VI. INTERNATIONAL ICONTECH CONFERENCE ON INNOVATIVE SURVEYS IN POSITIVE SCIENCES

December 4-5, 2022
Rijeka, Croatia- Amadria Park Hotel Milenij

ABSTRACTS BOOK

Editor:
Prof. Dr. M. Serdar GENÇ

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CONFERENCE ID

TITLE OF CONGRESS

VI.International
ICONTECH CONFEERENCE
on Innovative Surveys in Positive Sciences

DATE - PLACE

December 4-5, 2022
Rijeka, Croatia- Amadria Park Hotel Milenij

ORGANIZATION

Institute of Economic Development and Social Researches

EDITED BY

Prof. Dr. M. Serdar GENÇ

COORDINATOR

Alina AMANZHOLOVA

EVALUATION PROCESS

All applications have undergone a double-blind peer review process

PARTICIPATING COUNTRIES

Croatia, Türkiye, Azerbaijan, Saudi Arabia, Romania, Pakistan, Iraq, Algeria, Hungary, Poland, Brazil, India, Morocco, Serbia, Albania, South Africa, North Macedonia, Kosovo, China

TOTAL NUMBER OF PAPERS: 80
THE NUMBER OF PAPERS FROM TÜRKİYE: 38
OTHER COUNTRIES: 42

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ICONTECH CONFERENCE-6

on Innovative Surveys in Positive Sciences

December 4-5, 2022

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CONGRESS PROGRAM

ONLINE PRESENTATIONS

Meeting ID: 851 3167 6152
Passcode: 060606

ZOOM LINK:
https://us02web.zoom.us/j/85131676152?pwd=UlBNZ1RickxvcUNSUE9aZDJkcnpTUT09

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exp. Hall-1, Shahla Tahirgizi

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- Kongremizde Yazım Kurallarına uygun gönderilmiş ve bilim kurulundan geçen bildiriler için online (video konferans sistemi üzerinden) sunum imkanı sağlanmıştır.
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Örnek: Salon-1, Shahla Tahirgizi

Meeting ID: 851 3167 6152
Passcode: 060606

PARTICIPANT COUNTRIES: (19)

Croatia, Türkiye, Azerbaijan, Saudi Arabia, Romania, Pakistan, Iraq, Algeria, Hungary, Poland, Brazil, India, Morocco, Serbia, Albania, South Africa, North Macedonia, Kosovo, China

	Session 1	Session 2
Croatia	11:00-13:00	13:30-15:30
Turkiye	13:00-15:00	15:30-17:30
Azerbaijan	14:00-16:00	16:30-18:30
Saudi Arabia	13:00-15:00	15:30-17:30
Romania	12:00-14:00	14:30-16:30
Pakistan	15:00-17:00	17:30-19:30
Poland	11:00-13:00	13:30-15:30
India	15:30-17:30	18:00-20:00
Morocco	10:00-12:00	12:30-14:30
Albania	11:00-13:00	13:30-15:30
Iraq	13:00-15:00	15:30-17:30
Algeria	11:00-13:00	13:30-15:30
Hungary	11:00-13:00	13:30-15:30
Brazil	07:00-09:00	09:30-11:30
Serbia	11:00-13:00	13:30-15:30
South Africa	12:00-14:00	14:30-16:30
North Macedonia	11:00-13:00	13:30-15:30
Kosovo	11:00-13:00	13:30-15:30
China	18:00-20:00	20:30-22:30
France	11:00-13:00	13:30-15:30

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04.12.2022	Session-1 / Hall-1

Rijeka Time: 11^{00}-13^{00}

Ankara Time: 13^{00}-15^{00}

HEAD OF SESSION: Assist. Prof. Dr. Fatih TAŞ

TOPIC TITLE	AUTHORS	AFFILIATION
CHEMICAL AND PHYSIOLOGICAL PROPERTIES SHOWN BY GOLD IN THE HUMAN ORGANISM	Dr. Kərimova Rəna Cabbar kızı Rzayeva Sürəyya Cabbar kızı Əzizova Əsmət Nizami kızı Bayramov Adil Allahyar oğlu Yusifova Mətanət Yusif kızı	Azerbaijan Medical University, Azerbaijan
LIVER DAMAGE, PHYSIOLOGICAL CHARACTERISTICS AND ITS RELATIONSHIP WITH THE ENDOCRINE SYSTEM	Dr. Kərimova Rəna Cabbar kızı Ağayeva Asiya Hacı kızı Həsənova Xumar Əliövsət kızı Cəfərova Zemfira İbrahim kızı Şahməmmədova Sevinc Osman kızı Dr. Məşədiyeva Bayramova Səbinə Ənvər kızı	Azerbaijan Medical University, Azerbaijan
EVALUATION OF EPIDERMAL GROWTH FACTOR EXPRESSION IN RADICULAR CYSTS	Fatih TAŞ Fırat AŞIR Fikri ERDEMCİ	Siirt University, Türkiye Dicle University, Türkiye
SUBACUTE SUBDURAL HEMATOM BLEEDING INTO ARACHNOID CYST: OUR CLINICAL RESULTS	Mustafa OZASLAN Sedat YASİN Necati UCLER	Gaziantep University, Türkiye Elazığ Şehir Hastanesi, Türkiye
THE EVALUATION OF LOCALIZATION, SURGICAL RESECTION AND RADIOTHERAPY RESULTS OF ATYPIC MENINGIOMAS	Mustafa OZASLAN Serdal ALBAYRAK Necati UCLER	Gaziantep University, Türkiye Elazığ Şehir Hastanesi, Türkiye
THE VALIDITY OF ESTIMATED HEART BEAT PARAMETERS ON ESTABLISHING EXERCISE INTENSITY IN HEALTHY MALES	Şevval Yurtoğlu Ahmet Ayyıldız Sermin Algül Oğuz Özçelik	Kastamonu University, Türkiye Van Yüzüncü Yıl University, Türkiye

Meeting ID: 851 3167 6152
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04.12.2022	Session-1 / Hall-2

Rijeka Time: 11^{00}-13^{00}

Ankara Time: 13^{00}-15^{00}

HEAD OF SESSION: Assoc. Prof. Buket BAKIR

TOPIC TITLE	AUTHORS	AFFILIATION
THE EFFECTS OF APPLICATION OF HAWTHORN VINEGAR ON CD4 AND CD8 T LYMPHOCYTES EXPRESSION IN SPLEEN OF RATS	Assoc. Prof. Buket BAKIR Assoc. Prof. Nilay SEYİDOĞLU	Tekirdag Namik Kemal University, Türkiye
HISTOMORPHOMETRIC EVALUATION OF THE EFFECTS OF CAPSAICIN APPLICATION ON SMALL INTESTINE OF RATS	Assoc. Prof. Buket BAKIR Prof. Dr. Ebru KARADAĞ SARI	Tekirdag Namik Kemal University, Türkiye
COMPARISON OF GENERAL HISTOLOGICAL FEATURES IN TONGUE TISSUES OF PUPPY AND ADULT NEW ZEALAND RABBIT	Feyza BAŞAK Tansu KUŞAT Emine Ümran ÖRSÇELİK	Karabük University, Türkiye Kırıkkale University, Türkiye
ADVANCED TREATMENT OF SOME EMERGING MICROPOLLUTANTS BY PHOTOCATALYTIC AND MEMBRANE PROCESSES FROM RAW HOSPITAL WASTEWATER AND COST ANALYSIS	Gokce GUNEY Delia Teresa SPONZA	Dokuz Eylül University, Türkiye
PLIOCENE DEPOSITIONAL STAGES IN ERZURUM BASIN; AN EXAMPLE OF BASIN INVERSION. EASTERN ANATOLIA . TURKIYE	Mehmet Salih BAYRAKTUTAN	Ataturk University, Türkiye

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04.12.2022	Session-1 / Hall-3

Rijeka Time: 11^{00}-13^{00}

Ankara Time: 13^{00}-15^{00}

HEAD OF SESSION: Assist. Prof. Dr. Bülent BAŞYİĞİT

TOPIC TITLE	AUTHORS	AFFILIATION
IMPACTS OF HUMIC ACID PRACTICES ON NITROGEN, PHOSPHORUS AND POTASSIUM UPTAKE OF BEANS IN SALINE CONDITIONS	Prof. Dr. Nurdilek GÜLMEZOĞLU İmren KUTLU	Eskişehir Osmangazi University, Türkiye
THE POINTS TO BE CONSIDERED IN THE PRESERVATIVE SOLUTION UPTAKE, PENETRATION, AND RETENTION DETERMINATION STUDIES BEFORE AND AFTER PERMEABILITY IMPROVEMENT PRETREATMENTS IN WOOD	Davut BAKIR	Artvin Çoruh University, Türkiye
INVESTIGATION OF ESBL AND CARBAPENEMASE POSITIVE ENTEROBACTERIACEAE STRAINS AND GENOTYPES IN MUSSELS CAUGHT IN THE ÇANAKKALE STRAIT	Nesrin ÇAKICI	Çanakkale Onsekiz Mart University, Türkiye
MICROBIOLOGICAL HAZARDS IN POULTRY	Nesrin ÇAKICI Rabia EROĞLU	Çanakkale Onsekiz Mart University, Türkiye
BENEFICIAL EFFECT OF MAILLARD CONJUGATION ON EMULSIFYING BEHAVIOR OF PEA PROTEIN	Bülent BAŞYİĞİT	Harran University, Türkiye

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04.12.2022	Session-1 / Hall-4

Rijeka Time: 11^{00}-13^{00}

Ankara Time: 13^{00}-15^{00}

HEAD OF SESSION: Major Gheorghe Giurgiu

TOPIC TITLE	AUTHORS	AFFILIATION
NUTRACEUTICALS DENIPLANT IN THE NEUROPATHIC PAIN IN DOG WITH SPINAL CORD INJURY	Major Gheorghe Giurgiu, Prof. Dr. Manole Cojocaru	Deniplant-Aide Sante Medical Center, Biomedicine, Bucharest, Romania Titu Maiorescu University, Faculty of Medicine, Bucharest, Romania
IN VIVO TOXICITY OF CADMIUM CHLORIDE IN ALBINO RATS AND PROTECTIVE EFFECTS OF VITAMIN B1 AND NUTRIENTS HEMATO-BIOCHEMICAL EFFECTS OF CADMIUM INTOXICATED ALBINO RATS WITH ZN, VITAMIN B1 AND NUTRIENTS	Shivani Yadav, D.K Chauhan	Chaudhary Charan Singh University, Meerut, Uttar Pradesh
EFFECTS OF THE COVID-19 PROCESS ON FARM ANIMAL HUSBANDRY AND NUTRITION	Ayşe ŞEN Kadir ERTEN	Tekirdag Namik Kemal University, Türkiye
EFFECTS OF TANIN ON RUMINANT ANIMAL BEHAVIORS	Ayşe ŞEN Kadir ERTEN	Tekirdag Namik Kemal University, Türkiye
ACUTE AND SUBACUTE TOXICITY ASSESSMENT MODEL OF FERULA GROWING IN NORTHERN MOROCCO	NOUIOURA Ghizlane, TOURABI Maryem, LYOUSSI Badiaa, DERWICH El houssine	Université sidi Mohammed ben Abdellah, Fès, Maroc.
IMPORTANCE AND APPLICATIONS OF ENGINEERING PROPERTIES IN FOOD INDUSTRIES	Simple Sharma, Barinderjit Singh	I. K. Gujral Punjab Technical University, Jalandhar - Kapurthala Highway, Punjab 144603, India

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04.12.2022 | Session-1 / Hall-5

Rijeka Time: 11^{00}-13^{00}

Ankara Time: 13^{00}-15^{00}

HEAD OF SESSION: Assist. Prof. Dr. Rozina Khattak

TOPIC TITLE	AUTHORS	AFFILIATION
PHOTODEGRADATION OF CATIONIC DYE BY GREENLY SYNTHESIZED SILVER NANOPARTICLES IN SYNERGY OF PERSULFATE	Assist. Prof. Dr. Rozina Khattak	Department of Chemistry, Shaheed Benazir Bhutto Women University, Pakistan
PHYTOCHEMICAL AND ANTIOXIDANT POTENCIAL OF PARKIA BIGLOBOSA HUSK METHANOL EXTRACT IN ALBINO RATS	Jude Nwaoga, Sanusi Ahmad Jega, Shafiu Shehu Anka, Ibrahim Abdullahi	Kebbi State University of Science and Technology Aleiro, Kebbi State, Nigeria. Usmanu Danfodiyo University Sokoto, Nigeria. Federal Polytechnic Kaura Namoda, Zamfara State, Nigeria
FAILURE ANALYSIS OF ACRYLONITRILE BUTADIENE STYRENE (ABS) MATERIALS AND DAMAGE MODELING BY FRACTURE	Hassan Bouhsiss, A. En-naji, A. Wahid , S. Lasfar, Abdekarim Kartouni, Mohamed El Ghorba	Hassan II University of Casablanca, Casablanca, Morocco
STRUCTURE-BASED DRUG REPURPOSING TO INHIBIT THE DNA GYRASE OF Mycobacterium tuberculosis	Balasubramani G L, Rinky Rajput, Manish Gupta, Pradeep Dahiya, Jitendra K Thakur, Rakesh Bhatnagar, Abhinav Grover	Jawaharlal Nehru University, New Delhi National Institute of Plant Genome Research, New Delhi Banaras Hindu University, Banaras, India
THE PREVALENCE OF URINARY TRACT INFECTION STRAINS AMONG PREGNANT WOMAN WITH Escherichia coli IN LAGOS STATE, NIGERIA	OLAITAN Abiodun Josiah, BAJULAYE Albert Ajayi, Ass Prof. BANJO Temitope Temitayo,, OLAJUWON Mistura Ojuolape, AKINOLA Christiana Boluwatife	Lagos State University, Ojo Lagos State. Lagos State University of Education Oto/Ijanikin Lagos State. Crawford University Igbesa, Ogun State. Louisiana State University, United State of America.
INVESTIGATION OF BURST STRENGTH, ABRASION RESISTANCE AND PILLING RESISTANCE PROPERTIES OF KNITTED FABRICS PRODUCED FROM 100% CARDED COTTON RING AND PROSPIN® YARNS	Gözde BUHARALI Sunay ÖMEROĞLU	Bartin University, Ulus Vocational School, Department of Textile, Clothing, Footwear and Leather Bursa Uludag University, Engineering Faculty, Department of Textile Engineering

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04.12.2022	Session-1 / Hall-6

Rijeka Time: 11^{00}-13^{00}

Ankara Time: 13^{00}-15^{00}

HEAD OF SESSION: Dr. Mahmood Ahmed

TOPIC TITLE	AUTHORS	AFFILIATION
ANTIUREASE EFFECT OF BENZENESULFONOHYDRAZIDES, IN VITRO AND IN SILICO STUDIES	Dr. Mahmood Ahmed	University of Education, Lahore, Pakistan
EFFECT OF SMALL PH ALTERATIONS ON THE TRANSPORTATION PROPERTIES OF IONS AND LIMITING CURRENTS THROUGH POLYELECTROLYTE MULTILAYERS DEPOSITED ON MEMBRANES	Muhammad Ahmad	University of Education, Township, Lahore, Pakistan
PRESCRIBING PATTERN OF ANTIBACTERIAL AGENTS IN ADULT POPULATION: ASSESSMENT OF EFFICACY AND HARMS ASSOCIATED WITH IRRATIONAL PRACTICES	Dr. Huma Ali, Dr. Anum Tariq	Institute of Pharmaceutical Sciences Jinnah Sindh Medical University Karachi
DYE REMOVAL BY WASTE-DERIVED SULFONATED POLYSTYRENE	Mohammed el amine ZENNAKI, Lahcene TENNOUGA, Brahim BOURAS, Kouider MEDJAHED	Tlemcen University, Algeria
ASSESSEEMNT OF PHYSICO-CHEMICAL GROUNDWATER QUALITY OF THE GHISS-NEKOR AQUIFER (CENTRAL RIF, MOROCCO)	Saida Assouik Fouad Mourabit M'hamed Ahari	Abdelmalek Essaadi university, Faculty of Sciences and Technologies of Al Hoceima, Department of chimestry, Al Hoceima, Morocco
IN SILICO EVALUATION OF THE ANTIMALARIAL POTENTIAL OF THE PHYTOCONSTITUENTS OF THE AZADIRACHTA INDICA PLANT	Ekundayo T. AREH, Olubunmi ATOLANI, Learnmore KAMBIZI	Confluence University of Science and Technology, Nigeria University of Ilorin, Nigeria Cape Peninsula University of Technology, South Africa

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04.12.2022	Session-2 / Hall-1

Rijeka Time: 13^{30}-15^{30}

Ankara Time: 15^{30}-17^{30}

HEAD OF SESSION: Seren GEÇGEL

TOPIC TITLE	AUTHORS	AFFILIATION
ECONOMIC ANALYSIS OF SOLAR POWER PLANT FOR MERSİN PROVINCE	Seren GEÇGEL Fatih ÜNAL	Mersin University, Türkiye
WALLETGATE: A SERVICE-BASED OPEN WALLET APPROACH	Semih MUŞABAK Zeynep Nur SANDIKCI Elçin YILMAZ Ediz ŞAYKOL	Sipay Elektronik Para ve Ödeme Hizmetleri A.Ş. Beykent University, Türkiye
MAKING PROPELL SPEED CONTROL OF THE DRON DESIGNED IN SOLIDWORKS IN V-REP ROBOTIC SIMULATOR ENVIRONMENT WITH CODES PREPARED IN MATLAB	Bülent SİĞERGÖK Mehmet ÇAVAŞ	Fırat University, Türkiye
EFFECTS OF SODIUM HYDROXIDE ON THE UNCONFINED COMPRESSIVE STRENGTH OF CLAY-SAND SOILS	Tacettin GEÇKİL Özge Nur ÇETKİN Ceren Beyza İNCE	Inonu University, Türkiye
INVESTIGATION OF THE USAGE OF FERROCHROME SLAG AS FILLERS IN BITUMINOUS HOT MIXTURES	Tacettin GEÇKİL Sena KOÇ Ceren Beyza İNCE	Inonu University, Türkiye
MAXIMUM LOSS AND CONDITIONAL EXPECTED VALUE ANALYSES FOR THE MULTIVARIATE QUADRATIC QUALITY LOSS FUNCTION	Furkan GÖKTAŞ	Karabuk University, Türkiye
INTERVAL VALUED MEAN -VARIANCE ANALYSIS: AN APPLICATION ON BIST 30 HOLDING STOCKS	Furkan GÖKTAŞ	Karabuk University, Türkiye

