities, and patient outcomes. The model demonstrated excellent fit indices. In conclusion, nurses' attitudes toward specialization are a strong predictor of quality nursing care. Strengthening policies that support specialization in nursing education and in-service training programs may play a critical role in improving care quality.
Keywords: Nursing, Specialization, Quality of Nursing Care, Regression Analysis, Path Analysis

HEMŞİRELERİN UZMANLAŞMAYA YÖNELİK TUTUMLARININ UYGULADIKLARI BAKIMIN KALİTESİNE ETKİSİ

ÖZET
Bu araştırma, hemşirelerin uzmanlaşmaya yönelik tutumları ile bakım kalitesi arasındaki ilişkiyi ve bu ilişkiye etki eden bireysel ve mesleki faktörleri belirlemek amacıyla yapılmıştır. Tanımlayıcı ve ilişkisel nitelikteki çalışma, Türkiye'de farklı hastanelerde görev yapan 273 hemşire ile yürütülmüştür. Veriler; Hemşire Tanıtıcı Bilgi Formu, Uzmanlaşmaya Yönelik Tutum Ölçeği ve Kaliteli Hemşirelik Bakımı Ölçeği kullanılarak toplanmıştır. Analizlerde tanımlayıcı istatistikler, korelasyon analizi, robust regresyon ve AMOS ile yol analizi uygulanmıştır. Bulgulara göre, hemşirelerin uzmanlaşmaya yönelik tutum puan ortalaması 74,65 ± 13,87, kaliteli hemşirelik bakımı puan ortalaması ise 167,82 ± 23,04 olup her iki değişken de orta-üst düzeydedir.

Uzmanlaşmaya yönelik tutum ile kaliteli bakım toplam puanı arasında pozitif ve anlamlı bir ilişki saptanmıştır ($r = 0,525$; $p < 0,001$). Robust regresyon analizine göre bireysel ve mesleki özellikler, uzmanlaşmaya yönelik tutumdaki varyansın %16,6'sını açıklamaktadır ($R^2 = 0,166$; $p = 0,002$). Kaliteli hemşirelik bakımını yordayan model ise varyansın %18,7'sini açıklamıştır ($R^2 = 0,187$; $p < 0,001$). Klinik bakımın yeterli olduğunu düşünen hemşirelerin bakım kalitesi puanları anlamlı düzeyde daha yüksektir ($\beta = 7,084$; $p = 0,025$). Yol analizi sonuçları, uzmanlaşmaya yönelik tutumun kaliteli hemşirelik bakımının toplam puanı üzerinde güçlü ve pozitif bir doğrudan etkiye sahip olduğunu göstermiştir ($\beta = 0,886$; $p < 0,001$). Ayrıca bu tutumun fiziksel çevre, hemşirelik bakım faaliyetleri ve hasta sonuçları alt boyutları üzerinde de anlamlı etkileri bulunmaktadır. Modelin uyum indeksleri mükemmel düzeydedir. Sonuç olarak, hemşirelerin uzmanlaşmaya yönelik tutumları kaliteli hemşirelik bakımının güçlü bir yordayıcısıdır. Bu nedenle, hemşirelik eğitimi ve hizmet içi eğitimlerde uzmanlaşmayı destekleyen politikaların güçlendirilmesi bakım kalitesinin artırılmasında kritik öneme sahiptir.

Anahtar Kelimeler: Hemşirelik, Uzmanlaşma, Kaliteli Hemşirelik Bakımı, Regresyon Analizi, Yol Analizi

Teşekkür: *Bu çalışma, Çukurova Üniversitesi Sağlık Bilimleri Enstitüsü Hemşirelik Anabilim Dalı'nda yürütülen yüksek lisans tez çalışmasından üretilmiştir.*

ARE WE READY FOR THE MENOPAUSE ?

Master's Student Ayça ÜNNÜ
Eskişehir Osmangazi University, Institute of Health Sciences, Türkiye
ORCID: 0009-0008-5093-9397

Assoc. Prof. Dr. Yeliz KAYA
Eskişehir Osmangazi University, Faculty of Health Sciences, Department of Obstetrics and Gynecology Nursing, Türkiye
ORCID: 0000-0003-4277-3960

ABSTRACT
Menopause is a natural yet multifaceted transition phase in a woman's life cycle and is considered a significant life event not only due to physiological changes but also because of its psychological, social, and cultural dimensions. All symptoms experienced by women during this period are shaped by individual characteristics and social perceptions. The literature indicates that the experience of menopause is not solely biologically based; a woman's level of education, social support, cultural values, body image, and, in particular, her level of preparedness for this period are directly related to the severity of the symptoms experienced. Furthermore, societal role expectations, the perception of womanhood as synonymous with fertility, and cultural codes are among the factors that significantly influence menopause anxiety. In many societies, menopause is positioned as the 'beginning of loss'; this positioning can lead to denial, anxiety, and difficulties in adaptation among women.
The fear of menopause emerges as a significant psychological dimension resulting from women associating menopause with negative connotations such as uncertainty, loss, ageing, and the end of fertility. Current research shows that negative attitudes and fears about menopause increase symptoms such as hot flushes, sleep problems, and depressive moods, thereby reducing quality of life. In contrast, perceiving menopause as a natural stage of life, having adequate social and family support, and access to accurate information reduce fear levels and enable healthier adaptation. However, despite all these findings, while studies exist in the literature that reveal the relationship between menopause anxiety and dimensions such as depression and stress, there are no studies that directly address the fear dimension of menopause, indicating a significant gap in the field dimension. The study underpinning this paper aims to contribute to filling this gap by developing a scale to measure fear of menopause and establishing its validity and reliability. Understanding women's fears about the menopause process is of critical importance in enhancing the quality of nursing care and improving women's health services.
Keywords: Menopause, woman, fear

MENOPOZA HAZIR MIYIZ ?

ÖZET
Menopoz, kadın yaşam döngüsünün doğal ancak çok yönlü bir geçiş evresidir ve fizyolojik değişimlerin yanı sıra psikolojik, sosyal ve kültürel boyutlarıyla da önemli bir yaşam olayı olarak değerlendirilmektedir. Kadınların bu dönemde deneyimledikleri tüm semptomlar bireysel özellikler ve toplumsal algılarla şekillenmektedir. Literatür, menopoz deneyiminin yalnızca biyolojik temelli olmadığını; kadının eğitim düzeyi, sosyal desteği, kültürel değerleri, beden algısı ve özellikle bu döneme yönelik hazır oluşluk düzeyinin, yaşanan semptomların şiddeti ile doğrudan ilişkili olduğunu göstermektedir. Ayrıca toplumsal rol beklentileri, doğurganlıkla özdeşleşmiş kadınlık algısı ve kültürel kodlar, menopoz kaygısını belirgin biçimde etkileyen unsurlar arasında yer almaktadır. Birçok toplumda menopoz "kaybın başlangıcı" olarak konumlandırılmakta; bu konumlandırma kadınlarda reddetme, kaygı ve uyum güçlüklerine yol açabilmektedir.

Menopoz korkusu, kadınların menopozu belirsizlik, kayıp, yaşlanma ve üretkenliğin sona ermesi gibi olumsuz anlamlarla eşleştirmeleri sonucunda ortaya çıkan önemli bir psikolojik boyut olarak öne çıkmaktadır. Mevcut araştırmalar, menopoza yönelik olumsuz tutum ve korkuların; sıcak basması, uyku sorunları, depresif duygu durum gibi semptomları artırdığını, buna bağlı olarak yaşam kalitesini düşürdüğünü ortaya koymaktadır. Buna karşın menopozun doğal bir evre olarak algılanması, yeterli sosyal–ailevi destek ve doğru bilgiye erişim, korku düzeyini azaltarak daha sağlıklı bir adaptasyon sağlamaktadır. Ancak; tüm bu sonuçlara rağmen literatürde menopoz kaygısı, depresyon-stres gibi boyutlarla olan ilişkisini ortaya koyan çalışmalar mevcutken, menopozun korku boyutunu doğrudan ele alan çalışmaların olmadığı, bu nedenle alanda belirgin bir boşluğun bulunduğu görülmektedir.
Bu bildirinin temel dayanağı olan çalışmada, menopoz korkusunu ölçmeye yönelik ölçek geliştirme, geçerlik ve güvenirlik süreciyle bu boşluğun giderilmesine katkı sunmak amaçlanmaktadır. Kadınların menopoz sürecine ilişkin korkularının anlaşılması; hemşirelik bakımının niteliğini artıran, kadın sağlığı hizmetlerinin iyileştirilmesini sağlayan kritik bir öneme sahiptir.
Anahtar Kelimeler: Menopoz, kadın, korku

YORGUNLUK YÖNETİMİNDE TAMAMLAYICI YÖNTEMLER

Prof. Dr. Özlem OVAYOLU
Gaziantep University, Faculty of Health Sciences, Department of Nursing, Türkiye
ORCID: 0000-0002-7335-4032

Nur Dilara GÖKÇE
Gaziantep University, Institute of Health Sciences, Department of Nursing, Internal Medicine Nursing Master's Program, Türkiye
ORCID: 0009-0007-5172-8754

ABSTRACT
Although fatigue is often used interchangeably with the concepts of tiredness, weakness, exhaustion, lack of energy, and debility, it can be defined as a state of mental and physical exhaustion that encompasses all of these conditions. Fatigue is one of the most commonly reported symptoms after pain and, if not adequately managed, constitutes a significant problem that negatively affects individuals' daily living activities and quality of life. Fatigue arising from various health conditions may lead to energy depletion, inability to perform routine tasks, physical and emotional complaints, restlessness, indifference toward the environment, decreased sexual function, and an increased susceptibility to accidents. Therefore, in addition to pharmacological approaches, complementary and supportive methods are also utilized in the management of fatigue. All treatment approaches other than modern and scientific medical therapies are referred to as complementary and supportive therapies. As is well known, nurses are among the healthcare professionals who maintain continuous interaction with both patients and healthy individuals and play a key role in the management of fatigue symptoms. Accordingly, nurses should contribute to improving patients' quality of life by incorporating complementary methods into care practices, guided by evidence-based applications, in the management of fatigue.
Keywords: Fatigue, Nursing, Complementary and supportive methods.

COMPLEMENTARY METHODS IN FATIGUE MANAGEMENT

ÖZET
Yorgunluk; halsizlik, bitkinlik, enerji azlığı ve düşkünlük kavramları ile aynı anlamda kullanılsa da, bir anlamda bunların hepsini içine alan zihinsel ve fiziksel bir tükenmişlik hali olarak tanımlanabilmektedir. Bu durum, ağrıdan sonra en sık görülen sorunlardan biri olmakla birlikte, kontrol altına alınmadığı taktirde bireyin günlük yaşam aktivitelerini ve yaşam kalitesini olumsuz yönde etkiler. Birçok sağlık sorununa bağlı olarak yaşanan yorgunluk sonucunda; bireylerde enerji yoksunluğu, rutin işlerini yapamama, fiziksel ve duygusal yakınmalar, huzursuzluk, çevreye karşı ilgisizlik, cinsel güçte azalma ve kazalara yatkınlık gelişebilmektedir. Bu nedenle yorgunluk yönetiminde farmakolojik yaklaşımlara ek olarak tamamlayıcı ve destekleyici yöntemlerden de yararlanılmaktadır. Modern ve bilimsel tedavilerin haricindeki diğer tüm tedaviler, tamamlayıcı ve destekleyici tedavi olarak ifade edilir. Bilindiği gibi hemşireler, yorgunluk yönetiminde rol alan sağlık profesyonelleri içinde hasta ve sağlıklı bireylerle sürekli etkileşim halinde olan ekip üyelerindendir. Bu nedenle yorgunluğun yönetiminde kanıta dayalı uygulamalar rehberliğinde tamamlayıcı yöntemleri bakıma dahil ederek, hastaların yaşam kalitesinin desteklenmesine katkıda bulunmalıdır.
Anahtar kelimeler: Yorgunluk, Hemşirelik, Tamamlayıcı ve destekleyici yöntemler

NURSING APPROACHES TO THE MANAGEMENT OF IRON DEFICIENCY ANEMIA

Prof. Dr. Özlem OVAYOLU
Gaziantep University, Faculty of Health Sciences, Department of Nursing, Türkiye
ORCID: 0000-0002-7335-4032

Nur Dilara GÖKÇE
Gaziantep University, Institute of Health Sciences, Department of Nursing, Internal Medicine Nursing Master's Program, Türkiye
ORCID: 0009-0007-5172-8754

ABSTRACT
Anemia is a significant health problem that is commonly observed across all populations and leads to increased morbidity and mortality, resulting in a reduced quality of life. The clinical manifestations and signs of anemia vary depending on the patient's age, the presence of chronic diseases, the functional status of the cardiovascular, respiratory, and central nervous systems, as well as the severity of the anemia. Particularly in adults, the high prevalence of anemia should not be regarded as a physiological consequence of aging. Therefore, when anemia is present, the underlying cause or causes must be thoroughly investigated. Globally and in our country, iron deficiency anemia is among the most prevalent types of anemia. In general, the treatment of anemia varies according to its etiology and commonly includes erythropoietin therapy, dietary modifications, and supplementation with iron and/or vitamins (vitamin B12, folate, etc.). In the prevention and management of anemia, it is essential that healthcare professionals demonstrate awareness and implement plans based on evidence-based approaches. Nurses, in particular, should be able to assess populations at risk for anemia within a multidisciplinary framework, contribute to the early detection of anemia, and actively participate in the planning of care and treatment interventions. Additionally, it should be emphasized that patient monitoring, as well as the education of patients and their families, plays a crucial role in this process.
Keywords: Iron deficiency, Anemia, Nursing.

DEMİR EKSİKLİĞİ ANEMİSİNİN YÖNETİMİNDE HEMŞİRELİK

ÖZET
Anemi, tüm toplumda sıklıkla görülen önemli bir sağlık sorunu olup, morbidite ve mortalitede artışa yol açarak, yaşam kalitesinde azalmaya neden olur. Hastanın yaşına, kronik hastalıklarına, kalp, akciğer ve santral sinir sistemi ile ilgili durumlara ve aneminin şiddetine göre belirti-bulgular farklılık göstermektedir. Özellikle erişkinlerde aneminin sık görülmesi, yaşlanmanın fizyolojik bir sonucu olarak düşünülmemelidir. Bu nedenle anemi varlığında altta yatan neden veya nedenler mutlaka araştırılmalıdır. Dünyada ve ülkemizde tüm anemi çeşitleri içerisinde demir eksikliği anemisi, en fazla görülen anemi türlerindendir. Genel olarak aneminin tedavisi, nedene göre değişmekle birlikte sıklıkla eritropoetin tedavisi ve diyet düzenlenmesi, demir ve/veya vitamin takviyesi (B12, folat vb.) kullanılmaktadır. Aneminin önlenmesi ve yönetiminde, sağlık profesyonellerinin farkındalığı ve kanıt temelli yaklaşımlar doğrultusunda planlamaların yapılması son derece önemlidir. Özellikle hemşireler multidisipliner yaklaşımla, anemi yönünden riskli grupları değerlendirebilmeli, aneminin erken saptanmasına katkıda bulunmalı, bakım ve tedavi girişimlerinin planlanması sürecinde aktif olarak rol almalıdır. Hastaların izlemi, hasta ve ailesinin eğitiminin de bu kapsamda son derece önemli olduğu unutulmamalıdır.
Anahtar kelimeler: Demir eksikliği, Anemi, Hemşirelik