Meeting ID: 851 3167 6152
Passcode: 060606

04.12.2022	Session-2 / Hall-2

Rijeka Time: 13^{30}-15^{30}

Ankara Time: 15^{30}-17^{30}

HEAD OF SESSION: Ümit Fatih ÖZKAN

TOPIC TITLE	AUTHORS	AFFILIATION
REVIEW OF EVALUATION METRICS FOR GENERATIVE ADVERSARIAL NETWORKS	Canan KOÇ Fatih ÖZYURT	Firat University, Türkiye
AN OPTIMIZATION-BASED VIDEO STABILIZATION APPROACH	Semiha Dervişoğlu Mehmet Sarıgül Levent Karacan	Iskenrun Technical University, Türkiye
EVALUATION OF THE IMPACT OF THE CORONAVIRUS (COVID-19) PANDEMIC ON THE WORKING CONDITIONS OF COMPUTER ENGINEERS IN TURKIYE	Murat Sarı Ümit Fatih ÖZKAN Doğan Ömer KESKİN	Kütahya Dumlupınar University, Türkiye Computer Engineer, Doğanium Technology, Gebze, Kocaeli, Türkiye
WITH A STRATEGIC DECISION-MAKING APPROACH, ORDERING THE FACTORS AFFECTING FUEL CONSUMPTION IN BULK CARRIER VESSEL SELECTION BY USING FUZZY ANALYTICAL HIERARCHY PROCESS METHOD	Dilek Gedik Ünal Özdemir Devran Yazır Yunus Emre Nazlıgül	Karadeniz Teknik University, Türkiye Mersin University, Türkiye
AN EXAMPLE OF LITERATURE REVIEW WITH NATURAL LANGUAGE PROCESSING (NLP) TECHNIQUES ON THE USE OF GAMIFICATION METHODOLOGY IN MARITIME EDUCATION	Emin Serkan ERDÖNMEZ Cenk ŞAKAR	Dokuz Eylül University, Türkiye

Meeting ID: 851 3167 6152
Passcode: 060606

04.12.2022	Session-2 / Hall-3

Rijeka Time: 13^{30}-15^{30}

Ankara Time: 15^{30}-17^{30}

HEAD OF SESSION: Dr. Mustafa Serdar GENÇ

TOPIC TITLE	AUTHORS	AFFILIATION
TRANSITION MODELLING	Mustafa Serdar GENÇ	Erciyes University, Türkiye
FSI ANALYSIS OF CARBON REINFORCED RECYCLABLE COMPOSITE WIND TURBINE BLADE	Eren Anıl SEZER, Sinem KESKİN, Mustafa Serdar GENÇ, Berkay AYDOĞAN	Erciyes University, Türkiye
FLOW CHARACTERISTICS ON NACA2415 AIRFOIL AT LOW REYNOLDS NUMBER	Mustafa ÖZDEN, Mustafa Serdar GENÇ, Halil Hakan AÇIKEL, Kemal KOCA	Erciyes University, Türkiye
NUMERICAL ANALYSIS OF BICYCLE HELMET	Zeynel Turan, Sinem KESKİN, Halil Hakan AÇIKEL	Erciyes University, Türkiye
CASE STUDY ON THE EVALUATION OF WIND MEASUREMENTS PERFORMED BY LIDAR AND CUP ANEMOMETER	Ekim KÜLÜM, Mustafa Serdar GENÇ	Erciyes University, Türkiye
EVALUATION OF GREENGROCER WASTES IN KAYSERI FOR BIOGAS PRODUCTION	Gamze GENÇ, Hatice Büşra PEKER, Hilal DOĞAN	Erciyes University, Türkiye
EXPERIMENTAL STUDY ON THE EFFECT OF GRAPHENE IN FLAT-PLATE COLLECTORS	Gamze GENÇ, Rumeysa URAL, Merve ATİK, Hilal DOĞAN	Erciyes University, Türkiye

Meeting ID: 851 3167 6152
Passcode: 060606

04.12.2022	Session-2 / Hall-4

Rijeka Time: 13^{30}-15^{30}

Ankara Time: 15^{30}-17^{30}

HEAD OF SESSION: Dr. Ouail MJAHED

TOPIC TITLE	AUTHORS	AFFILIATION
NEW DENIAL OF SERVICE ATTACKS DETECTION APPROACH USING HYBRIDIZED NEURAL NETWORKS AND BALANCED DATASET	Ouail MJAHED Salah EL HADAJ El Mahdi EL GUARMAH Soukaina MJAHED	Faculty of Sciences and Technology, Department of Computer Sciences, L2IS, Marrakech, Morocco.
CLASSIFICATION OF CHEST X-RAY IMAGES OF LUNG DISEASES USING DEEP CONVOLUTIONAL NEURAL NETWORK	Joy Oluwabukola OLAYIWOLA Joke A. BADEJO Kikelomo Adetola Omotoye Jamiu Rotimi OLASINA	Covenant University, College of Engineering, Department of Electrical and Information Engineering, Ota, Nigeria
VISUALIZING THE WORLD'S HAPPINESS ACROSS THE WORLD AND ANALYZING ITS CONTRIBUTING FACTORS	Edona Krasniqi Bashkim Çerkini Dhuratë Hyseni	South East European University, Tetova, North Macedonia University of Applied Sciences in Ferizaj, Ferizaj, Kosovo University of Prishtina, Prishtina, Kosovo
COMPARISON BETWEEN PROFESSIONAL 3D SCANNING AND FREE SCANNING	Marigona Bajrami Bashkim Çerkini Fakije Zejnullahu	University of Applied Sciences in Ferizaj, Ferizaj, Kosovo
DESIGNED AND IMPLEMENTATION OF MAJOR NIGERIAN LANGUAGES TRANSLATION MOBILE APP, USING THE DEEP-TRANSLATE APPROACH	OLASINA Jamiu Rotimi AFUWAPE Oluwabukola Dorcas	Federal Polytechnic Ilaro, Nigeria
AN OVERVIEW OF FACE RECOGNITION METHODS	Abderrahmane Aqachtoul Karam Khaoula El mejdi Asma Youssef Ait khouya	Moulay Ismail University, Morocco
THE PROMISE AND LIMITATIONS OF ALGORITHMS IN ARTIFICIAL INTELLIGENCE FOR HEALTHCARE	Dr. Ritu	Prof NDIM, Delhi

Meeting ID: 851 3167 6152
Passcode: 060606

04.12.2022	Session-2 / Hall-5

Rijeka Time: 13^{30}-15^{30}

Ankara Time: 15^{30}-17^{30}

HEAD OF SESSION: dr Ljiljana Simonović Grujić

TOPIC TITLE	AUTHORS	AFFILIATION
RELATION BETWEEN MOTIVATION AND PERFORMANCE AT NURSES OF SHKODER	Dr. Irena Shala, Dr. Kilda Gusha, Elizabeta Koçeku	University of Shkodra "Luigj Gurakuqi", Shkodra
HEALTH DISTRICT GOVERNANCE AND POWER RELATIONS IN BURKINA FASO	Issa Sombié, Ph D	Institut des Sciences des Sociétés-CNRST/Burkina Faso
USING OF GREEN SPACES IN HEALTHCARE FACILITIES AND ITS IMPACT ON HUMAN HEALTH	Parween Karim Dedar S. Khoshnaw Zana F. Ali	Consultant Architect, Directorate of Health – Erbil, Kurdistan Region, Iraq University of Pécs, Boszorkány u. 2, 7624 Pecs, Hungary
A QUALITATIVE STUDY ON THE EFFECTS OF MINDFULNESS ON PSYCHOLOGICAL WELL-BEING	Ayusmita Dutta Deepsikha Kalita, Dr. Suantak Demkhosei Vaiphei	Assam Downtown University, Guwahati
SCHOOL ACHIEVEMENT AND LEARNING DIFFICULTIES OF ADOLESCENTS FROM VIOLENT FAMILIES	dr Ljiljana Simonović Grujić	Bejgrade, Srbija
TRENDS AND CHALLENGES IN THE PRODUCTION OF MILK SUBSTITUTES	Patrycja Cichońska, Małgorzata Ziarno	Warsaw University of Life Sciences (WULS-SGGW), Institute of Food Science, Department of Food Technology and Assessment, Warsaw, Poland

Meeting ID: 851 3167 6152
Passcode: 060606

04.12.2022	Session-2 / Hall-6

Rijeka Time: 13^{30}-15^{30}

Ankara Time: 15^{30}-17^{30}

HEAD OF SESSION: Dr. Raja Mohammad LATIF

TOPIC TITLE	AUTHORS	AFFILIATION
MODELLING THE PREDICTION OF NIGERIAN INSURANCES DATA	Ogundeji, A.A,James, Tolulope. O, Onwuka G.I, Babyemi, A.W, B. Shehu, SU Okeleke	Department of Mathematics Kebbi State University of Science and Technology, Aliero, Nigeria
(r*g*)**-MAPPINGS IN TOPOLOGICAL SPACES	Dr. Raja Mohammad LATIF	Prince Mohammad Bin Fahd University, Kingdom of Saudi Arabia
ANALYSIS OF A NEW THZ GRAPHENE STRUCTURE WITH ELECTROMAGNETICALLY INDUCED TRANSPARENCY	VICTOR DMITRIEV GERALDO MELO İZAİAS GONÇALVES	Federal University of Pará, Department of Electrical Engineering, Belém, Brazil
α(gg*)*-COMPACTNESS IN TOPOLOGICAL SPACES	Dr. Raja Mohammad LATIF	Prince Mohammad Bin Fahd University, Kingdom of Saudi Arabia
A NEW METHOD OF SIMPLIFIED JOHNSON COOK MODEL PARAMETER OPTIMIZATION FOR DP600 AND DP800 STEELS	Labinot Topilla, Serkan Toros, Habip Gökay Korkmaz	UBT – Higher Education Institution, Mechatronics Engineering , 10000, Prishtinë, Kosovo. Nigde Omer Halisdemir University, Mechanical Engineering Department, 51245, Nigde, Turkey
ANALOG LOWPASS FILTER DESIGN USING PASCAL POLYNOMIALS	Assist. Prof. Dr. Atilla Uygur	Gebze Technical University, Engineering Faculty, Electronics Department
DESIGN NEW CYCLOHEXANE-1,3-DIONE DERIVATIVES AS ANTI-NSCLC CANCER AGENTS USING QSAR AND DOCKING STUDIES	Khaoula Mkhayar, Rachid Haloui, Ossama Daoui, Souad Elkhattabi, Samir Chtita, Kaouakeb El khattabi	Sidi Mohamed Ben Abdellah-Fez University, Fez, Morocco. Hassan II University of Casablanca, Casablanca, Morocco
IDENTIFICATION OF SOLANUM NIGRUM (LEAVES EXTRACT) PHENOLIC COMPOUNDS, THEIR EFFECTS ON BEHAVIOR AND BLOOD BIOCHEMISTRY OF ROTENONE INDUCED PARKINSON'S RAT MODEL	Farzana Iftikhar, Shazia Perveen, Sumaira Kanwal, Khawar Ali Shahzad	The Women University Multan, Punjab, Pakistan,61000. Comsats University Islamabad, Punjab, Sahiwal Campus, 57000. Islamia University Bahawalpur. Punjab Pakistan.

Meeting ID: 851 3167 6152
Passcode: 060606

04.12.2022	Session-2 / Hall-7

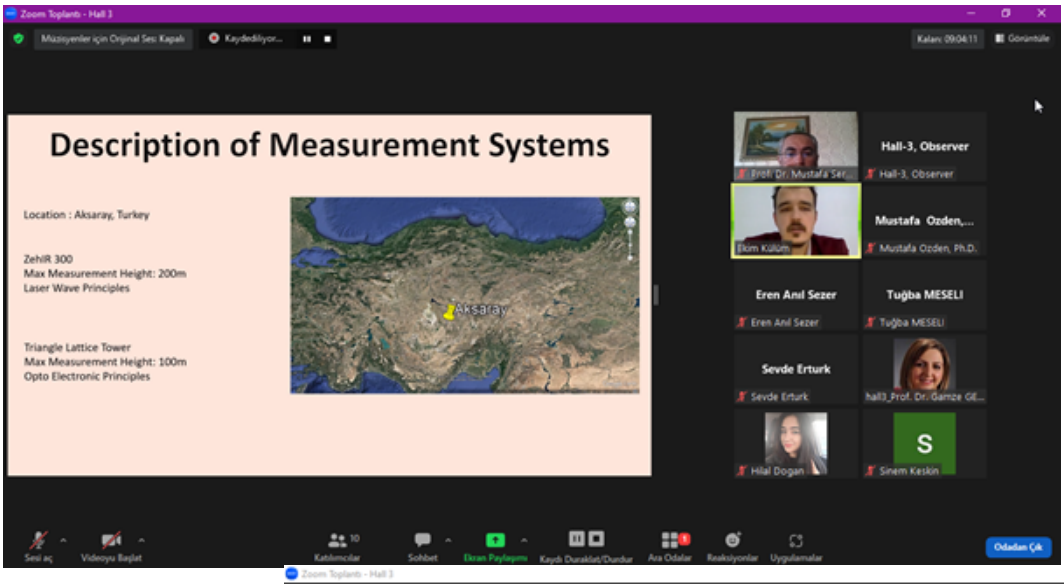
Rijeka Time: 13^{30}-15^{30}

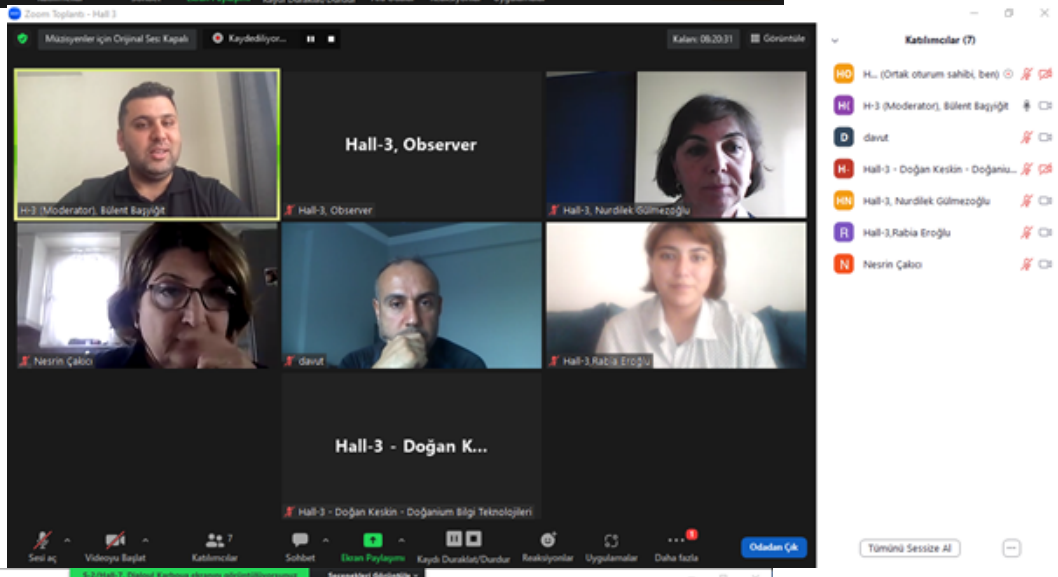
Ankara Time: 15^{30}-17^{30}

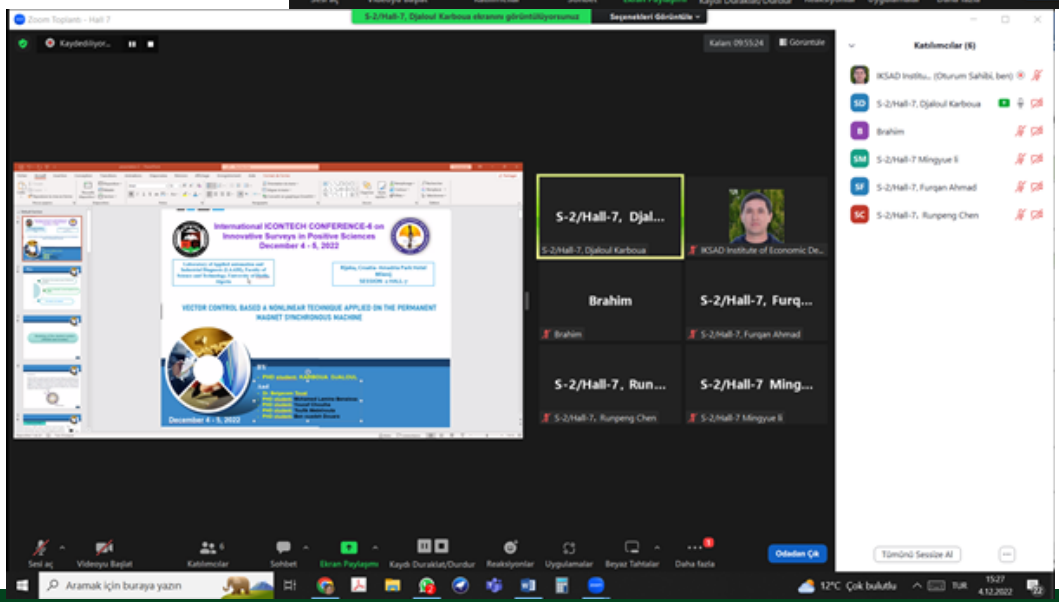
HEAD OF SESSION: Runpeng Chen

TOPIC TITLE	AUTHORS	AFFILIATION
BIOLOGICAL SCREENING AND MOLECULAR DOCKING STUDIES OF SULPHUR CONTAINING HETEROCYCLES FOR THE INHIBITION OF α-GLUCOSIDASE ENZYME	Furqan Ahmad Saddique, Matloob Ahmad	Department of Chemistry, Government College University, Faisalabad, Pakistan.
STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTE WATER AND PRESENT WORK IN SUR SAROVAR BIRD SANCTUARY IN KEETHAM LAKE AGRA UTTAR PRADESH INDIA	Nidhi Yadav, Dr. Vishwakant Gupta	Agra Dr. Bhimrao Ambedkar University, Agra.
VECTOR CONTROL BASED A NONLINEAR TECHNIQUE APPLIED ON THE PERMANENT MAGNET SYNCHRONOUS MACHINE	Djaloul Karboua, Belgacem Toual, Mohamed Lamine Benaissa, Youcef Chouiha, Toufik Mebkhouta, Ben ouadeh Douara	Laboratory of Applied automation and Industrial Diagnosis (LAADI), Algeria Laboratory of Electrical Engineering Biskra (LGEB), Algeria
MAGNETICALLY RECOVERABLE AND HIGHLY EFFICIENT SUN-LIGHT-ACTIVE Clay/CN/ M/AgW NANOCOMPOSITES FOR PHOTOCATALYTIC DEGRADATIONS OF GM	Brahim Ennasraoui, Hamza Ighnih, Redouane Haounati, Hassan Ouachtak, Naima Hafid, Amane Jada, Abdelaziz Ait Addi	Ibn Zohr University, Agadir, Morocco. Centre Régional des Métiers de l'Education et de la Formation Souss Massa, Morocco Université de Haute Alsace (UHA), F-68100 Mulhouse, France
THE PATHOGENESIS AND RISK FACTORS OF LUNG INJURY IN SEVERE ACUTE PANCREATITIS: A SYSTEMATIC REVIEW AND META-ANALYSIS	Runpeng Chen, Dongyang Wang, Qinghua Wang	School of Nursing, Binzhou Medical University, Yantai, China
PREVALENCE AND FACTORS ASSOCIATED WITH WORKPLACE VIOLENCE AMONG NURSING STUDENTS: A SYSTEMATIC REVIEW AND META-ANALYSIS	Mingyue Li, Dongyang Wang, Qinghua Wang	School of Nursing, Binzhou Medical University, Yantai, China
EFFECT OF CORNCOB ASH AS A PARTIAL REPLACEMENT OF CEMENT ON MECHANICAL PROPERTIES OF FIBROUS CONCRETE	Humaira Kanwal, Muhammad Irfan, Muhammad Asim, Muhammad Ahsan, Tayyaba Latif Mughal, Muhammad Tahir, Amna Mahmood, Sadia Mughal, Adil sultan	School of Nursing, Binzhou Medical University, Yantai, China

PHOTO GALLERY







H-2 observer
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6. ULUSLARARASI
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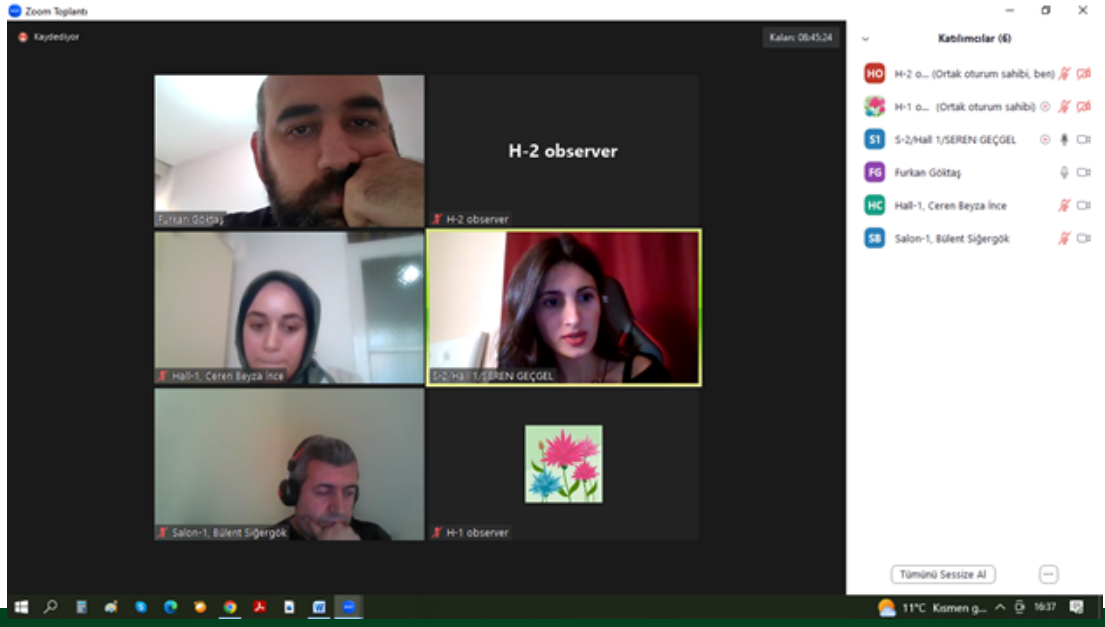
POZİTİF BİLİMLERDE
Radiküler Kistlerde Epidermal Büyüme Faktörü Ekspresyonunun Değerlendirilmesi
Evaluation Of Epidermal Growth Factor Expression In Radicular Cysts
Dokt. Öğr. Fikri ERDEMCİ

H-2 observer
Katılımcılar (4)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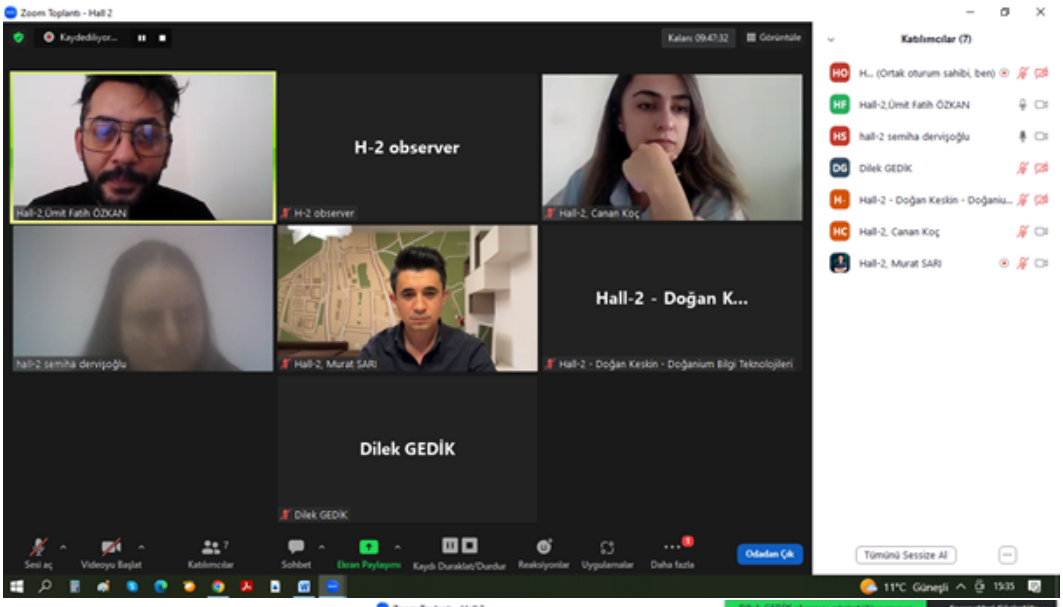
Katılımcılar (6)


Zoom Toplantı - Hall 2
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H-2 observer
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Hall-2, Canan Koç
halil-2 semiha dervişoğlu
Hall-2, Murat SARI
Hall-2 - Doğan K...
Hall-2 - Doğan Keskin - Doğanium Bilgi Teknolojileri
Dilek GEDİK
Katılımcılar (7)
H... (Ortak oturum sahibi, ben)
Hall-2,Ümit Fatih ÖZKAN
hall-2 semiha dervişoğlu
Dilek GEDİK
Hall-2 - Doğan Keskin - Doğaniu...
Hall-2, Canan Koç
Hall-2, Murat SARI
Sesi aç
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Katılımcılar
Sohbet
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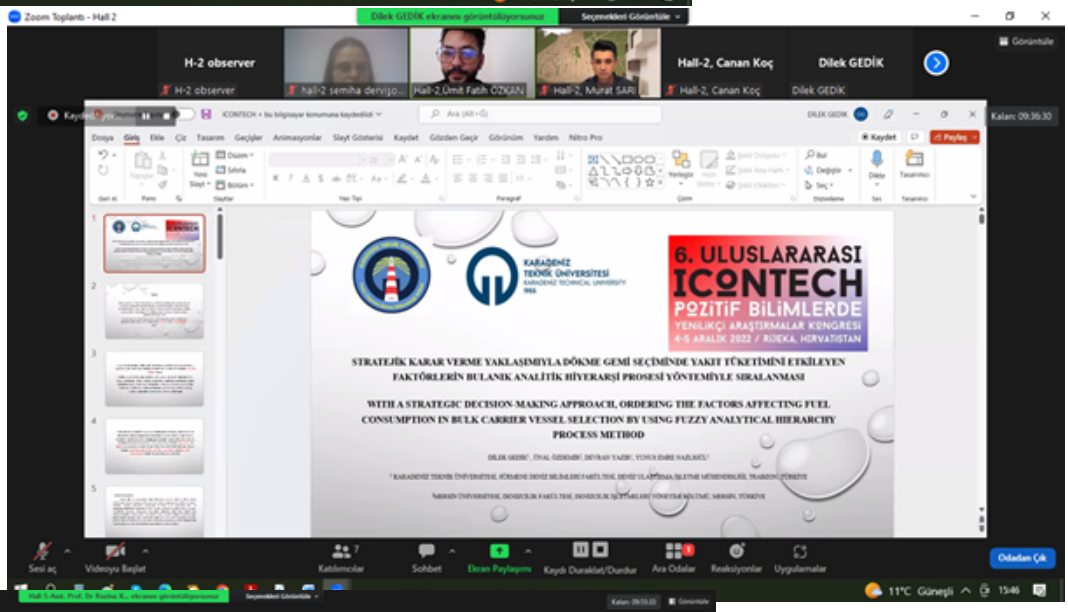
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Dilek GEDİK ekranını görüntülüyorsunuz
Seçenekleri Görüntüle
H-2 observer
Hall-2, Canan Koç
Dilek GEDİK
6. ULUSLARARASI
ICONTECH
POZİTİF BİLİMLERDE
YENİLİKÇİ ARAŞTIRMALAR KONGRESİ
4-5 ARALIK 2022 / RİJEKA, HIRVATİSTAN
STRATEJİK KARAR VERME YAKLAŞIMIYLA DÖKME GEMİ SEÇİMİNDE YAKIT TÜKETİMİNİ ETKİLEYEN FAKTÖRLERİN BULANIK ANALİTİK HİYERARŞİ PROSESİ YÖNTEMİYLE SIRALANMASI
WITH A STRATEGIC DECISION-MAKING APPROACH, ORDERING THE FACTORS AFFECTING FUEL CONSUMPTION IN BULK CARRIER VESSEL SELECTION BY USING FUZZY ANALYTICAL HIERARCHY PROCESS METHOD
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Katılımcılar
Sohbet
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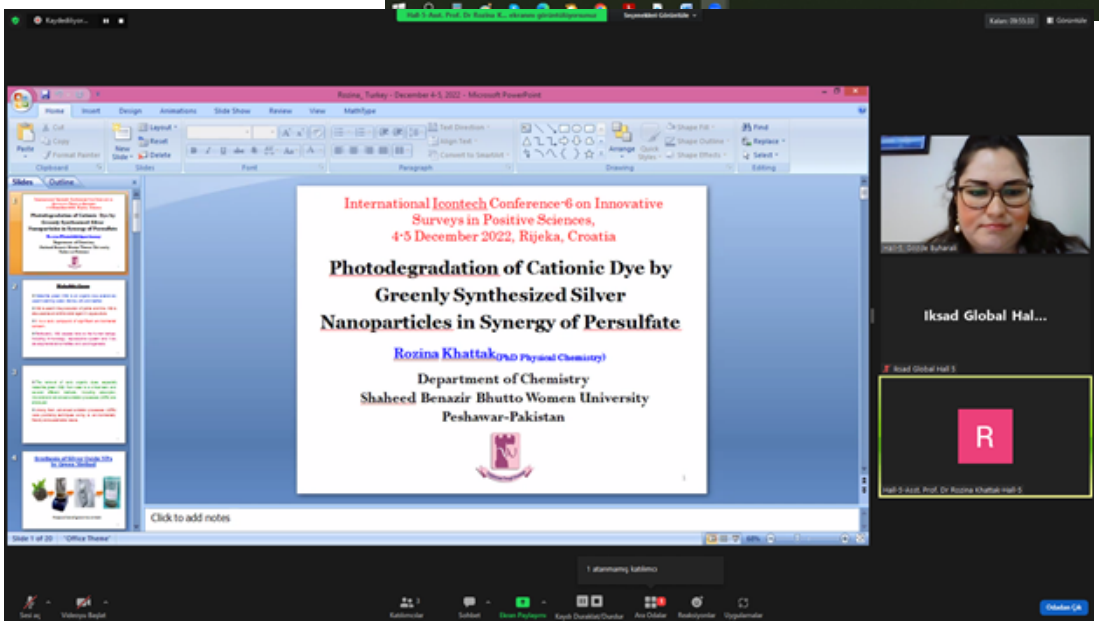

International Icontech Conference-6 on Innovative Surveys in Positive Sciences,
4-5 December 2022, Rijeka, Croatia
Photodegradation of Cationic Dye by Greenly Synthesized Silver Nanoparticles in Synergy of Persulfate
Rozina Khattak (Ph.D Physical Chemistry)
Department of Chemistry
Shaheed Benazir Bhutto Women University
Peshawar-Pakistan
Click to add notes
Iksad Global Hal...
R

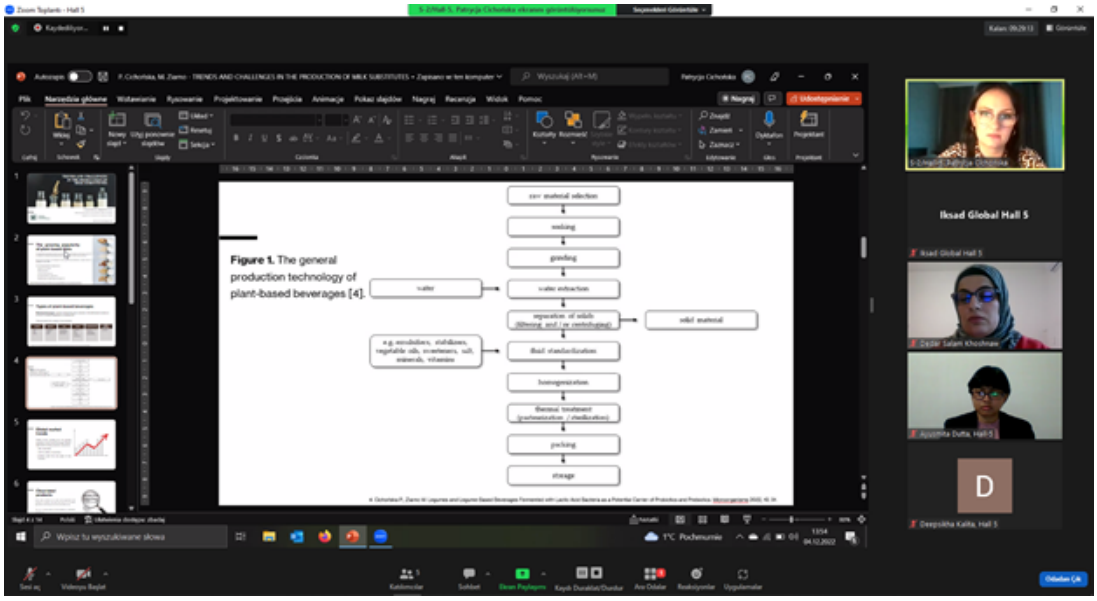
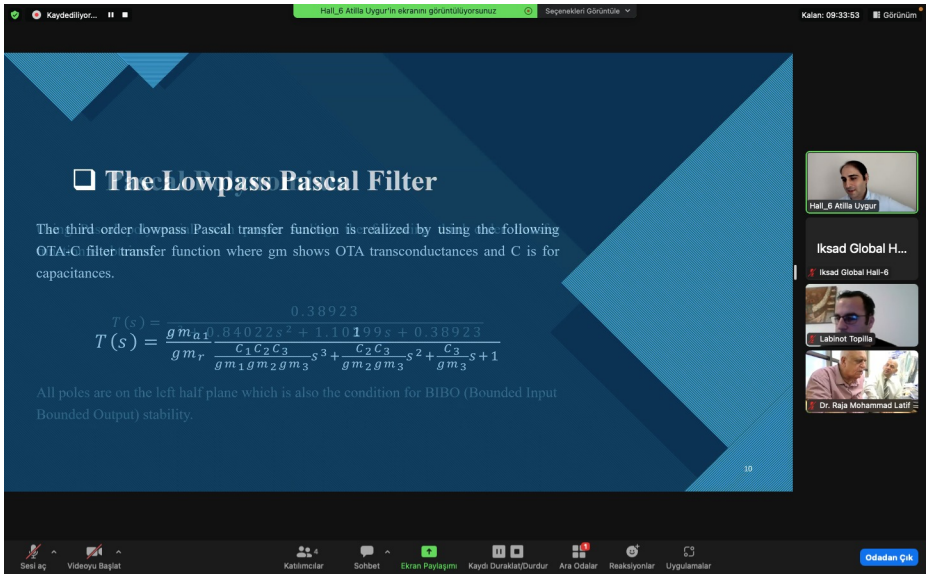


Figure 1. The general production technology of plant-based beverages [4].
Iksad Global Hall 5
D


The Lowpass Pascal Filter
The third order lowpass Pascal transfer function is realized by using the following OTA-C filter transfer function where gm shows OTA transconductances and C is for capacitances.
All poles are on the left half plane which is also the condition for BIBO (Bounded Input Bounded Output) stability.
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Dr. Raja Mohammad Latif
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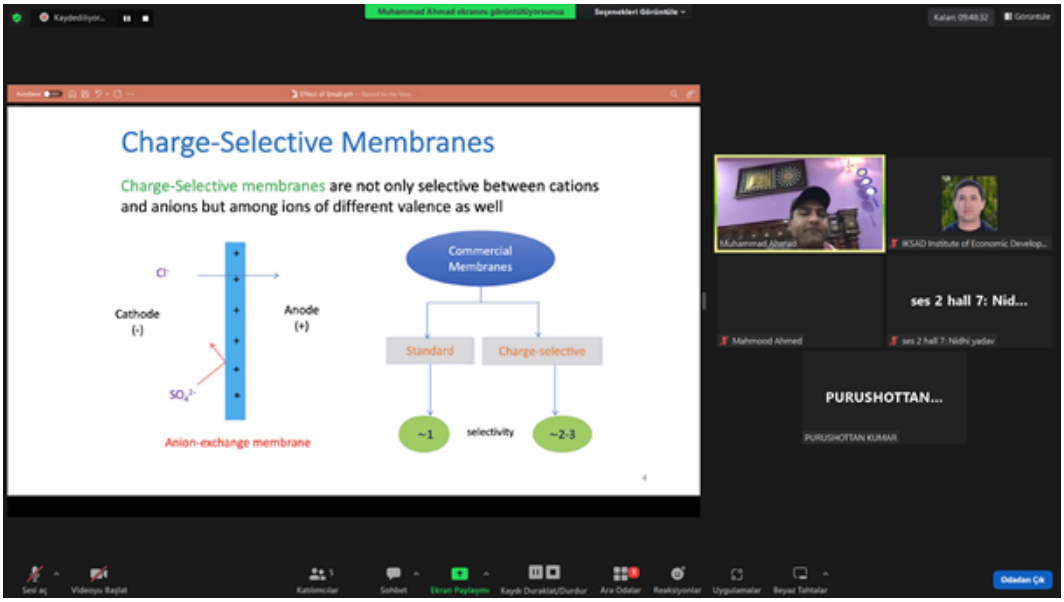
Charge-Selective Membranes
Charge-Selective membranes are not only selective between cations and anions but among ions of different valence as well
Cathode (-)
Anode (+)
Anion-exchange membrane
Commercial Membranes
Standard
Charge-selective
~1
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ALTININ İNSAN ORGANİZMASINDA GÖSTERDİĞİ KİMYASAL VE FİZYOLOJİK ÖZELLİKLER

CHEMICAL AND PHYSIOLOGICAL PROPERTIES SHOWN BY GOLD IN THE HUMAN ORGANISM

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ÖZET

Eski çağlardan beri takılar hem insanların estetik ihtiyaçlarını karşılamak hem de olumsuz enerjilerden korunmak için kullanılmıştır. İlk başta balık kulakları, kemikleri, dişleri vb. doğada kolayca bulundu. Tunç Çağı gibi malzemeler üzerine basit yöntemlerle yapılan bilezik ve kolyeler, metalurjinin gelişmesiyle yerini altın, gümüş, bronz gibi malzemelerden yapılan kuralcı takılara bıraktı. bel, kol ve bacaklar maddi ve manevi anlam ifade eden değerli eşyalar arasında bu güne kadar gelmiştir. Altının karakteristik sarı bir rengi vardır. Çoğunlukla yoğun metaldir. Altın, demir ve cam gibi daha az yoğun bir maddenin eşdeğer bir kısmından daha ağırdır. Altın yoğun ama aynı zamanda çok yumuşak bir metaldir. Metaller arasında şekillendirilmesi en kolay olanıdır.