THE RELATIONSHIP BETWEEN THE MATERNAL GENITAL TRACT MICROBIOME AND THE HEALTH OF WOMEN, THE FETUS, AND THE NEWBORN

PhD (Cand.) Büşra ÇARK
Selcuk University, Institute of Health Sciences, Department of Midwifery, Türkiye
ORCID: 0000-0003-4778-1628

Asst. Prof. Seyhan ÇANKAYA
Selcuk University, Faculty of Health Sciences, Department of Midwifery, Türkiye
ORCID: 0000-0003-0433-2515

ABSTRACT
The human body is colonized by microorganisms whose impact on health is increasingly recognized. Synergistic interactions between microorganisms and their hosts occur in nearly every niche of the body, shaping both physiology and pathophysiology. Similarly, the female genital system, including the vagina, cervix, endometrium, fallopian tubes, and ovaries, harbors its own microbiome, accounting for approximately 9% of the body's total bacterial load. The genital microbiota plays a protective role against pathogens and has preventive functions against various diseases. Next-generation sequencing techniques have enabled detailed characterization of the microbiome and discovery of unculturable microorganisms.
The female reproductive system consists of the lower urogenital tract and the upper urogenital tract. While most microbiome studies have focused on the vagina, evidence shows the upper reproductive tract is not completely sterile and also harbors bacterial colonization. Although bacterial density in the upper tract is much lower than in the lower tract, Lactobacillus species dominate the vagina, whereas the upper tract exhibits lower density but higher bacterial diversity.
The normal female genital microbiome plays a crucial role in preventing the spread of sexually transmitted infections and reducing preterm birth risk. Dysbiosis contributes to gynecological cancers and HPV-related lesions; women diagnosed with cervical cancer exhibit reduced Lactobacillus dominance and increased anaerobic bacteria. The vaginal microbiome is shaped throughout a woman's life by intrinsic and extrinsic factors, with low estrogen levels associated with higher microbial diversity. Moreover, the microbial composition at the embryo–maternal interface influences not only pregnancy success but also maternal and neonatal health before and after birth.
Understanding the female genital microbiome is crucial for both research and clinical practice. Maintaining microbial balance supports fertility, pregnancy outcomes, and overall women's health. Investigating the microbiome can prevent dysbiosis-related diseases and guide novel therapies. Personalized microbiome-based approaches may revolutionize women's health and improve long-term maternal and fetal outcomes.
Keywords: Female Genital Microbiome, Reproductive Health, Dysbiosis, Pregnancy Outcomes

GEBE VE ANNE GENİTAL SİSTEM MİKROBİYOMU İLE KADIN, FETÜS VE YENİDOĞAN SAĞLIĞI ARASINDAKİ İLİŞKİ

ÖZET
İnsan vücudu, sağlığa olan etkisi giderek daha fazla kabul gören mikroorganizmalarla kolonizedir. Mikroorganizmalar ile konakçılar arasındaki sinerjik ilişkiler, vücudun hemen her nişinde bulunur ve fizyolojisini ve patofizyolojisini şekillendirir. Benzer şekilde, kadın genital sistemi; vajina, serviks, endometriyum, fallop tüpleri ve yumurtalıklar kendi mikrobiyomunu barındırır ve bu mikrobiyom, vücuttaki toplam bakterinin yaklaşık %9'unu oluşturur. Genital mikrobiyota, patojenlere karşı koruyucu ve hastalıklara karşı önleyici rol oynar. Yeni nesil dizileme (NGS) yöntemleri, mikrobiyomun detaylı karakterizasyonunu ve kültürü yapılamayan mikroorganizmaların keşfini mümkün kılmıştır.

Kadın üreme sistemi, alt ürogenital sistem (vulva ve vajina) ile üst ürogenital sistemden (endometriyum, fallop tüpleri ve yumurtalıklar) oluşur. Çoğu mikrobiyom çalışması vajinaya odaklansa da üst üreme yolunun tamamen steril olmadığı ve bakteriyel kolonizasyona sahip olduğu gösterilmiştir. Üst ürogenital sistemin bakteri yoğunluğu alt sisteme göre çok daha düşüktür; buna rağmen, vajinada Lactobacillus türleri baskınken üst sistem daha düşük yoğunlukta ama yüksek çeşitlilikte bakterilere ev sahipliği yapar. Normal kadın genital mikrobiyomu, cinsel yolla bulaşan enfeksiyonların yayılmasını önlemede ve erken doğum riskini azaltmada önemli bir rol oynar. Disbiyoz, jinekolojik kanserler ve HPV ile ilişkili lezyonlarda rol oynar; özellikle rahim ağzı kanseri tanısı alan kadınlarda Lactobacillus baskınlığı azalır ve anaerobik bakteriler artar. Vajinal mikrobiyom, yaşam boyunca hem içsel hem de dışsal faktörlerle şekillenir; düşük östrojen seviyeleri yüksek mikrobiyal çeşitlilikle ilişkilidir. Ayrıca, embriyo-maternal ara yüzündeki mikrobiyal durum, yalnızca gebelik başarısını değil, doğum öncesi ve sonrası anne-bebek sağlığını da etkiler.

Kadın genital mikrobiyomunun anlaşılması, temel bilimsel araştırmaların yanı sıra klinik uygulamalar açısından da büyük önem taşır. Mikrobiyal dengenin korunması, fertilite, gebelik sonuçları ve genel kadın sağlığı için kritiktir. Genital mikrobiyomun detaylı incelenmesi, disbiyoz kaynaklı hastalıkların önlenmesine ve yeni terapötik stratejilerin geliştirilmesine olanak tanır. Gelecekte, kişiselleştirilmiş mikrobiyom odaklı tedavi ve önleyici yaklaşımlar, kadın sağlığında devrim niteliğinde ilerlemeler sağlayabilir ve maternal-fetal sağlık üzerinde uzun vadeli olumlu etkiler yaratabilir.

Anahtar kelimeler: Kadın Genital Mikrobiyomu, Üreme Sağlığı, Disbiyoz, Gebelik Sonuçları

THE EFFECT OF SEQUENTIAL USE OF FUNCTIONAL APPLIANCES ON SKELETAL GROWTH IN A CLASS III PATİENT: A CASE REPORT WITH CEPHALOMETRIC ANALYSIS

Res. Asst. Hatice Günnur ALTUNSAYAR
Ankara Yıldırım Beyazıt University, Faculty of Dentistry, Department of Orthodontics, Türkiye
ORCID: 0009-0001-0251-3147

ABSTRACT
This case report aimed to evaluate the skeletal effects of chin cup therapy followed by facemask treatment in a growing patient presenting with Angle Class III malocclusion and negative overjet using cephalometric analyses. The patient, diagnosed with Angle Class III malocclusion and negative overjet and determined to be in the PP2= growth stage based on hand–wrist radiography, was initially treated with a chin cup appliance, followed by facemask therapy aimed at maxillary protraction. Skeletal and dentoalveolar changes were assessed on lateral cephalometric radiographs obtained before and after treatment, and the evaluation included SNA, SNB, ANB, Wits appraisal, Co–A, Co–Gn, mandibular plane angle, and overjet measurements. Post-treatment cephalometric analyses demonstrated a significant anterior advancement of the maxilla, posterior rotation of the mandible, improvement in the sagittal skeletal relationship, and correction of the negative overjet to positive values. Control of mandibular growth direction was achieved, and the vertical facial growth pattern shifted from low-angle characteristics to a normal-angle pattern. The improvement in the sagittal skeletal relationship was further supported by increases in ANB and Wits values. In conclusion, the sequential application of chin cup and facemask therapy during the growth period may contribute to the correction of skeletal discrepancies in Class III malocclusion, and cephalometric analyses provide an objective method for evaluating the effects of this treatment approach on growth modification; however, further studies with larger sample sizes are required to confirm the long-term stability of the obtained results.
Keywords: Functional appliance, Chin cup, Facemask, Cephalometry