Anahtar Kelimeler: Altının negatif-pozitif, Kimyasal, Fizyolojik özellikleri

ABSTRACT

Since ancient times, jewelry has been used both to satisfy people's aesthetic needs and to protect against negative energies. At first, fish ears, bones, teeth, etc. were easily found in nature. bracelets and necklaces made with simple methods on materials such as Bronze Age gave place to prescriptive jewelry made from materials such as gold, silver, and bronze along with the development of metallurgy. Jewelry divided into several parts such as accessories for the head, neck, waist, arms, and legs have a material and spiritual meaning. has come up to this day among the valuable items. Gold has a characteristic yellow color. It is mostly dense metal. Gold is heavier than an equivalent portion of a less dense substance such as iron and glass. Gold is dense but also a very soft metal. Among the metals, it is the easiest to shape .

Keywords: Negative-positive, Chemical, Physiological Properties of gold

KARACİĞER HASARLARI, FİZYOLOJİK ÖZELLİKLERİ VE ENDOKRİN SİSTEM İLE İLİŞKİSİ

LIVER DAMAGE, PHYSIOLOGICAL CHARACTERISTICS AND ITS RELATIONSHIP WITH THE ENDOCRINE SYSTEM

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ÖZET

Karaciğer en sık yaralanan karın organıdır. Çoğu karaciğer hasarı hafiftir ve konservatif tedavi ile kendiliğinden düzelir. Burada konservatif tedavi, hastanın gözlemlenmesinden ve bazı durumlarda arteriyografi ve embolizasyon kullanımından oluşur. Yine de karaciğer yaralanmalarının %14'ü cerrahi müdahale gerektirir.Karaciğer kan damarlarının veya safra yollarının seyrine göre önce ikiye sonra da 8 segmente ayrılır. Bu segmentlere erişim, çeşitli bağların kesilmesiyle karaciğerin tam mobilizasyonu sayesinde mümkündür.Karaciğer dış, arka kenarı, üzerindeki oluklar dışında seröz bir zarla kaplıdır. Bu zar karaciğere sert bir bağ dokusu tabakası ile bağlıdır. Seröz zarı olmayan alanlarda lifli zar çok kalındır ve portal venden portal venin dalları ile birlikte karaciğere girer ve onlara eşlik eder.

Anahtar Kelimeler: Karaciğer hastalıkları, Fizyolojisi, Endokrinolojik özellikler

ABSTRACT

The liver is the most frequently injured abdominal organ. Most liver damage is mild and resolves spontaneously with conservative treatment. Here, conservative treatment consists of observation of the patient and, in some cases, the use of arteriography and embolization. Nevertheless, 14% of liver injuries require surgical intervention. The liver is divided into two parts and then into 8 segments according to the course of blood vessels or bile ducts. Access to those segments is possible thanks to the complete mobilization of the liver by cutting various ligaments. The outer, back edge of the liver is covered with a serous membrane, except for the furrows on it. This membrane is attached to the liver by a layer of tough connective tissue. In areas without a serous membrane, the fibrous membrane is very thick and enters the liver along with the branches of the portal vein from the portal vein and accompanies them.

Keywords: Liver diseases, Physiology, Endocrinological features

THE EFFECTS OF APPLICATION OF HAWTHORN VINEGAR ON CD4 AND CD8 T LYMPHOCYTES EXPRESSION IN SPLEEN OF RATS

ALIÇ SİRKE UYGULAMASININ SIÇANLARIN DALAĞINDA CD4 VE CD8 T LENFOSİTLERİNİN EKSPRESYONU ÜZERİNE ETKİLERİ

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ABSTRACT

The immune system is a defense process in a response of antigen. Imunomodulators are compounds affecting the immune response by increasing the immune system and suppressing abnormal. Natural products are known to contain bioactive compounds such as antioxidant and antiinflammatory that can be used as immunomodulator. The purpose of this study was to examine the effect of natural content of hawthorn vinegar administration immunohistochemically on CD4 and CD8 release in the spleen tissue of rats.

Hawthorn vinegar was obtained by three methods. 1. classical fermentation method 2. The sample obtained in a jar in a water bath at 65 ^{0}C for 30 minutes by thermal pasteurization. 3. The sample to be created by trading with the Response Surface Method and Ultrasound. The experimental groups as follows: Control (C) (untreated group), KAS (Fermentation, oral gavage 1 ml/kg hawthorn vinegar), PAS (thermal pasteurization, oral gavage 1 ml/kg), UAS (ultrasound method, oral gavage, 1 ml/kg). Crossman's Triple staining was performed in order to examine spleen tissue histologicaly. The streptavidin-Biotin Peroxidase Complex method was used for CD4 and CD8 expression in the spleen. Statistical measurements were analized in order to determine whether there was a difference between groups of weight of spleen tissue.

As a results, application of hawthorn vinegar increased CD4 and CD8 expression. It was remarkabled that the most intense reaction was seemed in the UAS group. It was not seemed difference weight of spleen tissue between all groups. In conclusion, It can be concluded that hawthorn vinegar increase the immune response by activating immune cells.

Key words: CD4, CD8, Hawthorn, Spleen

ÖZET

Bağışıklık sistemi, antijene yanıt olarak bir savunma sürecidir. İmmünomodülatörler, bağışıklık sistemini artırarak ve anormallikleri baskılayarak bağışıklık tepkisini etkileyen bileşiklerdir. Doğal ürünlerin, immünomodülatör olarak kullanılabilecek antioksidan ve antiinflamatuar gibi biyoaktif bileşikler içerdiği bilinmektedir. Bu çalışmanın amacı, doğal içeriye sahip olan alıç sirkesi uygulamasının sıçanların dalak dokusunda CD4 ve CD8 salınımı üzerine etkilerinin immünohistokimyasal yöntemle incelenmesidir.

Alıç sirkesi üç yöntemle elde edildi. 1. Klasik fermantasyon yöntemi 2. Termal pastörizasyon ile 65 ^{0}C'de 30 dakika su banyosunda kavanozda elde edilen numune. 3. Tepki Yüzey Metodu ve Ultrason ile işlem yapılarak oluşturulacak örnek. Deney grupları: Kontrol (C) (tedavi uygulanmayan grup), KAS (Fermantasyon, oral gavaj 1 ml/kg alıç sirkesi), PAS (termal pastörizasyon, oral gavaj 1

ml/kg), UAS (ultrasound yöntemi, oral gavaj, 1 ml/kg). Dalak dokusunun histolojik olarak incelenmesi için Crossman'nın Üçlü boyaması yapıldı. Dalakta CD4 ve CD8 ekspresyonu için streptavidin-Biotin Peroxidase Complex yöntemi kullanıldı. Gruplar arasında dalak dokusu ağırlığı açısından fark olup olmadığını belirlemek için istatistiksel ölçümler yapıldı.

Sonuç olarak alıç sirkesi uygulaması CD4 ve CD8 ekspresyonunu arttırdı. En yoğun tepkinin ise UAS grubunda olduğu dikkat çekti. Tüm gruplar arasında dalak dokusu ağırlığı bakımından fark olmadığı görüldü. Sonuç olarak, alıç sirkesinin bağışıklık hücrelerini aktive ederek immün yanıtı arttırabileceği sonucuna varılabilir.

Anahtar kelimeler: CD4, CD8, Alıç, Dalak

HISTOMORPHOMETRIC EVALUATION OF THE EFFECTS OF CAPSAICIN APPLICATION ON SMALL INTESTINE OF RATS

KAPSAİCİN UYGULAMASININ SIÇANLARIN İNCE BAĞIRSAK DOKUSUNA ETKİLERİNİN HİSTOMORFOMETRİK DEĞERLENDİRİLMESİ

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ABSTRACT

Hot pepper, which has a very old history and is used as a spice. It has started to be used in the field of medicine today. Capsaicin is colorless, odorless, hydrophobic and is the active ingredient that gives hot pepper its bitterness. In studies conducted with capsaicin today, it has been shown that the effect of capsaicin varies according to the application dose, organ and duration of use. In this study, it was aimed to histomorphometrically evaluate PDGF-C (Platelet Derived Growth Factor-C) and PDGFR-α (Platelet Derived Growth Factor receptor-α) immunoreaction intensities and villus length/crypt depth ratio between groups in intestinal tissues of rats treated with Capsaicin.

Thirty Spraque dawley female rats were divided into 3 groups with 10 in each group. Group 1(sham); The mixture containing 10% ethanol, 1% Tween 20 and 80% distilled water was injected subcutaneously every day for a week with the help of an insulin injector according to the weight of the animal. Group 2 (oral), 1 mg/kg capsaicin was added to the rats' water. Group 3 (injection) were injected subcutaneously daily by adding 1 mg/kg capsaicin, dissolved in 10% ethanol, and then adding 1% Tween 20 and 80% distilled water. Intensity of PDGF-C and PDGFR-α immunoreaktivity and the ratio of villus length/crypt depth in per unit area were compared histomorphometrically between the groups. Streptavidin-Biotin-Peroxidase Complex method was used to compare the PDGF-C and PDGFR-α immunoreaction intensities in the small intestine. Crossman's triple staining was applied to the ratio of villus length to crypt depth

As a result of statistical analysis, it was determined that capsaicin increased intensities of immunoreaction of PDGF-C and PDGFR-α in duodenum, jejunum, ileum and villus length/crypt depth. From this study, it can be concluded that capsaicin can increase the absorption of nutrients and has positive effects on growth.

Key words: Capsaicin, PDGF-C, PDGFR-α, Small intestine

ÖZET

Çok eski geçmişe sahip olan ve baharat olarak kullanılan acı biber günümüzde tıp alanında da kullanılmaya başlanmıştır. Kapsaisin, renksiz, kokusuz, hidrofobik özellikte olup acı bibere acılığını veren etken maddesidir. Günümüzde kapsaisinle yapılan çalışmalarda kapsaisinin etkisinin uygulama dozuna, organa ve kullanım süresine göre değiştiği bildirilmiştir. Bu çalışmada Kapsaisin uygulanan sıçanların bağırsak dokularında PDGF-C (Platelet Kaynaklı büyüme Faktörü-C) ve PDGFR-α (Platelet

Kaynaklı Büyüme Faktörü reseptörü- α) immunoreaksiyon şiddetleri ve gruplar arasında villus uzunluğu/kript derinliği oranı histomorfometrik olarak değerlendirilmesi amaçlanmıştır.

30 adet Spraque dawley ırkı dişi sıçanlar her grupta 10 adet olacak şekilde 3 gruba ayrıldı. Grup 1 (sham); % 10 ethanol, % 1 Tween 20 ve % 80 distile su içeren karışım hayvanın ağırlığına göre insulin enjektörü yardımıyla bir hafta süre ile her gün subkutan yolla enjekte edildi. Grup 2 (oral), 1 mg/kg kapsaisin sıçanların içtikleri suya ilave edildi. Grup 3 (enjeksiyon) bulunan sıçanlara ise 1 mg/kg kapsaicin, % 10 ethanol içinde çözdürüldükten sonra % 1 Tween 20 ve % 80 distile su ilave edilerek günlük olarak subkutan yolla enjekte edildi. Birim alanda gruplar arasında PDGF-C ve PDGFR-α salınım şiddeti ve villus uzunluğunun/kript derinliğine oranı histomorfometrik olarak karşılaştırıldı. İnce bağırsak dokusunda PDGF-C ve PDGFR-α immunoreaksiyon şiddetlerinin karşılaştırması amacıyla immünohistokimyasal (Streptavidin-Biotin Peroxidase Complex) boyama ve villus uzunluğunun/kript derinliğine oranı için Crossman'nın üçlü boyama yöntemi uygulandı.

İstatistiksel analizler sonucunda, kapsaisin uygulamasının duodenum, jejenum ve ileumda PDGF-C ve PDGFR-α salınım şiddetlerini ve villus uzunluğu/kript derinliğini arttırdığı tespit edildi. Bu çalışmadan kapsaisinin besinlerin emilimini arttırabildiği ve büyüme üzerinde olumlu etkilere sahip olduğu sonucuna varılabilir.

Anahtar kelimeler: Kapsaicin, PDGF-C, PDGFR-α, İnce bağırsak

IN SILICO EVALUATION OF THE ANTIMALARIAL POTENTIAL OF THE PHYTOCONSTITUENTS OF THE AZADIRACHTA INDICA PLANT

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ABSTRACT

Background and objectives: Malaria, a parasitic protozoan disease caused primarily by Plasmodium falciparum, has killed millions of people in Africa, particularly those with meager or no access to orthodox medical facilities and therapies. Extracts from the Azadirachta indica (neem) plant is believed to possess antimalaria properties among the locals that rely on herbs. Numerous in - vivo studies have suggested the antimalarial properties of neem extract and phytochemicals. This study employs an in - silico method through molecular docking techniques to provide insight while adding credence to the antimalarial potential of phytochemicals of neem plants as claimed in folkloric medicine.

Methods: The crystal structure of P. falciparum, a causative parasite of malaria, was retrieved from the Protein Data Bank, and Azadirachta indica phytochemicals were obtained from the PubChem database. Molecular docking through virtual screening was carried out on the characterized phytochemicals. The bioactive compounds from the Azadirachta indica plant were investigated by docking with the crystal structure of the P. falciparum receptor and compared with standard antimalarial drugs (lumefantrine and artemisinin).

Results: Three Azadirachta indica phytochemicals (gedunnin, nimbinene and salanin) shows a competing binding energy and affinity when compared to the approved antimalarial drugs (lumefantrine and artemisinin). While the binding affinities for azadirachtin, nimbandiol and quercetin is lower than the affinity in artemisinin but comparable with lumefantrine.

Conclusion: This virtual screening verified and identified a potential phytochemical component of antimalarial properties against a protein target: 1m7o, P. falciparum triosephosphate isomerase (PfTIM).

Keywords: In silico, Azadiracta indica, Plasmodium falciparum, Phytochemical, 3-Phosphoglycerate (3 PG).

ADVANCED TREATMENT OF SOME EMERGING MICROPOLLUTANTS BY PHOTOCATALYTIC AND MEMBRANE PROCESSES FROM RAW HOSPITAL WASTEWATER AND COST ANALYSIS

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ABSTRACT

A great deal of macro and micropollutants in domestic, urban, hospital and industrial wastewaters are discharged to the receiving environment. Discharge standards have not been established for micropollutants, which are still being studied on measurement techniques and their chronic effects on living organisms. The conventional wastewater treatment plants (WWTPs) are designed according to the regulations concerning on macro pollutants in wastewaters. The conventional WWTPs treat the macro pollutants (Chemical Oxygen Demand [COD], Biological Oxygen Demand [BOD], Total Suspended Solids [TSS], Total Nitrogen [TN], Total Phosphorus [TP], heavy metals, etc.) with high efficiencies, however they are insufficient to treat micropollutants due to their physicochemical properties. In this study, one of the most dangerous categories for health (neurotoxic; α-Hexabromocyclododecane [α-HBCDD], carcinogen; N-Nitrosodimethylamine [NDMA], ecotoxic; Gemfibrozil [GFZ] and endocrine disruptor; Perfluorooctanesulfonic acid [PFOS]) were selected and treatability with advanced treatment techniques (photocatalytic and membrane) were investigated. The removal efficiencies of α-HBCDD, NDMA, GFZ and PFOS were obtained as 98%, 66%, 95% and 76%, respectively at the optimum experimental conditions (nanoparticle concentration of 0.50 g L^{-1} CeO_2, irradiation time of 45 min, UV light power of 210 W, temperature of 60 °C and pH of 7.00) for the photocatalytic treatment. The removal efficiencies of α-HBCDD, NDMA, GFZ and PFOS were found as 99%, 95%, 97% and 96%, respectively at the optimum experimental conditions (permeate flux [J_v] of 104.17 L m^{-2} h^{-1}, cross-flow velocity [CFV] of 0.10 m h^{-1}, transmembrane pressure [TMP] of 4.75 bar, pH of 8.00, temperature of 25°C, operation time of 1 h) for the membrane treatment with RO. Cost analysis was made for both treatment alternatives and the cost of treating 1 m^3 of raw hospital wastewater was calculated as 5.39 € for photocatalytic treatment with CeO_2 and 0.67 € for RO. RO was chosen as the most feasible method to treat the studied micropollutants (α-HBCDD, NDMA, GFZ and PFOS) from raw hospital wastewater.

Keywords: cost, hospital wastewater, membrane, micropollutants, photocatalytic.

ECONOMIC ANALYSIS OF SOLAR POWER PLANT FOR MERSİN PROVINCE
MERSİN İLİ İÇİN GES SANTRALİNİN EKONOMİKLİK ANALİZİ

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ABSTRACT

Nowadays, a large part of the energy used to meet the increasing living standards and the energy needs of the increasing population; fossil resources such as coal, oil and natural gas. Fossil fuels used with increasing energy demand cause air pollution, global warming and acid rain. Fossil fuels used today are getting depleted and replaced by renewable energy. There are renewable energy sources that can be used as an alternative to fossil fuels to meet the world's energy needs. These renewable energy sources are cleaner, cheaper and harmless than fossil fuels. Solar energy is one of the renewable energy sources. Turkey is a country that meets most of its energy needs from fossil fuels and is dependent on foreign sources for energy supply. For this reason, the country should reduce its dependence on fossil fuels by turning to renewable energy sources to protect its economic and strategic interests and meet its increasing energy needs. Turkey is in a geographically advantageous position to benefit from solar energy, which is renewable energy. Turkey's current potential position should be evaluated very well for renewable energy. In this context, in this study the annual energy yield of the solar power plant established in Mersin Tarsus District, which is located in the Mediterranean region and receives a high amount of solar radiation annually, and the cost and economic analysis of the solar power plant were examined.

Keywords: Solar energy, Renewable energy, Solar Power Plant, Mersin

ÖZET

Günümüzde artan yaşam standartları ve artan nüfusun enerji ihtiyacını karşılamak için kullanılan enerjinin büyük bir kısmını; fosil kaynaklar olan kömür, petrol ve doğalgaz oluşturmaktadır. Artan enerji ihtiyacı ile kullanılan fosil yakıtlar hava kirliliği, küresel ve ısınma asit yağmurlarına sebep olmaktadır. Günümüzde kullanılan fosil yakıtlar giderek tükenmekte ve yerini yenilenebilir enerjiye bırakmaktadır. Dünyanın enerji ihtiyacının karşılanabilmesi için fosil yakıtlara alternatif olarak başvurulacak yenilenebilir enerji kaynakları bulunmaktadır. Bu yenilenebilir enerji kaynakları fosil yakıtlara göre daha temiz, ucuz ve zararsızdır. Güneş enerjisi yenilenebilir enerji kaynaklarından biridir. Türkiye, enerji ihtiyacının büyük bir kısmını fosil yakıtlardan karşılayan ve enerji arzında dışa bağımlı bir ülkedir. Bu nedenle ülkenin ekonomik ve stratejik çıkarlarını korumak ve artan enerji ihtiyaçlarını karşılamak için fosil yakıtlara olan bağımlılığını yenilenebilir enerji kaynaklarına yönelerek azaltması gerekmektedir. Türkiye, yenilenebilir enerji olan güneş enerjisinden yararlanmak için coğrafi olarak avantajlı bir konumdadır. Türkiye'nin mevcut potansiyel konumu yenilenebilir enerji için çok iyi değerlendirilmelidir. Bu bağlamda, yapılan çalışmada Akdeniz bölgesinde yer alan ve yıllık olarak yüksek miktarda güneş radyasyonu alan Mersin Tarsus İlçesinde kurulan GES santralinin yıllık enerji kazanımı ile GES santralinin maliyet ve ekonomik analizi incelenmiştir.

Anahtar Kelime: Güneş enerjisi, Yenilenebilir enerji, GES Santrali, Mersin

NUTRACEUTICALS DENIPLANT IN THE NEUROPATHIC PAIN IN DOG WITH SPINAL CORD INJURY

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ABSTRACT

Background After spinal cord injury, intestinal dysfunction has a serious impact on physical and mental health, quality of life. The dysbiosis is thought to impair recovery by decreasing the production of short-chain fatty acids which play a role in suppressing inflammation within the central nervous system. The neuropathic pain, is directly or indirectly related to gut dysbiosis, which may be mediated by "gut-brain" interactions.

Objective Remodeling gut microbiota could be beneficial for the recovery of motor function after spinal cord injury. Targeting gut dysbiosis could have significant therapeutic value in the management of spinal cord injury. The objective of this presentation is to discuss the scientific evidence supporting the efficacy of nutraceuticals Deniplant in the neuropathic pain.

Materials and methods While surgical decompression is the recommended treatment for compressive injury, information is lacking on what treatment best targets contusive injury. Several methods for treating the contusive injury have been investigated in dogs but an optional treatment has yet to be determined. We will overview neuropathic pain and the use of nutraceuticals in spinal cord injury management, evaluated by clinical trials.

Results Studies have demonstrated the presence of gut dysbiosis secondary to spinal cord injury. Nutraceuticals and dietary supplements derived from herbs have been used and there is considerable evidence that nutraceuticals may play an important role in inflammation and motor function after spinal cord injury.

Conclusion The dysbiosis contributes to the onset and progression of intraspinal pathology after spinal cord injury. Canine studies have demonstrated that inflammatory mechanisms may play a critical role in canine spinal cord injury.

Keywords: gut microbiota, spinal cord injury, ”microbiota-gut-brain” axis, nutraceuticals Deniplant

THE POINTS TO BE CONSIDERED IN THE PRESERVATIVE SOLUTION UPTAKE, PENETRATION, AND RETENTION DETERMINATION STUDIES BEFORE AND AFTER PERMEABILITY IMPROVEMENT PRETREATMENTS IN WOOD

ODUNDA PERMEABİLİTE ARTIRICI ÖN İŞLEMLER ÖNCESİ VE SONRASI KORUYUCU SOLÜSYON ALINIMI, PENETRASYON VE RETENSİYON TESPİT ÇALIŞMALARINDA DİKKAT EDİLMESİ GEREKEN NOKTALAR

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ABSTRACT

Incising pretreatments are technological processes aiming to increase the permeability of some wood species that have low permeability, like spruce, larch, and Douglas-fir, by using such as immersing in water, steaming, applying solvent, microwave treatment, treating with enzymes, mechanically incising, laser incising, and incubating with blue-stain or wood-decay fungi, or bacteria. There are few studies including anatomical, chemical, and treatability features of refractory tree species exposed to incising processes; however, there is not a detailed study including some problems and recommendations about different incising pretreatment studies, i.e., the hyphal growth rate and penetration capacity of *Physisporinus vitreus* in bioincised wood by the fungus, copper distribution, copper leaching and fixation, the relation between copper distribution, the technological performance of incised and treated wood and wood anatomy of refractory tree species before and after different incising pretreatments. Low-cost and appropriate protection methods are needed to increase the service life of wooden materials produced from refractory wood species. Therefore, the present study will explain the points to be considered in the optimal incubation conditions, mycelium's growth velocity, preservative solution uptake (g), penetration (cm), and retention (kg/m^3) determination studies before and after permeability improvement pretreatments in wood. According to the reports in the literature on this subject (especially based on our previous studies), I want to make the following recommendations: (1) The copper salts in incised woods can be filtered from the outer sections to the inner sections within the wood due to some incising pretreatments. Therefore, they accumulate more near the surface. Because incising pretreatments normally increase the uptake of preservative solutions in refractory woods, it is considered that both solvent (water) and solute (copper salts) are present in the environment. Namely, it is believed that after different incising pretreatments, increases in permeability were mostly limited from the surface to the inner sections. Therefore, using more than one criterion and method to detect the retention and penetration of wood preservatives will be more reliable, (2) in order to better understand and compare the effects of incising pretreatments in refractory wood species, use the main control samples, the preferred wood in the forestry industry such as the sapwood of Scots pine (*Pinus sylvestris* L.), (3) in order to get better understanding of the increase in permeability resulting from the different incising pretreatments, the chemical and anatomical properties of incised wood and dynamic interactions between chemical components and different incising pretreatments should be determined, (4) the optimum time for the bioincising process by *P. vitreus* is six weeks or, more properly, that corresponding to the controlled decay up to a 10 % weight loss, (5) the lignin functional groups within the wood are targeted adsorption sites for the transition metal ions regardless of the carrier solvent; therefore, as a result of degradation of these lignin groups by *P. vitreus*, it is expected that leaching would increase, especially during the weight loss of 10–15 %. Generally, the amounts of Cu leached from pretreated wood are proportional to the amounts of Cu absorbed during the pretreatments. Therefore, it is necessary to carry out leaching tests with the amount of wood preservatives taken after different incising pretreatments, (6) use either sapwood or heartwood parts of the wood in different incising pretreatments or impregnation processes due to their different treatability properties, (7) it is important that the physical properties mustn't be negatively altered and that the treatment should not weaken its

mechanical properties after all incising pretreatments, (8) in order to interpret the results more accurately and reliably, the differences in weight losses occurred in wood samples after different incising pretreatments should be compared, (9) in the bioincising process, the proper growth of *P. vitreus* and the intensity of fungal activity depends on all conditions (i.e., nutrient, temperature, water activity, oxygen, and pH) being favorable, while homogeneous bioincising depends on the complete coverage of the wood surface, (10) compare the uptake of the wood preservatives transverse and longitudinal to the axial tracheids in the samples from various refractory tree species, and (11) it is very important to choose the most suitable incising pretreatment methods for the refractory tree species before impregnation.

Keywords: Refractory wood species; Different incising pretreatments; Preservative uptake; Penetration; Retention; Leaching.

ÖZET

Delme (insizing) ön işlemleri, ladin, melez ve Duglas göknarı gibi permeabilitesi düşük olan bazı ağaç türlerinin suya daldırma, buharlama, solvent uygulama, mikrodalga işlemi, enzimlerle muamele, mekanik delme, lazer delme, mavi renk mantarları, odun çürüklük mantarları veya bakterilerle inkübe ederek permeabiliteyi artırmayı amaçlayan teknolojik işlemlerdir. Delme işlemleri uygulanmış emprenyesi güç ağaç türlerinin anatomik, kimyasal ve işlenebilirlik özelliklerine yönelik az sayıda çalışma mevcuttur. Ancak, farklı delme ön işlemlerinden önce ve sonra *Physisporinus vitreus* mantarı tarafından biyolojik delme uygulanmış odun içerisinde ilgili mantarın penetrasyon kapasitesi, hüfsel gelişim oranı, bakır dağılımı, bakır yıkanması ve fiksasyonu, delme ön işlemine tabi tutulmuş ve işlenmiş odunun teknolojik performansı ile bakır dağılımı arasındaki ilişkiler ve emprenyesi güç ağaç türlerinin odun anatomisi hakkındaki bazı sorunları ve önerileri içeren ayrıntılı bir çalışmaya rastlanılmamıştır. Emprenyesi güç ağaç türlerinden üretilen ahşap malzemelerin hizmet ömrünün arttırılması için düşük maliyetli ve uygun koruma yöntemlerine ihtiyaç duyulmaktadır. Bu yüzden, mevcut çalışma, odunda permeabilite artırıcı ön işlemlerden önce ve sonra optimal inkübasyon koşulları, miselyum gelişme hızı, koruyucu çözelti alınımı (g), penetrasyon (cm) ve retensiyon (kg/m^3) tespit çalışmalarında dikkat edilmesi gereken noktaları açıklamaya yöneliktir. Bu konuda literatürde yer alan raporlara göre (özellikle daha önceki çalışmalarımıza dayanarak) şu tavsiyelerde bulunmak istiyorum: (1) İnsizinglenmiş odunların içindeki bakır tuzları bazı delme ön işlemlerinin uygulanması neticesinde dış yüzeylerden iç kısımlara doğru filtrelenebilmektedir. Bu nedenle bahsi edilen emprenye tuzları yüzeye yakın kısımlarda daha fazla birikirler. Çünkü emprenyesi güç odunlarda delme ön işlemleri normalde koruyucu çözeltilerin alınımını artırır. Dikkat edilirse ortamda hem çözücü (su) hem de çözünen (bakır tuzları) mevcuttur. Yani, farklı delme ön işlemlerinin ardından meydana gelen permeabilitedeki artışların yüzeyden iç kısımlara doğru çoğunlukla sınırlandırıldığına inanılmaktadır. Bu nedenle odun koruyucuların retensiyon ve penetrasyonunun tespiti için birden fazla kriter ve yöntemin kullanılması daha güvenilir olacaktır, (2) emprenyesi güç ağaç türlerinde delme ön işlemlerinin etkilerini daha iyi anlamak ve karşılaştırmak için, ana kontrol örneklerinin sarıçam (*Pinus sylvestris* L.) diri odunu gibi ormancılık endüstrisinde tercih edilen odunlardan seçilerek kullanılması daha uygun olacaktır, (3) farklı delme ön işlemleri neticesinde meydana gelen permeabilite artışının daha iyi anlaşılması için, delme işlemi uygulanmış odunun kimyasal ve anatomik özellikleri ile kimyasal bileşenler ve farklı delme ön işlemleri arasındaki dinamik etkileşimler belirlenmelidir, (4) *P. vitreus* mantarı vasıtasıyla gerçekleştirilen biyolojik delme işlemi için optimum süre altı haftadır veya daha doğrusu, %10 luk bir ağırlık kaybına kadar ki kontrollü çürütmeye karşılık gelen süredir, (5) odundaki fonksiyonel lignin grupları, taşıyıcı çözücünün ne olduğu fark etmeksizin geçiş metal iyonlarının tutunduğu adsorpsiyon bölgeleridir; bu nedenle, bahsi edilen lignin gruplarının *P. vitreus* mantarı tarafından degrede edilmesinin bir sonucu olarak, özellikle % 10-15 lik ağırlık kaybı esnasında yıkanmanın artması beklenmektedir. Genel olarak, ön işlem görmüş odundan yıkanan Cu miktarları, ön işlemler esnasında alınan Cu miktarları ile orantılıdır. Bu nedenle, farklı delme ön işlemleri neticesinde alınan odun koruyucu miktarı ile beraber yıkanma testlerinin de yapılması gerekmektedir, (6) farklı işlenebilirlik özellikleri nedeniyle odunun diri odun veya öz odun kısımlarının farklı delme ön işlemlerinde veya emprenye işlemlerinde kullanılması gerekir, (7) tüm delme ön işlemleri neticesinde fiziksel özelliklerin olumsuz yönde değişmemesi ve bu işlemlerin mekanik özellikleri düşürmemesi

önemlidir, (8) sonuçların daha doğru ve güvenilir bir şekilde yorumlanabilmesi için farklı delme ön işlemlerinden sonra odun örneklerinde meydana gelen ağırlık kayıplarındaki farklılıklar karşılaştırılmalıdır, (9) biyolojik delme işleminde, *P. vitreus*'un uygun şekilde gelişmesi ve mantar aktivitesinin yoğunluğu, tüm koşulların (yani, besin, sıcaklık, su aktivitesi, oksijen ve pH) uygun olmasına bağlıdır. Çünkü homojen bir biyolojik delme mantarın odun yüzeyini tamamen sarmasına bağlıdır, (10) çeşitli emprenyesi güç ağaç türlerinden elde edilen örneklerde boyuna traheidlere paralel ve dik yönde alınan odun koruyucuların miktarlarını karşılaştırınız ve (11) emprenye işlemlerinden önce emprenyesi güç ağaç türleri için en uygun delme ön işlem yöntemlerinin seçilmesi çok önemlidir.

Anahtar kelimeler: Emprenyesi güç odun türleri; Farklı delme ön işlemleri; Koruyucu alınımı; Penetrasyon; Retensiyon; Yıkanma.

PHOTODEGRADATION OF CATIONIC DYE BY GREENLY SYNTHESIZED SILVER NANOPARTICLES IN SYNERGY OF PERSULFATE

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ABSTRACT

Photocatalysis is a process that has the potential to remove water pollutants because it is sustainable and benign to the environmental. This study examined the effects of a nanostructured silver oxide photocatalyst on the degradtion of the organic contaminant malachite green (MG), which is recalcitrant. An eco-friendly, low-cost process using green tea leaf extract was used to create the silver oxide nanoparticles. By using SEM, EDX, XRD, FTIR, and UV-visible spectroscopy, the surface, morphological, and optical characteristics of the produced Ag_2O nanoparticles were identified. The photoactivity of the nanoparticles was good, as evidenced by the 83% degradation of malachite green (MG) in 3 hours. Persulfate ions demonstrated a substantial synergistic effect on the efficacy of solar/Ag_2O photocatalysis, as evidenced by the total elimination of MG in 21 min. The findings showed that solar/Ag_2O photocatalysis, in particular solar/Ag_2O/PS photocatalysis, is an effective way to remove harmful organic pollutants from the aquatic environment, including malachite green.

Keywords: Silver oxide nanoparticles, photcatalysis, persulfate, synergistic effect

PHYTOCHEMICAL AND ANTIOXIDANT POTENCIAL OF PARKIA BIGLOBOSA HUSK METHANOL EXTRACT IN ALBINO RATS

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ABSTRACT

This study assessed the determination of phytochemical constituents present in parkia biglobosa husk and antioxidants effect of its methanol extract on rats .The phytochemical property of methanol extract was determined using standard method of Harborne and Sofowora. The phytochemical screening of the husk methanol extract revealed the presence of alkaloid, saponins, tannins, flavonoids, steroids and glycosides. The quantitative phytochemical analysis revealed high content of tannins 42.8%, flavonoids 35.5%, steroids 32.6%, alkaloids 16%, saponins 14.5% and glycosides 3.2%. Acute toxicity was determined using up and down method, doses of 1000mg/kg, 2000mg/kg,3000mg/kg, 30000mg/kg,4000mg/kg and 5000mg/kg was administered orally and observed for 14 days.. The antioxidants was determined using standard method, the antioxidants studies show significant increase ($p>0.05$) in MDA as in the group induced with the CCL4 when compared with the normal and standard groups. Also the activity of the enzymatic antioxidants such as CAT, GSH and SOD was significantly low ($p<0.05$) in the induced group while non enzymatic antioxidants such as Vitamin C and Vitamin E was significantly decrease ($p<0.05$) in the induced group when compared with the normal and standard drug groups. However administration of the plant extract at various doses of 50mg/kg, 100mg/kg, 150mg/kg and 200mg/kg. This result suggest that, the husk methanol extract of the plant have antioxidants potential therapeutic and preventive efficacies which may be due to its phytochemicals content.

Key words: Parkia biglobosa husk, Acute toxicity, Cabon-tetrachloride, phytochemicals, and antioxidants.

FAILURE ANALYSIS OF ACRYLONITRILE BUTADIENE STYRENE (ABS) MATERIALS AND DAMAGE MODELING BY FRACTURE

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ABSTRACT

Polymer materials are distinguished by their simple and economical for-matting, versatility, lightness, and chemical stability. Despite their widespread use both in everyday life and in advanced technologies, these materials are generally still very poorly understood in regards to its chemical, physical and environmental, rheological and mechanical properties. The purpose of this study is to determine the notch effect on the mechanical behavior of Acrylonitrile Butadiene Styrene (ABS), which we carried out tensile tests on ABS rectangular test pieces for different backgrounds. The notch ranges from 1 mm to 18 mm. Subsequently we have based an approach, which consists in following the evolution of static damage as a function of the fraction of life test pieces notched, to know the critical fraction of life and which corresponds to a critical notch radius, which can be authorized. Second, we calculated the stress concentration factor by two methods to determine the critical stress concentration that usually precedes the sudden failure of a component. Finally, we will relate the damage factor Ds to the stress concentration factor through the fraction of life by using a nonlinear correlation, which makes it possible to predict the instant of acceleration of damage for a preventive maintenance.