FONKSİYONEL APAREYLERİN ARDIŞIK KULLANIMININ SINIF III BİREYDE İSKELETSEL BÜYÜME ÜZERİNE ETKİSİ: SEFALOMETRİK ANALİZLE BİR OLGU SUNUMU

ÖZET
Bu olgu sunumunda, Angle Sınıf III maloklüzyona ve negatif overjete sahip büyüme dönemindeki bir hastada, chincap ve ardından uygulanan facemask tedavisinin iskeletsel etkilerinin sefalometrik analizler aracılığıyla değerlendirilmesi amaçlanmıştır. Negatif overjet ve Angle Sınıf III anomalisi bulunan ve el–bilek radyografisine göre PP2= büyüme gelişim döneminde olduğu belirlenen hastaya, tedavinin ilk aşamasında chincap apareyi uygulanmış, ardından maksiller protraksiyonu hedefleyen facemask tedavisine geçilmiştir. Tedavi öncesi ve tedavi sonrası alınan lateral sefalometrik radyografiler üzerinde iskeletsel ve dentoalveoler değişiklikler analiz edilmiş; değerlendirmede SNA, SNB, ANB, Wits appraisal, Co–A, Co–Gn, mandibular düzlem açısı ve overjet ölçümleri kullanılmıştır. Tedavi sonrası sefalometrik analizler, maksillada anterior yönde anlamlı bir ilerleme, mandibulada posterior rotasyon, sagittal iskeletsel ilişkinin iyileşmesi ve negatif overjetin pozitif değerlere dönüştüğünü göstermiştir. Ayrıca mandibular büyüme yönünde kontrol sağlandığı ve yüzün vertikal büyüme paterninin düşük açılı karakteristiklerden normal açılı özelliklere kaydığı belirlenmiştir. Sagittal iskeletsel ilişkideki düzelme, ANB ve Wits değerlerindeki artışla desteklenmiştir.

Sonuç olarak, büyüme döneminde ardışık olarak uygulanan chincap ve facemask tedavisinin Sınıf III maloklüzyonda iskeletsel uyumsuzlukların düzeltilmesine katkı sağlayabileceği ve sefalometrik analizlerin bu tedavi yaklaşımının büyüme modifikasyonu üzerindeki etkilerinin objektif olarak değerlendirilmesine olanak tanıdığı düşünülmektedir; ancak elde edilen sonuçların uzun dönem stabilitesinin daha geniş örneklemli çalışmalarla doğrulanması gerekmektedir.

Anahtar kelimeler: Fonksiyonel aparey, Chincap, Facemask, Sefalometri

VİRÜSLERİN TEMEL YAPISAL VE MORFOLOJİK ÖZELLİKLERİ

Assoc. Prof. Dr. Bilge Kaan TEKELİOĞLU
Çukurova University, Ceyhan Faculty of Veterinary Medicine, Department of Virology, Türkiye
ORCID: 0000-0001-6727-3175

ÖZET
Virüsler, benzersiz temel ve morfolojik yapıları nedeniyle önemli bilimsel ilgi çeken son derece küçük biyolojik varlıklardır. Hücresel organizmaların aksine, virüsler gerçek bir hücresel yapıya sahip değildir ve bağımsız olarak metabolik faaliyetler gerçekleştiremezler. Çoğalmaları tamamen canlı konakçı hücrelere bağlıdır; bu özellik onları diğer tüm biyolojik sistemlerden temel olarak ayırır. Bu özellikler nedeniyle virüsler, canlı ve cansız varlıklar arasındaki sınırda benzersiz bir konumda yer alırlar. Virüs morfolojisi, virüslerin yapısal çeşitliliğine, bulaşma biçimlerine ve patojenik potansiyellerine ilişkin kritik bilgiler sağladığı için virolojide merkezi bir kavramı temsil eder. Kapsid mimarisi, nükleik asit tipi (DNA veya RNA, tek veya çift sarmallı), lipid zarfının varlığı veya yokluğu ve viral parçacıkların simetrisi (ikosahedral, helisel veya kompleks) gibi morfolojik özellikler, virüs sınıflandırması, tanımlanması ve taksonomisinde belirleyici roller oynar. Bu özellikler sadece viral aileleri ve cinsleri tanımlamakla kalmaz, aynı zamanda virüsün çevredeki stabilitesini ve fiziksel ve kimyasal etkenlere karşı duyarlılığını da etkiler. Bu nedenle morfolojik çalışmalar, yalnızca temel virolojik araştırmalar için değil, aynı zamanda klinik ve tanısal uygulamalar için de hayati önem taşımaktadır. Moleküler biyoloji tekniklerindeki gelişmeler, elektron mikroskopi ve görüntüleme teknolojilerindeki iyileştirmelerle birleşerek, viral parçacıkların ultra yapısal düzeyde ayrıntılı görselleştirilmesini ve analizini mümkün kılmıştır. Sonuç olarak, daha önce bilinmeyen çok sayıda virüs keşfedilmiş, karakterize edilmiş ve sınıflandırılmış, bu da viral çeşitlilik hakkındaki anlayışımızı önemli ölçüde genişletmiştir. Önemli olarak, viral morfoloji, konak hücreye bağlanma, giriş ve bağışıklık sisteminden kaçınma mekanizmalarıyla yakından ilişkilidir. Yüzey glikoproteinleri ve zarf yapıları gibi yapısal bileşenler, reseptör tanıma, doku tropizmi ve patojenitede kilit roller oynamaktadır. Dahası, morfolojik varyasyonlar, virüslerin antiviral ajanlara ve dezenfeksiyon prosedürlerine karşı direncini etkileyebilir ve bu da tedavi ve önleyici stratejilerdeki önemini vurgulamaktadır. Sonuç olarak, virüs morfolojisinin incelenmesi, yalnızca temel biyolojik bilgiler için değil, aynı zamanda epidemiyolojik gÖZETim, tanı araçlarının geliştirilmesi, aşı tasarımı ve etkili kontrol önlemlerinin uygulanması için de vazgeçilmezdir. Bu inceleme, etiyolojik ve yapısal prensiplerden zoonotik potansiyele kadar virüs morfolojisine kapsamlı bir genel bakış sunmayı ve "Tek Tıp, Tek Sağlık" yaklaşımı çerçevesinde küresel sağlık açısından önemini vurgulamayı amaçlamaktadır.
Anahtar Kelimeler: Morfoloji, Virüs, Yapısal Özellik

BASIC STRUCTURAL AND MORPHOLOGICAL CHARACTERISTICS OF VIRUSES

ABSTRACT
Viruses are extremely small biological entities that attract significant scientific interest due to their unique structural organization and biological behaviour. Unlike cellular organisms, viruses lack a true cellular structure and are incapable of carrying out metabolic activities independently. Their replication is strictly dependent on living host cells, a feature that fundamentally distinguishes them from all other biological systems. Because of these characteristics, viruses occupy a unique position at the boundary between living and non-living entities. Virus morphology represents a central concept in virology, as it provides critical insights into the structural diversity of viruses, their modes of transmission, and their pathogenic potential. Morphological features such as capsid architecture, nucleic acid type (DNA or RNA, single- or double-stranded), the presence or absence of a lipid envelope, and the symmetry of viral particles (icosahedral, helical, or complex) play decisive roles in virus classification, identification, and taxonomy. These characteristics not only define viral families and genera but also influence viral stability in the environment and susceptibility to physical and chemical agents.