Keywords: polymer; ABS; mechanical properties; stress concentration factor; damage

α(gg*)*-COMPACTNESS IN TOPOLOGICAL SPACES

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ABSTRACT

In 2022, T. Shyla Isaq Mary and G. Abhirami introduced and studied basic properties of a new class of sets in topological spaces namely alpha generalization of generalized star closed $\left(\alpha(gg)^*\text{-closed}\right)$ sets. We will extend the concept of compactness via $\alpha(gg)^*$-open sets by introducing $\alpha(gg)^*$-compactness in topological spaces and will investigate their relationships among them as well as their characterizations by making use of generalized mappings including $\alpha(gg)^*$-continuous functions and $\alpha(gg)^*$-irresolute functions. The objective of this paper is to introduce the new concepts called $\alpha(gg)^*$-compact space, $\alpha(gg)^*$-Lindelof space, countably $\alpha(gg)^*$-compact space, almost $\alpha(gg)^*$-compact space, and mildly $\alpha(gg)^*$-compact space in topological spaces and investigate fundamental properties and characterizations of these new types of mappings in topological spaces.

2020 AMS Subject Classification. Primary: 54B05, 54D20, 54D30.

Key words: Topological space, $\alpha(gg)^*$-closed set, $\alpha(gg)^*$-open set, $\alpha(gg)^*$-compact space, $\alpha(gg)^*$-Lindelof space, countably $\alpha(gg)^*$-compact space, almost $\alpha(gg)^*$-compact space, mildly $\alpha(gg)^*$-compact space.

$(r^*g^*)^{**}$-MAPPINGS IN TOPOLOGICAL SPACES

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ABSTRACT

In 2020, N. Meenakumari and T. Indira inroduced a new class of closed sets called $(r^*g^*)^{**}$ - closed *sets in topological spaces and investigated some basic properties. In this paper, we introduce* $(r^*g^*)^{**}$ - continuous *function,* $(r^*g^*)^{**}$ - irresolute *function,* $(r^*g^*)^{**}$ - open *function,* $(r^*g^*)^{**}$ - closed *function,* pre - $(r^*g^*)^{**}$ - open *function, and* pre - $(r^*g^*)^{**}$ - closed *function, and investigate several properties and characterizations of these new types of mappings in topological spaces.*

Mathematics Subject Classification (2020): 54C05, 54C08, 54C10.

Keywords and Phrases: Topological space, $(r^*g^*)^{**}$ - open set, $(r^*g^*)^{**}$ - closed set, $(r^*g^*)^{**}$ - interior set, $(r^*g^*)^{**}$ - closure set, $(r^*g^*)^{**}$ - continuous function, $(r^*g^*)^{**}$ - iirresolute function, $(r^*g^*)^{**}$ - open function, $(r^*g^*)^{**}$ - closed function, pre - $(r^*g^*)^{**}$ - open function, pre - $(r^*g^*)^{**}$ - closed function.

STRUCTURE-BASED DRUG REPURPOSING TO INHIBIT THE DNA GYRASE OF *Mycobacterium tuberculosis*

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Short Introduction:

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

Experiments and Key result findings:

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

References:

1. Agrawal A, Roué M, Spitzfaden C, Petrella S, Aubry A, Hann M, Bax B, Mayer C. *Biochem J*. 2013 Dec 1;456(2):263-73.

2. Stanger F V, Dehio C, Schirmer T. *PLoS One*. 2014 Sep 9; 9 (9):e107289. doi: 10.1371/journal.pone.0107289.

THE PREVALENCE OF URINARY TRACT INFECTION STRAINS AMONG PREGNANT WOMAN WITH *Escherichia coli* IN LAGOS STATE, NIGERIA

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ABSTRACT

The study was carried out to investigate the prevalence of Urinary Tract Infection among pregnant woman with *Escherichia coli* in Ojo Primary Health Centre, Lagos State, Nigeria. A total of 125 pregnant woman were enrolled in this study.UTI was diagnosed using the Mid-Stream Urine culture by using $>10^5$ colony forming unit as the significant level of the bacteria. The prevalence was found to be 13.0%, there was high incidence in age group of 21-25 years (22.31%). There was also high incidence of infection at the third trimester of pregnancy (39.23%) compared to the first trimester (4.615%) and second trimester (6.15%). according to their educational level, 5% were literate and 45% were illiterate and the prevalence of the pathogenic organism was 47% in woman who had the past clinical history of UTI and 40% been sexually active. Bacteria organisms isolated in the samples includes; *E. coli, Klebsiella spp* and *Proteus spp.* The findings shows that *E. coli* showed the highest significant of 18 (43.10%) over *Klebsiella spp* 03 (3.85%) and *Proteus spp* 02 (2.31%) in pregnant woman. It is therefore suggested that all pregnant woman should be thoroughly screened when attending the antenatal clinic and positive cases should be treated with the antibiotic drugs in other to reduce the adverse effects on both maternal and the fetal health.

Keywords: Prevalence, Urinary Tract Infection, Trimester, Antenatal care, pathogenic organism

ÇOK DEĞİŞKENLİ KUADRATİK KALİTE KAYIP FONKSİYONU İÇİN MAKSİMUM KAYIP VE KOŞULLU BEKLENEN DEĞER ANALİZLERİ

MAXIMUM LOSS AND CONDITIONAL EXPECTED VALUE ANALYSES FOR THE MULTIVARIATE QUADRATIC QUALITY LOSS FUNCTION

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ÖZET

Taguchi, kuadratik kalite kayıp fonksiyonu kullanarak, kaliteyi parasal kayıpla ölçmüştür. Bu fonksiyon, Pignatiello tarafından *n* boyutta genelleştirilince çok değişkenli kuadratik kalite kayıp fonksiyonu elde edilmiştir. Çok değişkenli kuadratik kalite kayıp fonksiyonu için koşulsuz beklenen değer analizi yapmak oldukça kolaydır. Öte yandan sadece beklenen değere dayalı karar verme iyi bir yaklaşım değildir. Bu nedenle matematiksel modelleme yardımıyla bu fonksiyonun bir çok açıdan incelenmesi yararlı olabilir. Bu çalışmada çok değişkenli normal dağılım varsayımı altında kalite kaybının dağınıklık bileşeni ile ilgili analizler yapılmıştır. Başka bir deyişle kalite kaybının yanlılık bileşeninin sıfır olduğu varsayılmıştır. Bu varsayım, ideal bir süreç tasarımının doğal bir sonucudur. Kalite karakteristiklerinin *n* boyuttaki güven bölgesi elipsoit iken çok değişkenli kuadratik kalite kayıp fonksiyonunun maksimum değeri Monte Carlo Simülasyon veya Levenberg – Marquardt Algoritması ile bulunabilir. Bu çalışmada Monte Carlo Simülasyonu için kısa bir algoritma verilmiştir. Ayrıca elipsoit güven bölgesinin sınırı üzerinde kalite kaybının koşullu beklenen değeri için matematiksel ifade verilmiştir. Teorik altyapı tamamlandıktan sonra ise açıklayıcı bir örnek verilmiştir. Burada farklı güven düzeyleri için kalite kaybının koşullu beklenen değerleri ve maksimumları bulunmuştur. Elde edilen sonuçlara göre güven düzeyi arttıkça koşullu beklenen değer ve maksimum kayıp çok daha hızlı artmaktadır. Ayrıca yüksek güven düzeyleri için bu değerler, kalite kaybının koşulsuz beklenen değerinden oldukça yüksektir. Dolayısıyla uç ama olası kalite kayıplarını incelemek için bu çalışmada önerilen bu iki metrik kullanılabilir.

Anahtar Kelimeler: Kalite, Kuadratik Fonksiyon, Çok Değişkenli Analiz, Maksimum Kayıp, Koşullu Beklenen Değer.

ABSTRACT

Taguchi measures the quality with monetary loss by using the quadratic quality loss function. When this function is generalized to *n* dimensions by Pignatiello, a multivariate quadratic quality loss function is obtained. It is quite easy to perform unconditional expected value analysis for the multivariate quadratic quality loss function. On the other hand, decision making based on only expected value is not a good approach. Thus, it may be useful to examine this function from many perspectives with the help of mathematical modelling. In this study, we perform the analyses related to the dispersion component of quality loss under the assumption of multivariate normal distribution. In other words, we assume that the bias component of quality loss is equal to zero. This assumption is a natural consequence of an ideal process design. While the n-dimensional confidence region of the quality characteristics is ellipsoid, the maximum value of the multivariate quadratic quality loss function can be found with Monte Carlo Simulation or Levenberg – Marquardt Algorithm. In this study, we give a short algorithm for Monte Carlo Simulation. In addition, we give a mathematical expression for the conditional expected value of the quality loss at the boundary of the ellipsoid confidence region. After laying down the theoretical background, we also give an explanatory example. Here, we find that the conditional expected values and maximums of the quality loss for different confidence levels. According to the results obtained, as the confidence level increases, the conditional expected value and the maximum loss increase much faster. In addition, for high confidence levels, these values are considerably higher than

the unconditional expected value of quality loss. Therefore, these two metric proposed in this study may be used to examine extreme but possible quality losses.

Key Words: Quality, Quadratic Function, Multivariate Analysis, Maximum Loss, Conditional Expected Value.

ARALIK DEĞERLİ ORTALAMA – VARYANS ANALİZİ: BİST 30 HOLDİNG HİSSELERİ ÜZERİNE BİR UYGULAMA

INTERVAL VALUED MEAN – VARIANCE ANALYSIS: AN APPLICATION ON BIST 30 HOLDING STOCKS

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ÖZET

Markowitz'in ortalama – varyans (OV) modeli Portföy Yönetimi Teorisini derinden etkilemiştir. Örneğin, risk ve çeşitlendirme kavramları OV modelinin tanıtılmasından bu yana portföy seçiminin merkezinde olmuştur. Öte yandan parametrelerinin tahminindeki istatistiksel hatalar nedeniyle bu model uygulamada genellikle kullanılmaz. Ortalama vektörünün tahmini daha zordur ve bu nedenle daha önemli bir sorundur. Dayanıklı OV modelleri bu sorunu ortadan kaldırmak için kullanılabilir. Öte yandan bu modeller en kötü durum odaklı olduğundan genellikle tutucu yatırımcılar ve finansal kurumlar için uygundur. Bu nedenle bu çalışmada portföyde kısa pozisyon ve risksiz varlık bulunabildiği varsayımları altında aralık değerli OV analizi yapılmıştır. Burada Temel Bileşenler Analizinden yararlanılmıştır ve temel bileşenler için aralık değerli optimal çözüm elde edilmiştir. Bu çözümlerden hangisinin seçileceği yatırımcılara bırakılmıştır. OV modeli bu analizde, klasik yaklaşımda portföy seçimine karşı gelmektedir. Dayanıklı OV modeli ise kötümser yaklaşımda portföy seçimine karşı gelmektedir. Bununla birlikte iyimser yaklaşımda portföy seçimi tanımlanmıştır. Ayrıca gelecekteki getirilere bağlı olarak en iyi ve en kötü portföy seçimleri için matematiksel ifadeler elde edilmiştir. Teorik altyapı oluşturulduktan sonra, 2016 (2017) yılı eğitim (test) periyotu olmak üzere BİST 30 holding hisselerinin gerçek veri seti kullanılarak bir uygulama yapılmıştır. Yapılan uygulamada iyimser (kötümser) yaklaşımın klasik yaklaşıma göre daha iyi (daha kötü) sonuçlar verdiği görülmüştür. Ayrıca iyimser (kötümser) yaklaşımdan daha iyi (daha kötü) sonuçlar da vardır. Dolayısıyla aralık değerli OV analizi, yatırımcılara esneklik sağlar ve doğru ellerde değerli bir araç olabilir.

Anahtar Kelimeler: Portföy Seçimi, Ortalama – Varyans Modeli, Parametre Belirsizliği, Temel Bileşenler Analizi, Uzman Bilgisi.

ABSTRACT

The mean – variance (MV) model has had a profound influence on the Portfolio Management Theory. For example, the concepts of risk and diversification have been in the centre of the portfolio selection since the MV model was introduced. On the other hand, it is not generally used in practice due to the statistical errors in the estimation of its parameters. The mean vector's estimation is harder and thus a more important problem. Robust MV models can be used to overcome this problem. On the other hand, they are generally suitable for the financial institutions or the conservative investors due to the worst-case orientation. Thus, in this study, we perform an interval valued MV analysis under the assumption that short positioning and risk-free asset are allowed in the portfolio. Here, we use Principal Components Analysis and derive interval valued optimal solutions for the principal components. It is left to investors to selection which of these solutions. In this analysis, MV model corresponds to the portfolio selection in the classical approach. The robust MV model corresponds to the portfolio selection in the pessimistic approach. In addition, we define the portfolio selection in the optimistic approach. Furthermore, we obtain mathematical expressions for the best and worst portfolio selection based on the future returns. After laying down the theoretical background, we make an application by using the real data set of BIST 30 holding stocks where the year 2016 (2017) is the training (testing) period. In our application, we observe that the optimistic (pessimistic) approach gives better (worse) results than the classical approach. In addition, there are better (worse) results than the optimistic (pessimistic)

approach. Thus, the interval valued MV analysis gives investors flexibility and may be a valuable tool in the right hands.

Key Words: Portfolio Selection, Mean – Variance Model, Parameter Uncertainty, Principal Components Analysis, Expert Knowledge.

ANTIUREASE EFFECT OF BENZENESULFONOHYDRAZIDES, IN VITRO AND IN SILICO STUDIES

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ABSTRACT

Keeping in view the therapeutic importance of ureases due to its involvement in different pathological conditions, its inhibition was investigated by newly synthesized benzenesulfonohydrazides. Elemental analysis, IR, 1H NMR and 13C NMR spectral studies were performed to elucidate the structure of benzenesulfonohydrazides. In vitro urease enzyme inhibition assay revealed the compound INS-5 was found to be the most potent (IC50 = 1.11±0.29µM) among the tested compounds. The compound INS-2 was competitive inhibitor with Ki value 5.60 µM while the compounds INS-1 and INS-5 were mixed type of inhibitors with Ki values 4.32 and 2.76 µM respectively. Ancillary to synthetic studies, DFT and TDDFT calculations at B3LYP/6-311G(d,p) level of theory were performed for comparative analysis of spectroscopic data, frontier molecular orbitals (FMOs), natural bond orbital (NBO) analysis and molecule electrostatic potential (MEP) surface. Overall, experimental findings were supported nicely by corresponding DFT computed results. The NBO analysis confirmed that the presence of hyperconjugative interactions are pivotal cause for stability of investigated compounds. Global reactivity descriptors were also calculated using the energies of FMOs energies. Molecular docking studies were performed to identify the plausible binding mode of the competitive inhibitor.

Keywords. Urease, Hydrazides, Disease, Docking studies

EFFECT OF SMALL PH ALTERATIONS ON THE TRANSPORTATION PROPERTIES OF IONS AND LIMITING CURRENTS THROUGH POLYELECTROLYTE MULTILAYERS DEPOSITED ON MEMBRANES

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ABSTRACT

Ion-exchange membranes coated with polyelectrolyte multilayers (PEMs) yield high monovalent/divalent ion selectivities. However, the poly(4-styrenesulfonate) (PSS)/protonated poly(allylamine) (PAH) coatings lower the current efficiencies and productivities due to a considerable decrease in the fluxes of ions. In this study, the cation fluxes and limiting currents through PEMs were increased appreciably by increasing the pH of the surrounding solutions from 6.5 to 8.3 while the achieved selectivities were still an order of magnitude greater than those through bare cation-exchange membranes. For example in Donnan dialysis, the achieved K^+/Mg^{2+} selectivity is >100 at pH 8.3 through $(PAH/PSS)_5$PAH-coated Nafion cation-exchange membranes (CEMs), and the K^+ flux is 22 times greater than that at pH 6.5. In addition, the limiting current through PEMs coated CEMs increases almost 5 times at pH 8.3. Such an increase in the limiting currents enhances current efficiencies to ~80% in electrodialysis separations through membranes with a selectivity of 18 and a recovery of 50% monovalent ions from the source phase. Transmembrane potential measurements and increases in Cl-/SO42- selectivities (from 9.5 at pH 6.5 to ~70 at pH 8.3) for porous alumina membranes coated with (PSS/PAH)5PSS films suggest that the coating becomes cation-permselective at higher pH. Increased cation transference numbers in polyelectrolyte coatings likely lead to the enhanced limiting currents for coated Nafion at higher pH. Finally, $(PAH/PSS)_5$PAH-coated Nafion shows a Li^+/Mg^{2+} Donnan dialysis selectivity >800 at neutral pH and a selectivity of 10 at pH 8.3. However, the Li+ flux is 6 times greater at pH 8.3, which might make operation at the higher pH desirable.

PRESCRIBING PATTERN OF ANTIBACTERIAL AGENTS IN ADULT POPULATION: ASSESSMENT OF EFFICACY AND HARMS ASSOCIATED WITH IRRATIONAL PRACTICES

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ABSTRACT

Assessment of drug utilization pattern may improve the clinical outcomes, prevent irrational antibiotic practice, compliance of guideline towards medical practice/standards and may help to avoid drug-drug interactions. It measures the quality of care (QoC) and sustainability of medication therapy by determining drug utilization data in health management. Retrospective study was conducted for a duration of six months in qualitative and cross section manner in multifaceted tertiary care setups in Karachi Pakistan. Using hospital information system, the respective record of 250 Patients prescribed with selective antibiotics including intravenous(iv) ciprofloxacin, amikacin and meropenem admitted to various hospital departments and units were incorporated in this study. Exclusion criteria include Patient having incomplete medications or data records. The essential information was noted in a data collection form by well-trained pharmacists. The internal *consistency and reliability* of questionnaire was determined by the Coefficient of spearman correlation and also Cronbach's α values. Data collection form comprise of multiple section which include demographic information, whereas prescribing variables for selected antibiotic were also recorded with respect to duration of treatment, administered dose, frequency of administration and dosing interval. Clinical outcome measures with respect to therapy success or failure. After collection of required information, data was descriptively analyzed using software Statistical Package for the Social Sciences (version 20). Qualitative data was evaluated with respect to frequency and percentages whereas quantitative expressions were determined in terms of mean and standard deviations. Antibiotic rationalization odds ratios (ORs) were estimated taking 95 % confidence intervals with level of statistical significance set at $P<0.05$. In this study, evaluation of prescribing pattern determine that incorrect dose was administered to 36.25% of patient while wrong dose interval was found to be in 30.20% patients. Higher utilization of ciprofloxacin was noted in gastroenterology unit. Meropenem and ciprofloxacin were utilized in least inappropriate manner. Frequency of selected antibiotics in terms of Poly Pharmacy was also observed. Clinical outcome with respect to therapeutic success and failure was measured, success rate was found to be 89%,85%,86% for Ciprofloxacin, Meropenem and Amikacin respectively while, higher mortality rate was observed in Meropenem

Key words: Drug utilization evaluation, Antibiotic, Clinical outcomes, Prescribing Pattern

IN VIVO TOXICITY OF CADMIUM CHLORIDE IN ALBINO RATS AND PROTECTIVE EFFECTS OF VITAMIN B1 AND NUTRIENTS HEMATO-BIOCHEMICAL EFFECTS OF CADMIUM INTOXICATED ALBINO RATS WITH ZN, VITAMIN B1 AND NUTRIENTS

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ABSTRACT

The goal of the current investigation was to determine whether certain dietary components would be advantageous when given to rats that were exposed to cadmium (Cd) both singly and in combination. Based on several biochemical indicators, the physiological response of Cd intoxication on albino rats was assessed toward hepatotoxicity and haematotoxicity.