Morphological studies are therefore essential not only for fundamental virological research but also for clinical and diagnostic applications. Advances in molecular biology techniques, combined with improvements in electron microscopy and imaging technologies, have enabled detailed visualization and analysis of viral particles at the ultrastructural level. As a result, numerous previously unknown viruses have been discovered, characterized, and classified, significantly expanding our understanding of viral diversity. Importantly, viral morphology is closely linked to mechanisms of host-cell attachment, entry, and immune evasion. Structural components such as surface glycoproteins and envelope structures play key roles in receptor recognition, tissue tropism, and pathogenicity. Moreover, morphological variations can influence viral resistance to antiviral agents and disinfection procedures, highlighting their relevance in therapeutic and preventive strategies. Consequently, the study of virus morphology is indispensable not only for basic biological insight but also for epidemiological surveillance, the development of diagnostic tools, vaccine design, and the implementation of effective control measures. This review aims to provide a comprehensive overview of virus morphology, ranging from etiological and structural principles to zoonotic potential, while emphasizing its significance for global health within the framework of the “One Medicine, One Health” approach.
Keywords: Morphology, Structure, Virus

ENHANCED ELECTROCHEMICAL PERFORMANCE OF PRISTINE AND RARE-EARTH-DOPED CU–CO–V TERNARY OXIDE NANOCOMPOSITES FOR HYBRID SUPERCAPACITOR APPLICATIONS

Muhammad Ijaz KHALID
Department of Physics, University of Agriculture, Pakistan

Muhammad Yasin NAZ
Department of Physics, University of Agriculture, Pakistan

Shazia SHUKRULLAH
Department of Physics, University of Agriculture, Pakistan

ABSTRACT

In this work, a three-dimensional (3D) porous and rough network of pristine transition metal oxide (TMOs) nanocomposite and a well-structured La-doped TMOs nanocomposite were synthesized via a hydrothermal route for hybrid supercapacitor applications. The pristine TMOs exhibited a stable 3D rough-porous framework that enabled diffusion-controlled charge storage, as confirmed by Dunn's b-value of 0.52. It revealed an energy bandgap of 3.68 eV, an equivalent series resistance (ESR) of 1.51 Ω, and an Urbach tail energy of 1.68 eV, indicating a high density of defect states responsible for its battery-type behavior. This nanocomposite achieved a maximum specific capacitance of 1002 F g^{-1} at 10 mV s^{-1} with 56% retention at 100 mV s^{-1} from CV analysis, along with 316.4 F g^{-1} from GCD measurements, corresponding to an energy density of 10.9 Wh kg^{-1} and a power density of 248 W kg^{-1}. In contrast, the La-doped TMOs framework exhibited dense morphology and an EDLC-type surface charge storage mechanism with a b-value of 1.1, supported by its narrow bandgap (3.42 eV) and lower ESR (1.06 Ω), which provided efficient electron/ion transport pathways. This composite delivered a high specific capacitance of 1080 F g^{-1} at 10 mV s^{-1}, with 63% retention, as determined by CV analysis. GCD measurements yielded 372.6 F g^{-1} at 1 A g^{-1}, along with an energy density of 12.9 Wh kg^{-1} and a power density of 249.2 W kg^{-1}. These results highlight the superior electrochemical performance of La-doped TMOs, which is further verified by its asymmetric supercapacitor device (Cu-Co-La // Ac) that exhibits a short-circuit current of 2.63 mA, establishing it as a promising electrode material for next-generation supercapacitor applications.

Keywords: Cu–Co–V ternary oxides; Hybrid supercapacitors; Electrochemical performance; Charge storage mechanism; Energy storage materials.

ION CHANNEL–MODULATING PEPTIDES FROM MOROCCAN SCORPION AND VENOMS: EXPLORING POTENTIAL ANTI-CANCER EFFECTS

Reda CHAHIR
Pasteur Institute of Morocco, Laboratory of Venoms and Toxins, Morocco

Salma CHAKIR
Pasteur Institute of Morocco, Laboratory of Venoms and Toxins, Morocco
Hassan I University, Faculty of Sciences and Techniques (FSTS), Laboratory of Agri-Food and Health, Morocco

Océane PERTEGAZ
INSERM UMR 1069 N2COx, Faculty of Medicine, France

Hinde AASSILA
Hassan I University, Faculty of Sciences and Techniques (FSTS), Laboratory of Agri-Food and Health, Morocco

Marie POTIER-CARTEREAU
INSERM UMR 1069 N2COx, Faculty of Medicine, France

Naoual OUKKACHE
Pasteur Institute of Morocco, Laboratory of Venoms and Toxins, Morocco

ABSTRACT
Animal venoms are a rich and underexplored source of bioactive peptides capable of modulating critical cellular pathways, particularly those involving ion channels–dependent signaling. In this study, we performed a comprehensive proteomic characterization of the venoms of the Moroccan scorpion *Androctonus mauritanicus* and the Moroccan cobra *Naja haje* using RP-HPLC and LC-MS/MS approaches. The analysis revealed a diverse repertoire of neurotoxic peptides, predominantly small molecules in the 2–5 kDa range, with high specificity for various ion channels. Several of these peptides share structural and functional homology with previously characterized toxins, suggesting substantial pharmacological potential, including anticancer and antiviral activities. The discovery of peptides with multiple bioactivities underscores the therapeutic relevance of these venoms. Complementary in silico modeling and experimental biological assays are underway to further evaluate their mechanisms of action and to identify promising candidates for drug development. These findings position Moroccan scorpion and cobra venoms as valuable sources for the discovery of novel ion channel–modulating therapeutics.
Keywords: Venoms, Peptides, Ion channels, Bioactivity, Pharmacological potential

LETHALITY AND PATHOPHYSIOLOGICAL EFFECTS OF *DABOIA MAURITANICA* VENOM FROM MOROCCO: HEMORRHAGIC, EDEMATOUS, AND MYOTOXIC EFFECTS IN MICE

Noureddine HAMMANI
Pasteur Institute of Morocco, Laboratory of Venoms and Toxins, Morocco
Hassan II University, Faculty of Medicine and Pharmacy of Casablanca, Laboratory of Chemistry–Biochemistry, Environment, Nutrition and Health, Morocco

Nihal MESMOUDI
Pasteur Institute of Morocco, Laboratory of Venoms and Toxins, Morocco
Mohammed V University in Rabat, Faculty of Dental Medicine, Laboratory of Odontological Biomaterials and Nanotechnology, Morocco

Khawla AMMOUCH
Pasteur Institute of Morocco, Laboratory of Venoms and Toxins, Morocco
Mohammed V University in Rabat, Faculty of Dental Medicine, Laboratory of Odontological Biomaterials and Nanotechnology, Morocco

Abdellah MOUSTAGHFIR
Mohammed V University in Rabat, Faculty of Dental Medicine, Laboratory of Odontological Biomaterials and Nanotechnology, Morocco

Hanane ENNAJI
Hassan II University, Faculty of Medicine and Pharmacy of Casablanca, Laboratory of Chemistry–Biochemistry, Environment, Nutrition and Health, Morocco

Samir IBENMOUSSA
Hassan II University, Faculty of Medicine and Pharmacy of Casablanca, Laboratory of Chemistry–Biochemistry, Environment, Nutrition and Health, Morocco

Naoual OUKKACHE
Pasteur Institute of Morocco, Laboratory of Venoms and Toxins, Morocco

ABSTRACT

The diverse ophidian fauna of Morocco includes eight venomous snake species, one of which is a cobra, and seven belonging to the Viperidae family, responsible for approximately 80% of viper envenomations. Among them, the viper *Daboia mauritanica* (Dm) is one of the most dangerous and is frequently involved in the majority of envenomation cases reported by the Anti-Poison and Pharmacovigilance Center. These snakes cause a wide range of symptoms, both local and systemic, such as local or regional edema, dermonecrosis, myotoxicity, as well as hemorrhagic diathesis, often associated with defibrinogenation and thrombocytopenia.