The results of present study shows the effects of dietary nutrients in rats exposed to cadmium (2 mg/kg) subcutaneously with particular reference to liver, kidney and blood. The overall toxic effects of continuous exposure to cadmium were assessed by monitoring body weight and organ-body weight ratio in rats. A significant decrease was observed in body weight of rats exposed to cadmium as compared to control rats. Exposure of rats to Cd significantly increased the organ body weight ratio as compared to the control groups. However, Cd exposed rats when concomitantly treated with dietary nutrients tended to normalize the organ body weight ratios very close to untreated controls.

Results clearly show that administration of Cd resulted in a significant decrease of Hb, GSH and PCV. Further, treatment with dietary nutrients alone and their combination recovered almost normal values. Exposure to Cd resulted in gradual increase in hepatic and renal markers in blood serum. However, Cd exposed rats following treatment with dietary nutrients individually and in combination showed a marked improvement in serum variables.

Oral supplementation of dietary nutrients with simultaneous Cd treatment increased the antioxidant enzyme activities in liver and kidney when compared to rats treated with Cd alone.

Key words: Cadmium, Essential metal, Antioxidant, Methionine,

RELATION BETWEEN MOTIVATION AND PERFORMANCE AT NURSES OF SHKODER

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Purpose:

This study aims to look at the importance of the motivation of individuals at work, in relation to the factors that influence it, as well as to measure the relationship that exists between motivation and the needs of the individual.

Various incentives motivate a person to learn and perform in his/her work. Here we can mention the satisfaction they get from the work done, self-respect, achievement of personal objectives. No system moves without motivation and no organization can achieve its objectives without motivating human capital.

This work mainly focuses on the relationship between the influence of motivation and performances of nurses in health institutions.

Method:

The study focused on Shkodra and involved 130 nurses of different ages, public and private employees. A Likert scale questionnaire was used, with data from the period January 2022 -June 2022.

Conclusions:

This study brings us to the conclusion that motivation can make employees to better use their skills, with enthusiasm and effectiveness for the successful achievement of individual and organizational objectives. Unfortunately we see that motivation of nurses in public and private institutions leaves much to be desired.

Keywords: motivation, nurse, performance.

THE PROMISE AND LIMITATIONS OF ALGORITHMS IN ARTIFICIAL INTELLIGENCE FOR HEALTHCARE

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ABSTRACT

Global spending on intelligence and AI systems will reach more than $ 204 billion by 2025.The AI industry will generate up to $ 119 billion a year by 2025. There will be 8 billion voice assistants by 2023. By 2030, China will become the largest AI market, accounting for 26% of the global AI market share.. AI market will grow to $ 190 billion by 2025 . Majority of business applications will use AI by 2025 . Current business AI acquisition

• Recognition increased significantly during the COVID-19 epidemic, growing by 37% in finance, 27% in stores, and 20% in IT.

• 37% of organizations in 2019 used AI in the workplace.

• The number of businesses using AI in business has grown by 270% between 2015 and 2019. Marketing and marketing prioritize AI and machine learning more than any other department in business today . The demand for AI talent has doubled in the last two years. Technology and financial services companies currently absorb more then 60% of AI talents. For those businesses that are already in the AI crisis, the best performing companies have said that there are twice as many opportunities for their peers to use technology in advertising. Surprisingly, data analysis is the key to AI-focused businesses, and personalization of the site is the second most frequently cited case used by AI. Many executives believe that the most important benefit of artificial intelligence is providing data that can be used to make data-driven decisions. Large companies (those with at least 100,000 employees) are the most likely to have an AI strategy, but only half have one .

Keywords: AI, Health care , Algorithm, Challenges

HEALTH DISTRICT GOVERNANCE AND POWER RELATIONS IN BURKINA FASO

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Abstract

Introduction

The pluralistic nature of the governance of the health system with the multiplicity of actors disrupts power relations. Since the adoption of the Bamako Initiative in 1987 in Burkina Faso, we have noted the presence of community representatives in the decision-making space of health districts. They participate alongside government representatives in the decision-making process. This article aims to analyze the influence of the different actors involved in the governance of a health district in Burkina Faso.

Methodology

A total of 32 people were included in the study. These people were divided into three main groups: members of the district team (n=9), managers of the government's deconcentrated technical services (n=8) and community representatives (n=15). The data was collected through individual interviews. The content analysis method was used. NVIVO software was used for data processing.

Results

The results indicate that community representatives have little influence in the decision-making process at the health district level. Indeed, all the resources that allow actors to influence exchanges are beyond their reach. Language skills, expertise, and economic capital are the main resources that are mobilized in this space. They are easily mobilized in interactions by both health district officials and community representatives. As a result, the views of the communities are poorly taken into account in the governance of health districts in Burkina Faso.

Conclusion

The article notes that mastery of the language of communication, economic situation, and expertise on health issues give more scope for action to health district officials than to communities.

Keywords: Governance, health district, health system, power relations, Burkina Faso

INVESTIGATION OF BURST STRENGTH, ABRASION RESISTANCE AND PILLING RESISTANCE PROPERTIES OF KNITTED FABRICS PRODUCED FROM 100% CARDED COTTON RING AND PROSPIN® YARNS

%100 KARDE PAMUK RİNG VE PROSPIN® İPLİKLERİNDEN ÜRETİLEN ÖRME KUMAŞLARIN PATLAMA MUKAVEMETİ, AŞINMA DAYANIMI VE BONCUKLANMA DİRENCİ ÖZELLİKLERİNİN İNCELENMESİ

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ABSTRACT

In this study, new and original modified ring yarns called "ProSPIN®" were used together with conventional ring yarns for the production of knitted fabrics. The basic principle of the ProSPIN spinning system, which emerged as a result of the efforts to improve the spinning triangle that exists in the ring spinning system and affects the yarn properties negatively, is based on the separation of the roving fed to a unit in the ring spinning machine into two strands at the exit of the drafting system with the help of a compactor, and the two fiber groups that come out as compacted in two separate strands, taking the twist coming from the traveler-ring system and coming together to form the yarn. The aim of this study is to comparatively examine the abrasion, pilling and bursting strength properties of knitted fabrics produced using ring and their equivalent ProSPIN yarns. For this purpose, single jersey fabrics were produced from 100% carded cotton ring and their equivalent ProSPIN yarns with twist coefficients αe 3,5 and yarn counts Ne 12, Ne 16, Ne 20 and Ne 28. Burst strength, abrasion resistance and pilling resistance properties of the fabrics produced were investigated. When the test results were examined, it was seen that the burst strength, abrasion resistance and pilling resistance values of single jersey fabrics produced using ProSPIN yarns were higher. With this study, it is aimed to transfer the data, evaluation and results of some basic performance properties of single jersey fabrics produced from ring and their equivalent ProSPIN yarns to the sector and researchers.

Keywords: Ring Yarn, ProSPIN Yarn, Single Jersey Fabric, Burst Strength, Abrasion Resistance, Pilling Resistance

ÖZET

Bu çalışmada, örme kumaşların üretimi için konvansiyonel ring iplikler ile birlikte ‘‘ProSPIN®’’ adı verilen yeni ve özgün modifiye ring iplikler kullanılmıştır. Ring iplik eğirme sisteminde var olan ve iplik özelliklerini olumsuz etkileyen eğirme üçgenini iyileştirmeye yönelik çabaların sonucunda ortaya çıkan ProSPIN iplik eğirme sisteminin temel prensibi, ring iplik makinesindeki bir üniteye beslenen fitilin, çekim sisteminin çıkışında, bir kompaktör yardımıyla iki kola ayrılması, iki ayrı kolda kompaktlaştırılmış olarak çıkan iki lif topluluğunun, kopça-bilezik sisteminden gelen bükümü alarak, ipliği oluşturacak şekilde bir araya gelmesine dayanmaktadır. Bu çalışmanın amacı, ring ve eşleniği ProSPIN iplikler kullanılarak üretilen örme kumaşların aşınma, boncuklanma ve patlama mukavemeti özelliklerini karşılaştırmalı olarak incelemektir. Bu amaçla büküm katsayıları α_e 3,5 ve iplik numaraları Ne 12, Ne 16, Ne 20 ve Ne 28 olan %100 karde pamuk ring ve eşleniği olan ProSPIN ipliklerden süprem kumaşlar üretilmiştir. Üretilen kumaşların patlama mukavemeti, aşınma dayanımı ve boncuklanma direnci özellikleri incelenmiştir. Test sonuçları incelendiğinde, ProSPIN iplikler kullanılarak üretilen

süprem kumaşların patlama mukavemeti, aşınma dayanımı ve boncuklanma direnci değerlerinin daha yüksek olduğu görülmüştür. Bu çalışma ile ring ve eşleniği olan ProSPIN ipliklerden üretilmiş süprem kumaşların bazı temel performans özelliklerine ait veri, değerlendirme ve sonuçların sektöre ve araştırmacılara aktarılması hedeflenmiştir.

Anahtar Kelimeler: Ring İplik, ProSPIN İplik, Süprem Kumaş, Patlama Mukavemeti, Aşınma Dayanımı, Boncuklanma Direnci

DYE REMOVAL BY WASTE-DERIVED SULFONATED POLYSTYRENE

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ABSTRACT

Polystyrene (PS), one of the most used polymers in everyday life, has a low recycling rate due to its inexpensive virgin resin. In order to make polystyrene waste (WPS) recycling advantageous, it is possible to change it chemically, introducing heteroatoms in the polymer chain thus transforming the waste into a material with more added value. A strong polyanion, polystyrene sulfonate (PSS) a material has been investigated for the removal of various dyes from water. PSS was characterized by Fourier-transform infrared spectroscopy (FT-IR) and thermogravimetry. The adsorbent showed good adsorption performance due to its functional groups and strong adsorption strengths. Selective removal of methylene blue (MB) from the MB/wastewater mixture can be achieved using this adsorbent. The removal efficiency was over 90% even after five cycles of adsorption-desorption.

Keywords: polystyrene,polystyrene sulfonate,Fourier-transform infrared spectroscopy, methylene blue.

USING OF GREEN SPACES IN HEALTHCARE FACILITIES AND ITS IMPACT ON HUMAN HEALTH

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ABSTRACT

Recently, many scientific papers discussed the importance of green spaces in designing hospitals and its impact on mental and physical well-being of hospital attenders. The natural environment around hospitals plays an important role in boosting the psychological well-being of patients and staff. The current study attempts to examine the impact of green spaces by providing a case study of evaluating and assessing outdoor and indoor gardens and their impact on patient outcomes and staff performance in Shar hospital in Sulaymaniyah, Iraq. In order to assess the green spaces in Shar hospital, the research adopted a qualitative and quantitative approach enhanced with field observation. The approach is oriented towards hospital attendees and their personal observations. In addition, the study concentrates on analyzing and assessing different key areas in Shar Hospital; outdoor gardens, main reception hall, waiting area, corridors, doctor rooms and patient rooms and wards. Then the important findings were derived in the design of outdoor and indoor greenery and its effects on hospital occupants. The research finds that gardens and plants have positive effects in reducing negative effects such as stress and fatigue on patients and staff. The research also finds that greenery beneficial in creating a healthy environment, and recommends that interior and outdoor green spaces should be designed and operated as therapeutic and healing spaces for all hospital occupants.

Keywords: greenery in hospitals and healthcare facilities, benefits of green spaces, positive effects of gardens on patients and staff, natural environment improves physiological and psychological effects.

DENİZCİLİK EĞİTİMİNDE OYUNLAŞTIRMA METODOLOJİSİNİN KULLANIMI ÜZERİNE DOĞAL DİL İŞLEME (NLP) TEKNİKLERİYLE BİR LİTERATÜR TARAMASI ÖRNEĞİ

AN EXAMPLE OF LITERATURE REVIEW WITH NATURAL LANGUAGE PROCESSING (NLP) TECHNIQUES ON THE USE OF GAMIFICATION METHODOLOGY IN MARITIME EDUCATION

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ÖZET

Günümüzde teknolojinin gelişmesi, eğitim ve öğretim sürecine dair farklı tekniklerin kullanılmasına ön ayak olmuştur. Denizcilik eğitiminde verimliliği artırmaya yönelik çalışmalar kapsamında son dönemde yenilikçi oyunlaştırma tekniklerinin ağırlık kazandığı görülmektedir. Oyunlaştırma, eğitim motivasyonu üzerindeki etkisinin fark edilmesi ile daha da önemli hale gelmiştir. Yenilikçi oyunlaştırma araçları olarak simülatörler, sanal ve artırılmış gerçeklik teknolojileri örnek gösterilebilir. Bu çalışmada "Maritime Education" ve "Gamification" anahtar kelimeleriyle literatür taraması yapılmış ve son 5 yılda yazılmış 20 makale rastgele seçilmiştir. Daha sonra seçilen 20 makale üzerinde Doğal Dil İşleme (NLP) teknikleri uygulanmıştır. Doğal Dil İşleme, bilgisayarların dili insanlara benzer şekilde kullanılmasına yönelik çalışmaların yürütüldüğü ve dil bilimi, bilgisayar bilimi gibi disiplinlerin bir arada çalıştığı yapay zekanın bir alt alanıdır. Temel amacı, çalışılan dilin bağlamsal nüansları da dahil olmak üzere, belgelerin içeriğini anlayabilen bir bilgisayar yazılımı ortaya koymaktır. Makalelerin analizinde ise konu modelleme yöntemi kullanılmıştır. Konu modelleme kümelemeye benzer şekilde, sayısal metrik hesaplamaları (Öklid, Manhattan vb.) kullanarak doğal konu gruplarını bulan ve bir araya getiren bir denetimsiz sınıflandırılma yöntemdir. Konu modelleme, büyük verileri otomatik olarak organize etmek, anlamak, aramak, özetlemek ve keşfedilen temalara göre sınıflandırmak için kullanılmaktadır. Özellikle büyük hacimli metinlerden gizli konuları çıkarmak için oldukça sık kullanılan bir tekniktir. Konu modelleme algoritmalarından bir olan Latent Dirichlet Allocation (LDA) algoritması, Türkçe'siyle "Gizli Dirichlet Ayırımı" (GDA) algoritması, konu modelleme algoritmaları arasında sadeliği ve kullanım kolaylığı yönünden öne çıkmaktadır. Doğal dil işlemede GDA, "Naive Bayes" teoremini esas alan ve hangi kelimenin hangi dokümanda hangi konuyu temsil ettiğini tahmin etmeye çalışan bir denetimsiz sınıflandırma modelidir. Kısaca gözlemlenmeyen gruplar aracılığıyla bir dizi gözlemi açıklayan üretken bir istatistiksel algoritmadır. Belirlenen makaleler ilk aşamada GDA Algoritması kullanılarak kendi içinde incelenmiş ve makalenin içeriği otomatik olarak tespit edilmiştir. Sonraki süreçte seçilen bütün makaleler bir arada yorumlanarak denizcilik eğitiminde oyunlaştırma ile ilgili yapılan araştırmaların ne yönde eğilimi olduğu ile ilgili değerlendirmelerde bulunulmuştur.

Anahtar Kelimeler: Denizcilik Eğitimi, Oyunlaştırma, Doğal Dil İşleme, Gizli Dirichlet Ayırımı, Konu Modelleme

ABSTRACT

Today, the development of technology has led to the use of different techniques in the education and training process. Within the scope of efforts to increase efficiency in maritime education, it's seen that innovative gamification techniques have gained weight recently. Gamification has become even more important with the realization of its effect on educational motivation. Simulators and virtual and augmented reality technologies can be given as examples of innovative gamification tools. In this study, a literature review was conducted with the keywords "Maritime Education" and "Gamification" and 20

articles written in the last 5 years were randomly selected. Then, Natural Language Processing (NLP) techniques were applied to 20 selected articles. Natural Language Processing is a sub-field of artificial intelligence in which studies are carried out for computers to use language in a similar way to humans and disciplines such as linguistics and computer science work together. Its main purpose is to produce computer software that can understand the content of documents, including the contextual nuances of the studied language. The subject modeling method was used in the analysis of the articles. Similar to clustering, subject modeling is an unsupervised classification method that finds and brings together natural subject groups using numerical metric calculations (Euclidean, Manhattan, etc.). Topic modeling is used to automatically organize, understand, search, summarize and categorize big data according to the themes discovered. It is a very common technique to extract hidden topics, especially from big datas. The Latent Dirichlet Allocation (LDA) algorithm, which is one of the topic modeling algorithms, stands out among the topic modeling algorithms in terms of simplicity and ease of use. In Natural Language Processing, LDA is an unsupervised classification model that is based on the "Naive Bayes" theorem and tries to predict which word represents which subject in which document. In short, it is a generative statistical algorithm that describes a set of observations through unobserved groups. The determined articles were examined in themselves using the GDA Algorithm at the first stage and the content of the article was determined automatically. In the next process, all the selected articles were interpreted together and evaluations were made about the tendency of the research on gamification in maritime education.

Keywords: Maritime Education, Gamification, Natural Language Processing, Latent Dirichlet Allocation, Topic Modeling

TRENDS AND CHALLENGES IN THE PRODUCTION OF MILK SUBSTITUTES

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ABSTRACT

In recent years, a growing popularity of plant-based diets and consumer tendencies to limit the consumption of animal products has been observed. Plant-based beverages are a group of products that are treated as milk substitutes. Their growing popularity is mainly due to allergies to cow's milk components, ethical and environmental awareness of consumers, the growing popularity of vegan diets, and the nutritional value of plant-based beverages. They do not have a specific definition in the literature, but are often referred to as products obtained by water extraction of shredded plant materials. Plant-based beverages available on the market are made of various raw materials, including e.g. cereals, legumes, seeds, and nuts. These products have many positive health effects on the human body due to the low content of saturated fatty acids in total fat and the presence of bioactive ingredients such as β-glucans, phytosterols, and polyphenols. Market trends resulting from the growing popularity of plant-based beverages indicate high interest among consumers of products with a clean label, with the addition of probiotics, and products made from new types of raw materials. However, producers of plant-based beverages face many challenges related mainly to their physicochemical stability, taste and texture. Milk substitutes contain small particles (e.g., fat droplets or plant cell fragments) dispersed in an aqueous medium. Their structure makes it difficult to maintain stability during storage, which directly influences their perception by consumers. The types of processes used in the production technology have a great influence on their properties. An important challenge for producers of milk substitutes is also to obtain a composition similar to that of cow's milk. Plant-based beverages are usually characterized by reduced protein and fat content, and increased carbohydrate content compared to milk. They also contain anti-nutritional factors (e.g. oligosaccharides, protease inhibitors, phytates, and saponins) that reduce the digestibility of proteins and bioavailability of some nutrients, as well as plant off-flavors that reduce their sensory acceptance. This work proposes solutions to these challenges, including technological aspects and natural processing methods such as fermentation and germination.