The management of viper envenomation involves addressing the clinical and biological manifestations caused by viper venom, grouped under a single clinical syndrome known as "viper envenomation," without distinguishing between the specific clinical presentations of each species. However, for effective treatment of viper envenomations, it is essential to conduct a thorough characterization of the venom specific to each species. This led us to study the lethality as well as the hemorrhagic, edematous, and myotoxic activities of *Daboia mauritanica* venom.

Our data show that the intraperitoneal median lethal dose (LD_{50}) of *D. mauritanica* venom is 48.64 µg per mouse. Additionally, the minimal hemorrhagic and edematous doses (MHD and MED) for the same venom were found to be 1.37 µg and 3.05 µg per mouse, respectively. The viper also induces myonecrosis of skeletal muscles, leading to an increase in serum creatine phosphokinase (CPK) levels. These LD_{50} values and the obtained pathophysiological results can serve as a reference for the development of an antivenom aimed at treating bites from this dangerous snake species in Morocco.

Keywords: *Daboia mauritanica*, Viper venom, Lethality (LD_{50}), Hemorrhagic toxicity, Myotoxicity

TYPE OF THROMBOPHILIA – A FACTOR THAT INFLUENCES THE CHARACTERISTICS OF NEW-BORN PARAMETERS - RETROSPECTIVE STUDY

Adrian LOICHITA
University of Medicine and Pharmacy "Victor Babeș", Romania

Izabella PETRE
University of Medicine and Pharmacy "Victor Babeș", Romania

Miruna SAMFIREAG
University of Medicine and Pharmacy "Victor Babeș", Romania

Dacian OROS
University of Medicine and Pharmacy "Victor Babeș", Romania

Nicoleta MIRICA
West University of Timișoara, Faculty of Physical Education and Sport, Romania

Melinda MITRANOVICI
University of Medicine and Pharmacy "Victor Babeș", Romania

Ion PETRE
University of Medicine and Pharmacy "Victor Babeș", Romania

ABSTRACT

By definition, thrombophilia is a hereditary or acquired predisposition to hypercoagulability and increased risk of thrombus in the blood circulation due to hereditary deficiencies of coagulation factors or molecular structure abnormalities of other factors (Leiden factor V, prothrombin – coagulation factor II) or acquired (due to occurrence in the bloodstream of abnormal proteins with a pro-coagulant effects (such as lupus anticoagulant or anti-cardiolipin antibodies).

In this study we gathered 275 patients who tested positive for thrombophilia. For this patient we registered data about the age of our patients, the number of pregnancies and deliveries, the differences between the number of pregnancies and the number of deliveries (DIFF), the gestational period (GP), the new-born weight and the APGAR score received at birth. We calculated the central tendency and dispersion parameters and for the statistical significance we applied an ANOVA One Way test with $\alpha = 0.05$ – confidence level. We divided our patients in three different groups: patients with inherited thrombophilia (43 patients), patients with acquired thrombophilia (46 patients) and patients with both types of thrombophilia (186 patients). For all three groups we run a descriptive statistic, calculating the central tendency and dispersion parameters.

We calculated the statistical parameters for the age, number of pregnancies (Gesta) and deliveries (Para), the differences between the number of pregnancies and the number of deliveries (DIFF), the gestational period (GP), the new-born weight and the APGAR score received at birth variables. The ANOVA One Way analysis for the new-born weight variable between the three studied groups (Group 1 – Patients with inherited thrombophilia, Group 2 – Patients with acquired thrombophilia and Group 3 – Patients with inherited + acquired thrombophilia). We obtained that there are no significant differences ($= 0.76 > 0.05$) between the newborn weights in the studied groups.

Based on this statistical analysis we can say that the type of thrombophilia can influence the pregnancy dynamics. The highest number of abortions was registered in the case of inherited thrombophilia.
Keywords: Type of Thrombophilia, New-Born Parameters

RECENT ADVANCES AND FUTURE PERSPECTIVES ON FLOATING–MUCOADHESIVE FAST-DISSOLVING FILMS: A REVIEW

Shama PARVEEN
Jamia Hamdard, School of Pharmaceutical Education and Research (SPER), Department of Pharmaceutics, India

Vijay KUMAR
Jamia Hamdard, School of Pharmaceutical Education and Research (SPER), Department of Pharmaceutics, India

Jitendra Kumar SHARMA
Apex University Jaipur, Department of Pharmacy, India

Vikas VERMA
Apex University Jaipur, Department of Pharmacy, India

Amarjeet SINGH
Innovative College of Pharmacy, Department of Pharmacy, India

ABSTRACT
Fast-dissolving oral films (FDFs) are known for being a patient-friendly dosage form, designed for oral administration, and with buccal and sublingual routes of administration. Their lightweight structure, rapid saliva hydration, non-water requirement, and patient compliance have prompted a considerable volume of studies on polymer selection, formulation strategies, and assessment methods. Recently, an increased focus has been laid on mucoadhesive fast-dissolving films that have been constructed to adhere to the oral mucosa to prolong residence time, potentiate drug absorption and boost therapeutic activity. This review overviews latest developments in mucoadhesive fast-dissolving film technology, focusing especially on mouth-dissolving platforms. These include film-forming and mucoadhesive polymers, criteria for choosing materials, formulation and manufacturing strategies, and essential evaluation factors applicable to oral cavity performance. Recent trends in formulation: polymer blend, improved mucoadhesive and controlled drug release are critically discussed. In addition, present restrictions concerning mechanical stability, dose loading, and fluctuation in the rate of adhesion are considered. Lastly, the future perspectives on advanced polymers, rational formulation development, and translational issues are considered to inform the elaboration of mucoadhesive fast-dissolving films for oral drug delivery.
Keywords: Mucoadhesive oral films; Fast-dissolving films; Buccal drug delivery; Sublingual drug delivery; Polymeric oral films.

COMBINED EXPERIMENTAL AND THEORETICAL INVESTIGATION OF MELAMINIUM DIHYDROGEN PYROPHOSPHATE: SYNTHESIS, CRYSTAL STRUCTURE, HIRSHFELD SURFACE ANALYSIS, AND REACTIVITY MAPPING

Elmehdi MAJDI
Hassan II University of Casablanca, Ben M'Sick Faculty of Sciences, Laboratory of Physical Chemistry of Materials, Morocco

Soufiane ZERRAF
Hassan II University of Casablanca, Ben M'Sick Faculty of Sciences, Laboratory of Physical Chemistry of Materials, Morocco

Said BELAAOUAD
Hassan II University of Casablanca, Ben M'Sick Faculty of Sciences, Laboratory of Physical Chemistry of Materials, Morocco

ABSTRACT

A new hybrid organic–inorganic compound, melaminium dihydrogen pyrophosphate $(C_3N_6H_7)_2(H_2P_2O_7)$ (MDP), was prepared in ambient conditions (296.15 K, 1.01325 bar) and its structure was determined by single-crystal X-ray diffraction. The compound crystallizes in the monoclinic system with space group P1 and its structure is characterized by a strong three-dimensional lattice structure that is consolidated by an extensive network of strong in- termolecular interactions such as N–H···O and O–H···O hydrogen bonds formed between the melaminium cations and the pyrophosphate anions, as well as Van der Waals forces. The con- tribution of particular contacts to the crystal packing was evaluated by means of Hirshfeld surface analysis and 2D fingerprint plots. Theoretical DFT calculations were also carried out at B3LYP/LANL2DZ level (in solvents water) and utilized to perform optimized geometry and to predict the compound's electronic reactivity using FMO and NBO analyses. An excep- tionally low HOMO–LUMO gap of 0.30 eV indicates high electronic reactivity, and, thus, possible functional applications. Theoretical geometry parameters were in very good agree- ment with the XRD data with low standard deviation on bond lengths (0.06%) and bond an- gles (0.016%). The geometries of hydrogen bondings, in aqueous solution, were unchanged with respect to gas phase calculation with deviations below 2%, further demonstrating the reliability of the computed model and the solvent effect on geometry. Moreover, molecular electrostatic potential (MEP) mapping and Electron localization function (ELF) analyses un- veiled charge distribution and reactive sites. All in all, the experimental and theoretical meth- ods combined here can help to have a complete knowledge of the structural, electronic and the intermolecular interactions in this hybrid molecule, in addition in silico predictions revealed a promising pharmacological profile of the MDP compound, with anticancer, antiangiogenic, and anti-inflammatory activities (Pa > 0.7). Molecular docking on the TIE-2 receptor (PDB: 2GY7) showed a strong affinity of MDP (–14.1 kcal/mol) compared to Rebastinib (–10.7 kcal/mol), suggesting a superior inhibitory potential. These results support the interest in MDP as a therapeutic candidate targeting tumor angiogenesis.

Keywords: Crystal structure; Density functional theory; X-ray diffraction; Hirshfeld surface; Pyrophosphate compound.

THE IMPACT OF ECO-INNOVATION ON GREEN SUPPLY CHAIN EFFICIENCY IN THE AGRICULTURAL SECTOR

Asst. Prof. Dr. Sahil CHOUHAN
Amritsar Group of Colleges, Department of Business Studies, India

Asst. Prof. Dr. Anju THAPA
Central University of Jammu, School of Business Studies, India

ABSTRACT
Eco-innovation plays a pivotal role in transforming traditional supply chains into sustainable systems by integrating environmental considerations into processes, products, and practices. This study investigates the role of eco-innovation in enhancing green supply chain efficiency, with a specific focus on the agriculture sector. Agriculture, as a resource-intensive industry, faces growing pressure to address environmental challenges while maintaining productivity and profitability. This research examines the adoption of eco-innovative practices, such as resource-efficient technologies, sustainable farming methods, and environmentally friendly packaging, and their impact on supply chain performance. Employing a mixed-methods approach, the study analyses data from agricultural enterprises to identify key drivers, challenges, and outcomes of eco-innovation. The findings indicate that eco-innovation significantly improves supply chain efficiency by reducing resource consumption, minimising waste, and lowering carbon emissions. Additionally, it enhances economic performance by fostering cost savings and market competitiveness. However, the study also highlights barriers such as limited access to green technologies, high initial costs, and a lack of knowledge and skills among stakeholders. The research underscores the importance of collaborative efforts among policymakers, supply chain factors, and technology providers to overcome these challenges and accelerate the transition to sustainable practices. By providing insights into the synergy between eco-innovation and green supply chain efficiency, this study contributes to the growing body of knowledge on sustainable supply chain management. It offers actionable recommendations for agricultural stakeholders aiming to enhance environmental sustainability and operational performance through innovative approaches.
Keywords: Green Supply Chains, Agriculture Sector, Eco-Innovation.

COMPUTER SOLUTION TO REPLACEMENT MODELS FOR ITEMS THAT FAILS SUDDENLY

Alfa MOHAMMED
Federal Polytechnic Bida, Department of Cyber Security and Data Protection, Nigeria

Abdulrahman Mohammed SABA
Federal Polytechnic Bida, Department of Networking and Cloud Computing, Nigeria

ABSTRACT
Replacement theory is used in the decision-making process of replacing a used equipment with a substitute; mostly a new equipment of better usage. The problem of replacement arises when any one of the components of productive resources, such as; machinery, building and men deteriorates due to time or usage; therefore, the replacement might be necessary due to the deteriorating property or failure or breakdown of particular equipment. A program was then written in C++ to compute the replacement metrics.
The number of unit replacement was accepted as 10000, the probabilities for p1 to p10 were considered. The value for the costs of replacement was accepted as N300. The mean life failure at long run was computed as 3.3 weeks and the average rate of failure in the long run was computed as 3030 per week. Individual replacement time was computed as 151.5 per week and the group replacement policy was then computed for week 1, 2, 3, and 4 as 300, 150, 133.33, and 150 respectively. The comparisons were done on the group replacement time for week 1 to 4, and the minimum cost replacement time is N133.33 per week. Therefore, the cost of replacement time is due at every three weeks.
Keywords: Replacement, Policy, Group replacement, Individual replacement, Paise, Items, Suddenly.

ANALGESIC EFFECTS OF AQUEOUS LEAF EXTRACT OF MERCURIALIS ANNUA IN MICE

Abdeljalil ELMAHDAOUI
University Cadi Ayyad, Faculty of Sciences, Semlalia, Department of Biology, Marrakech, Morocco

Lansine DİAKİTÉ
University Cadi Ayyad, Faculty of Sciences, Semlalia, Department of Biology, Marrakech, Morocco

Aziz AUHMANI
University Cadi Ayyad, Faculty of Sciences, Semlalia, Department of Chemestry, Marrakech, Morocco

Zahra SOKAR
University Cadi Ayyad, Faculty of Sciences, Semlalia, Department of Biology, Marrakech, Morocco

ABSTRACT
Pain is devastating conditions that characterize several diseases. Corticosteroids, non-steroidal anti-inflammatory drugs and opioids are widely used to manage the symptoms associated with pain. Notwithstanding their success, these agents are unaffordable and cause many undesirable side-effects. As a result, the search for alternative and complementary treatments is justified. Medicinal and aromatic plants have been widely used to treat a variety of illnesses. *Mercurialis* species are used in Moroccan and European ethnomedicine to treat conditions associated with inflammation, such as purulent wounds, eczema, abscesses and lung diseases, but also as a laxative and to treat menstrual disorders. In addition, there is insufficient scientific data on toxicity of Moroccan *Mercurialis anuua* used by herbalists and practitioners. In this context, the acute oral toxicity of the aqueous extract of *Mercurialis anuua* in Swiss mice was assessed in accordance with OECDE guidelines. Analgesic activity was examined using the hot plate and acetic acid-induced writhing test in mice. The results indicated that the extract examined had LD 50 values > 5000 mg/kg and was thus assessed as non-toxic according to OECD document 425. The results of the hot plate test showed that the various doses studied, and particularly at 800 mg/kg, caused a significant increase in latency time similar to Morphine (10 mg/kg) compared with the control. On the other hand, the extract at dose of 400 and 800 mg/kg and mg/kg showed significant inhibition of number of writhes induced by acetic acid and comparable to that shown by the reference drug (acetylsalicylic acid). As a result, the aqueous leaf extract of *Mercuriallis annua* possess analgesic in Swiss albino mice. It therefore has the potential to offer safe analgesic and anti-inflammatory compounds. Further studies to isolate, elucidate and characterize the bioactive components responsible for these activities are recommended.
Keywords: Pain; Acute toxicity; Mercuriallis annua; Hot plate test

REDUCING MUTUAL COUPLING IN 2.4 GHZ MIMO ANTENNAS USING ORTHOGONAL POLARIZATION DIVERSITY

Rajae TRIBAK
Research Group In Emerging And Sustainable Technologies, Faculty Polydisciplinary, Abdelmalek Essaadi University, Larache, Morocco
ORCID ID: 0009-0003-5813-7501

Hicham SETTI
Research Group In Emerging And Sustainable Technologies, Faculty Polydisciplinary, Abdelmalek Essaadi University, Larache, Morocco

Aziz DKIOUAK
STIC Laboratory, Faculty of Sciences, Chouaib Doukkali University, El Jadida, Morocco

Larbi SETTI
Research Group In Emerging And Sustainable Technologies, Faculty Polydisciplinary, Abdelmalek Essaadi University, Larache, Morocco

ABSTRACT
For 2.4 GHz wireless devices, keeping MIMO antennas compact while maintaining high isolation is a constant challenge. Our goal was to design a small antenna structure that reduces mutual coupling without adding complex or bulky decoupling circuits. We specifically wanted to test if a simple orthogonal polarization layout could achieve the performance levels needed for modern IoT and Wi-Fi applications.
We designed a two-element MIMO antenna using modified rectangular patches on a standard, low-cost FR-4 substrate. Instead of using external decoupling structures, we oriented the two elements at 90 degrees to one another to leverage polarization diversity. The design was simulated and optimized to cover the 2 to 3 GHz range, with a focus on achieving deep resonance and high port-to-port isolation.
The simulations showed a very clear resonance at 2.4 GHz, where the return loss S_{11} reached -30.57 dB. This confirms excellent impedance matching and efficient power transfer. Thanks to the orthogonal placement, the mutual coupling between the elements was significantly reduced. We also found that the Envelope Correlation Coefficient (ECC) stayed near zero and the Diversity Gain (DG) remained high, which proves that the two ports operate independently with minimal interference.
Our findings show that orthogonal polarization is a practical and effective way to handle coupling in small MIMO designs. It provides high isolation while keeping the overall footprint small and the manufacturing cost low. In conclusion, this design is a strong candidate for portable devices and embedded systems where space is limited but high-speed communication is required.
Keywords: MIMO Antenna; Orthogonal Polarization; Mutual Coupling; 2.4 GHz

THE IMPACT OF ARTIFICIAL INTELLIGENCE ON INTELLECTUAL PROPERTY AND IMAGE RIGHTS

Luis Ángel SEVILLA HERNÁNDEZ
Juárez Autonomous University of Tabasco, Division of Social Sciences and Humanities, Mexico

ABSTRACT

Introduction and Purpose: The accelerated development of artificial intelligence (AI) has raised significant challenges in the fields of copyright, intellectual property, and image rights. One of the main issues is the lack of legal recognition for AI-generated works. Samuelson (2017) argues that copyright has traditionally been attributed to natural or legal persons, leaving the ownership of algorithm-generated creations uncertain. Additionally, many AI models are trained using copyrighted materials without authorization, which may constitute an intellectual property infringement (Lemley & Casey, 2020). Another critical issue is the unauthorized use of individuals' images through AI-generated content, such as deepfakes, which can manipulate identity and privacy (Gervais, 2021). This study aims to examine these legal challenges and propose regulatory solutions to balance technological innovation with the protection of intellectual property and privacy.

This study adopts a qualitative research approach based on documentary analysis and expert interviews. The methodology includes a legal review of current copyright and intellectual property regulations, an analysis of legal cases related to AI-generated content, and semi-structured interviews with digital law professionals. Additionally, a comparative analysis of regulatory frameworks in different jurisdictions will be conducted to identify best practices addressing these issues.

The findings highlight the urgent need for international regulatory frameworks to govern AI's impact on intellectual property and image rights. The absence of clear regulations allows companies to exploit protected materials and individuals' images without legal consequences. Establishing transparent policies on AI-generated content ownership and ethical guidelines for image usage is crucial to protecting creators and individuals.

The rapid advancement of AI necessitates legal adaptations to ensure a fair balance between innovation and rights protection. The study suggests that international cooperation and standardized regulations are key to addressing the challenges posed by AI in intellectual property and image rights.

Keywords: Artificial Intelligence; Copyright; Intellectual Property; Image Rights; Deepfake; Legal Regulations

RIGHTS OF GROUPS IN SITUATIONS OF VULNERABILITY: LIKE PEOPLE WITH DISABILITIES, LGBTI, MIGRANTS, INDIGENOUS PEOPLE, OR PEOPLE DEPRIVED OF LIBERTY

Ingrid Villegas HERNÁNDEZ
Juárez Autonomous University of Tabasco, Faculty of Law, Mexico

Mayrani Vázquez PÉREZ
Juárez Autonomous University of Tabasco, Faculty of Law, Mexico

Dr. Gloria Auristela HERNÁNDEZ PÉREZ
Anáhuac Mayab University, Mexico
Juárez Autonomous University of Tabasco, Mexico
Universidad Olmeca, Mexico
ORCID: 0009-0006-3446-4622

ABSTRACT
"The world has become a dangerous place." This is what Amnesty International believes, given that world leaders show little willingness to defend human rights on the world stage. Crimes against humanity, war crimes, ethnic cleansing, the climate of hate promoted by States and the threats that weigh on the most vulnerable populations such as indigenous people and members of the LGBTI community, among others, continue to be topics of urgent discussion. Millions of people are moving around the world in search of shelter, some food, clean water and medical care. In short, in search of peace. Social discontent grows more every day because the human rights of citizens are violated every day, consequently, leaders are required not only politically and academically prepared but also possessors of a high dose of human sensitivity.
Keywords: Liberty, Rights, LGBTI

RIGHT TO INFORMATION DURING PREGNANCY, CHILDBIRTH AND PUERPERIUM

Fabiola PÉREZ LÓPEZ
Juárez Autonomous University of Tabasco, Mexico
ORCID: 0009-0005-9908-894X

Martha Carolina VIDAL ARELLANO
Juárez Autonomous University of Tabasco, Mexico
ORCID: 0009-0005-3278-0181

Dr. Gloria Auristela HERNÁNDEZ PÉREZ
Anáhuac Mayab University, Mexico
Juárez Autonomous University of Tabasco, Mexico
Universidad Olmeca, Mexico
ORCID: 0009-0006-3446-4622

ABSTRACT
This article aims to explain and promote the application of a model of care aimed at women during pregnancy, childbirth and the puerperium, we are interested in changing the model and helping to guarantee dignified, respectful and safe treatment for those women who are in a situation of misinformation. We will address two important issues, which are the humanization of care and safety for women and their babies. Within humanization we find a very common problem and which most women have in mind every time they talk or remember the birth of their baby, and this problem is that women are protagonists of this reproductive process, on the contrary most women affirm that during labor they do not manage to feel protagonists due to, medical personnel who are in the room, affirm that there are many people and that some are distracted in other conversations with their colleagues, this always generates discomfort, discomfort and takes away their prominence, it is important to always keep in mind that the main thing at that time is to keep the life of the mother and her baby safe, always do everything in the most professional way possible in order to guarantee that the right to life is being protected
Keywords: Humanized, Intercultural, Safe, Motivational, Professional Approach.

15th INTERNATIONAL ZEUGMA CONFERENCE ON SCIENTIFIC RESEARCHES

January 19-21, 2026 / Gaziantep, Türkiye

REF: AKADEMİK TEŞVİK

İLGİLİ MAKAMA

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Bilgilerinize arz edilir,

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Dr. Mustafa Latif EMEK
Chairman of Institute

Contact information
Congress Web Page : www.zeugmakongresi.org
E-mail Adress : zeugmakongresi@gmail.com

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Çankaya – Ankara
06-146-071

Konu : Kongre Düzenlenmesi
Sayı : BSE-7 10 Ağustos 2025

İLGİLİ KURUMA

İçişileri Bakanlığı tarafından tahsis edilen 06-146-071 tescil kodu ile Tüzel Kişiliğe sahip olan İKSAD Enstitüsü 5253 sayılı kanuna uygun olarak "Bilimsel araştırmalar ve akademik çalışmalar" alanında ulusal ve uluslararası düzeyde faaliyetlerini yürütmektedir.

Kurumumuzun Yönetim Kurulu 6 Ağustos 2025 tarihinde saat 10.30'da "Bilimsel Diplomasi Projesi" görüşmeleri ile "Bilimsel Kongreler Düzenlenmesi" gündemleri ile toplanmış ve alınan karara istinaden aşağıda detayları yazılı olan bilimsel etkinliğin düzenlenmesine ve etkinliğe ilişkin resmi görevlendirme konusunda karar vermiştir.

Bilgi ve gereğini rica ederim

Dr. Mustafa Latif EMEK
Yönetim Kurulu adına
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