Keywords: plant-based beverages, food innovations, plant-based diet, food technology, consumer trends.

ACUTE AND SUBACUTE TOXICITY ASSESSMENT MODEL OF FERULA GROWING IN NORTHERN MOROCCO

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ABSTRACT

Over the last two decades, the use of herbal remedies has expanded globally and traditional medicine has become very popular. According to the World Health Organization, about 80% of the world population, especially in developing countries, relies on plants for their health care. From ancient times the medicinal properties of plants were discovered. Plants have been a constant source of drugs and recently, much emphasis has been placed on finding novel therapeutic agents from medicinal plants. Today many people prefer to use medicinal plants rather than chemical drugs Right from its beginning, the documentation of traditional knowledge especially on the medicinal uses of plants, has provided many important drugs of modern day. The genus of Ferula belongs to the Peucedaneae tribe, a subfamily of Apioideae, family of Umbelliferae with 133 species distributed throughout the Mediterranean area and central Asia. It is traditionally used for the treatment of different diseases, such as asthma, epilepsy, stomachache, flatulence, intestinal parasites, weak digestion, and influenza. Recent pharmacological and biological studies have also shown several activities, such as antioxidant, antiviral, antifungal, anti-diabetic, molluscicidal, antispasmodic and hypotensive. The present study was performed to investigate acute and subacute oral toxicity of Ferula fruit (28 days) in rats.

the obtained data revealed that oral administration of Ferula extract in rats for 28 successive days had no significant changes on body weight, body weight gain, the hematological parameters in rats all over the period of the experiment, and there are no significant increases in the activity of aspartate aminotransferase, alanine aminotransferase, alkaline phosphatase, creatinine and urea. Liver of treated rats showed mild changes as thrombosis and sinusoidal leukocytosis. It also showed portal infiltration with inflammatory cells, while kidney of treated rat showed an atrophy of glomerular tuft, thickening of parietal layer of Bowman capsule, and focal tubular necrosis. It also showed dilatation and congestion of renal blood vessels.

Keywords: genus Ferula, acute and subacute toxicity, kidney, liver, spleen,

ANALYSIS OF A NEW THZ GRAPHENE STRUCTURE WITH ELECTROMAGNETICALLY INDUCED TRANSPARENCY

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ABSTRACT

Currently, graphene is one of the most promising nanomaterials studied worldwide, due to its excellent electrical, optical, thermal and plasmonic properties. In this sense, the element carbon is of inestimable importance for the development of modern science and the various applications that can be used in different technological areas. Its excellent interaction with a wide range of frequencies of the electromagnetic spectrum, especially the Teraherz range, allows the material to be used in the development of various plasmonic nanodevices. In this sense, our work analyzes the possibility of developing a plasmonic nanodevice based on graphene, whose working principle is the propagation of plasmonic waves over graphene, generating dipole resonances in the structure, in addition to the effect of electromagnetically induced transparency. Our device is formed by a layer of silicon and silica, a waveguide of graphene and another layer of silica, where two graphene nanoribbons will be deposited, functioning as resonators. Graphene was modeled from its conductivity, where we used the Drude model. Through computer simulations using the Comsol Multiphysics software we analyzed the frequency response of the device, obtaining good levels for the device insertion and isolation losses. The electromagnetically induced transparency effect was observed when we simulated the device with the waveguide and the two resonators deposited on the silica above the guide, in which case the dipole mode is divided into two frequency bands at 9.8 THz and 10.1 THz, isolating the output port with isolation levels of 8 %, in addition to a region between the isolation frequencies at 9.3 THz, where we have the transmission of plasmonic waves from the input port to the devices output port, with transmission levels above 50 % of incident wave. We also show that the variation of the chemical potential of graphene through the application of external voltage on the structure evidences the dynamic control of the resonance frequencies, changing the operating range of the device. Thus, from our results it is possible to use the analyzed structure in the development of plasmonic devices such as filters, switches, sensors, among others.

Keywords: graphene, plasmonic, electromagnetically induced transparency

ASSESSEEMNT OF PHYSICO-CHEMICAL GROUNDWATER QUALITY OF THE GHISS-NEKOR AQUIFER (CENTRAL RIF, MOROCCO)

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ABSTRACT

The Ghiss-Nekor coastal aquifer is located in the North-East of the Moroccan Mediterranean sea and in South-East of the city of Al Hoceima.

This strategic resource of groundwater covers an area of approximately 100 km^2 exposed to various sources of pollution, both natural and anthropogenic, this means that the quality of this water resource should be controlled regularly. The aim of this study is to identify and evaluate the physico-chemical groundwater quality of the Ghiss-Nekor aquifer. . Analyzes focused on various parameters (such as water temperature, conductivity, pH, and major chemical elements) from 25 sampling sites.

According to the present study, the groundwater of the Ghiss-Nekor aquifer has a near-neutral pH respecting Moroccan drinking water standards, and is marketed by very high levels of mineralization. Graphical analysis indicated that the investigated waters were dominated by two types of chemical facies, and statistical analysis indicated that the 25 investigated water points could be classified into five different classes with similar chemical properties.

Keywords: Ghiss-Nekor aquifer, Groundwater, hydrochemistry.

AN OVERVIEW OF FACE RECOGNITION METHODS

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ABSTRACT

An important issue to be solved in face recognition is how to represent a face so that a computer vision system can recognize it regardless of its shape, size, position, and orientation. In this paper, we will give a qualitative and quantitative comparison of some existing Face recognition methods such as: Local Binary Patterns Histograms (LBPH), SIFT, eigenfaces, Zernike moments, etc. In the experimental, we used our own Faces data set. It contains 1200 images of 60 persons from the FSTE students and staff of different genders. The images are 128*128 pixels. Each person is represented by various views (20 images) in a variety of poses going from facial views to frontal views with various expressions. For the similarity measure, we used the l_1 norm defined by the Euclidean distance between descriptors. The recognition rate is the criterion for measuring the performance of the compared methods.

Keywords: Face recognition, Descriptors, LBPH, SIFT, Zernike moment

A QUALITATIVE STUDY ON THE EFFECTS OF MINDFULNESS ON PSYCHOLOGICAL WELL-BEING

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ABSTRACT

Mindfulness is a concept that positively affects many aspects of a person's well-being. The term means to be aware of the present moment or to be present in the "here and now". Meditation consists of several types, but the main focus of the study is mindfulness meditation, which is necessary for a person in the hustle and bustle of life. The article delves deeper into mindfulness, its contribution to well-being, and its measurement. A few minutes of mindfulness meditation can calm our minds, relax our bodies, and restore lost energy to our bodies. Mindfulness meditation can be practiced by keeping certain key points in mind and following a few simple steps. Mindfulness is beneficial in many ways, such as in improving and balancing physical, social, emotional, professional, societal, and spiritual well-being.

Key words: Mindfulness, well-being, meditation, self-awareness, non-judgemental, measurement.

Objectives: The main objective of the current study is to explore the effects of mindfulness meditation on overall psychological well-being and in enhancing memories in day-to-day life experiences.

Method: The current study is a qualitative analysis of the importance of mindfulness meditation in delivering quality of life and well-being, based on the existing documents and literature.

SCHOOL ACHIEVEMENT AND LEARNING DIFFICULTIES OF ADOLESCENTS FROM VIOLENT FAMILIES

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ABSTRACT

Introduction/Aim. Growing up of the adolescents in dysfunctional family systems affected by intimate partner violence was associated with difficulties in psychosocial development, including problems in schooling. The aim of the research was to determine the association of intimate partner violence with the intellectual functioning, problems and success in studying of adolescents.

Methods. The research was carried out on a sample of 154 adolescents, aged 15 – 18, divided in a IPV group of adolescents coming from dysfunctional families (n = 34) adolescents who grew up in intimate partner violence families and were exposed to intimate partner violence, which was reported and processed, and a control group (n = 120) adolescents from families in which according to the CPRS-R Questionnaire there was not found any form of violence, or any other psychosocial pathology. Questionnaire for the Examination of Psychosocial Characteristics of the Youth and Family (revised, CPRS-R) were used for measuring dimensions of family functioning. The data were processed by using descriptive statistics and linear regression analysis.

Results. Intimate partner violence was a significant ($p \leq 0.01$) predictor of disorders in adolescents intellectual functioning: lower school achievement (β=.408), excused absence from school (β= .618), unexcused absence from school (β =-.824), memory disorders (β =-.541), breaking rules and getting punished at school (β =-.592), conflicts with peers (β =-.460)**.** The development of adolescents who was growing up in violence families was associated with attention deficit (75.5% vs.27.9%), memory disorder (58, 8% vs.5.4%), significantly lower school achievement (3.26 vs.4.34), comparated to adolescents from functional familes.

Conclusion. Exposure of the adolescents to intimate partner violence was associated with the changes in intellectual functioning. Difficulties in cognitive processes, the most in attention, and memory, associated with disinterest in school, fears from school and big absence from school were connected with significantly lower school achievement and planning for the future.

Key words: intimate partner violence, school achievement of the adolescents, the intellectual functioning school achievement, problems with studying of adolescents

COVİD-19 SÜRECİNİN ÇİFTLİK HAYVAN YETİŞTİRİCİLİĞİ ve BESLENMESİNE ETKİLERİ

EFFECTS OF THE COVID-19 PROCESS ON FARM ANIMAL HUSBANDRY AND NUTRITION

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ÖZET

Dünya nüfus artışının beraberinde getirdiği beslenme, barınma ve sağlık sorunları insanoğlunu temel ihtiyaçların karşılanması hususunda yeni arayış ve çabaya yönlendirmektedir. Artan gıda ihtiyacı, tarım sektörü merkeze alınmış ancak aynı ivmeyle artış gösteremeyen tarım arazileri ve hayvan sayısı, daha fazla verim elde etmeye yönelik bir amaca evrilmiştir. Değişen ekonomik koşullar, gıda israfı, alternatif gıda maddeleriyle birlikte kaliteli gıda tüketimin değişmesi ve artan sağlık sorunlarıyla gelecekte insanoğlunun beslenmesi konusu tartışılmaya devam ederken; maksimum verim için 'doğal yapı' giderek bozulmuş, ekolojik tahribat, biyolojik çeşitliliğin özellikle bölgeye özgü 'yerli' hayvan sayılarının hızla azalması, canlı türlerinin yok olması ve salgın hastalıklar gibi birçok felaketi de beraberinde getirmiştir. Vahşi yaşam alanlarına yapılan müdahaleler ile insanoğlunun yayılmacı politikası daha fazla hayvan türü ile insanı karşı karşıya getirmiştir. Son olarak Çin'in Hubei eyaletine bağlı Wuhan kentinde ortaya çıkan ve tüm dünyayı etkisi altına alan Covid-19 salgını bozulan ekolojik dengenin sonuçlarından biridir. Diğer yandan, Covid-19 salgını, gıda ve tarım alanlarında başı çeken gelişmiş ülkelerle, gelişmekte olan, Doğu ve Güney Afrika gibi gıda sorununun olduğu ülkelerin arasındaki farkı daha da derinleştirmiştir. Nitekim, pandemi süresince seyahat ve ithalat-ihracata yönelik kısıtlamalar ülkelerin bitkisel ve hayvansal üretim açısından kendi kendilerine yeterli olmalarının ne denli önemli olduğu göstermiştir. Bu çalışmada, Covid-19 salgınının tarım sektörü ile özellikle çiftlik hayvan yetiştiriciliği ve beslenmesi üzerine etkileri derlenmiştir.

Anahtar kelimeler: Covid-19, hayvan yetiştirme, hayvan besleme, hayvansal gıda tüketimi.

ABSTRACT

Nutrition, shelter and health problems brought about by the increase in the world's population lead human beings to new quests and efforts to meet their main needs. The increasing necessity for food, the agricultural sector was centered, but the number of agricultural lands and animals that could not increase with the same acceleration, evolved into a goal of obtaining more efficiency. While the issue of nutrition of human beings in the future continues to be discussed with the changing economic conditions, food waste, changing consumption of quality food with alternative foodstuffs and increasing health problems; For maximum efficiency, the 'natural structure' has gradually deteriorated, and it has brought many disasters such as ecological destruction, the rapid decrease in biological diversity, especially the number of 'native' animals specific to the region, the extinction of living species and epidemics. Interventions in wildlife areas and the expansionist policy of mankind have brought more animal species and humans face to face. Finally, the Covid-19 epidemic, which emerged in the city of Wuhan in China's Hubei province and affected the whole world, is one of the results of the deteriorated ecological balance. On the other hand, the Covid-19 outbreak has further deepened the gap between developed countries leading in food and agriculture and developing countries with food problems such as East and South Africa. As

a matter of fact, restrictions on travel and import-export during the pandemic have shown how important it is for countries to be self-sufficient in terms of plant and animal production. In this study, the effects of the Covid-19 outbreak on the agricultural sector and especially on livestock breeding and nutrition were compiled.

Keywords: Covid-19, animal husbandry, animal nutrition, animal food consumption.

TANENLERİN RUMİNANT HAYVAN DAVRANIŞLARI ÜZERİNE ETKİLERİ

EFFECTS OF TANIN ON RUMINANT ANIMAL BEHAVIORS

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ÖZET

Tanenler, bitkilerde bulunan ve bitkiyi dışardan gelecek tehlikelere karşı koruyan doğal fenolik bileşiklerdir. Birçok yemde bulunan tanenlerin antioksidan, antiparaziter, antibakteriyel gibi olumlu etkilerinin yanı sıra zehirleyici etkileri de bulunmaktadır. Hidrolize tanenler toksik bileşiklerden %20 daha fazla zehir etkisine sahiptirler. Yem hammaddelerinde bulunan tanenlerin tolerans eşiği, sığırlarda %3-5 ve keçilerde %8-10 oranındadır. Özellikle bu konuda yapılan araştırmalar kaba yemlere alternatif olarak verilen birçok ağaç yaprağı, üretim atığı ve meyve çekirdeklerinin yüksek miktarda tanen içermesinin, hayvanlar üzerinde olumsuz etkileri olduğu yönündedir. Tanenlerle ilgili yapılmış çalışmaların önemli bir bölümünde, besleme üzerine olan etkilerine yer verilmiştir. Fakat tanenlerin hayvan davranışı üzerine etkilerine dair çalışmaların sayısı ise sınırlıdır. Oysaki hayvan davranışlarının gözlemi, bakım ve besleme koşullarının durumu hakkında pek çok ipucu verebilmektedir. Canlının beslenme, barınma koşulları, üreme ve sosyal ilişkiler gibi yaşam faaliyetlerinin yanı sıra anormal durumlara verdikleri tepkilerin tümü, davranış bilimi olarak adlandırılmaktadır. 1809'lu yıllarda Charles Darwin ile temeli atılan ve günümüze kadar farklı türlerin gözlem ve araştırmalarına dayanan davranış bilimi, 'Zootekni' bilimi içinde çoğunlukla 'araç' olarak görülmekte ve kullanılmaktadır. Çiftlik hayvanlarından en yüksek düzeyde verim elde edebilmek için uygun şartların düzenlenmesinde, hayvan davranışlarının göz önünde tutulması önemlidir. Bu çalışmada, tanenlerin; ruminant hayvanların beslenme davranışları üzerine, günümüze kadar yapılmış olan çalışmalar ve sahaya yansımaları derlenmiştir.

Anahtar kelimeler: Tanen, hayvan davranışları, beslenme davranışları

ABSTRACT

Tannins are natural phenolic compounds found in plants that protect the plant against external hazards. Tannins in many feeds have positive effects such as antioxidant, antiparasitic and antibacterial, as well as toxic effects. Hydrolyzed tannins have 20% more toxic effects than toxic compounds. The tolerance threshold of tannins in feed raw materials is 3-5% in cattle and 8-10% in goats. In particular, studies on this subject indicate that the high amount of tannins in many tree leaves, production wastes and fruit seeds, which are given as an alternative to roughage, have negative effects on animals. In a significant part of the studies on tannins, their effects on nutrition are included. However, the number of studies on the effects of tannins on animal behavior is limited. However, observation of animal behavior can give many clues about the state of care and feeding conditions. All of the life activities of living things such as nutrition, sheltering conditions, reproduction and social relations, as well as all of their responses to abnormal situations, is called the science of behavior. Behavioral science, which was founded in 1809 with Charles Darwin and based on observations and researches of different species, is mostly seen and used as a 'tool' within the science of 'zootechnics'. In order to obtain the highest level of efficiency from farm animals, it is important to consider animal behavior in arranging the appropriate conditions. In this

study, tannins; Studies on the feeding behavior of ruminant animals and their reflections on the field have been compiled.

Keywords: Tannins, animal behaviors, nutiritional behaviours.

RADİKÜLER KİSTLERDE EPİDERMAL BÜYÜME FAKTÖRÜ EKSPRESYONUNUN DEĞERLENDİRİLMESİ

EVALUATION OF EPIDERMAL GROWTH FACTOR EXPRESSION IN RADICULAR CYSTS

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ÖZET

Giriş: Çenede görülen ve köken aldığı dokular dişlerle alakalı olan kist ve tümörlere, odontojenik kist veya odontojenik tümör adı verilir. Odontojenik kistler, kendi içerisinde gelişimsel ve inftamatuar odontojenik kistler olarak sınıflandırılmaktadır. Bunlardan gelişimsel odontojenik kistler; dentigeröz, keratokist, lateral periodontal ve glandüler kistler olarak sınıflandırılır. İnflamatuar odontojenik kistler ise; radiküler, paradental ve rezidüel kistler şeklinde sınıflandırılır. Çenede en çok görülen ve diş köklerinin ucunda meydana gelen inflamatuar odontojenik kistlerden bir tanesi radiküler kistlerdir. Çalışmamızda, patolojik inceleme için alınmış inflamatuar odontojenik kistlerden radiküler kistlerin immunohistokimyasal (EGF primer antikoru) olarak incelenmesi amaçlandı.

Materyal ve Metot: Çalışmamızda daha önce patolojik inceleme için alınmış olan inflamatuar kistlerden radiküler kistler, immunohistokimyasal inceleme için alındı. Alınan bu dokulardan elde edilen kesitler, EGF primer antikoru ile boyandı ve ışık mikroskobu altında değerlendirildi.

Bulgular: Çalışmamızda, radiküler kistler immunohistokimyasal olarak değerlendirildi. Epitel tabakasının yüzeyindeki hücrelerde ve bazal hücrelerde yoğun bir şekilde EGF ekspreyonu izlendi. Ayrıca damar endotelinde ve epitel tabakasının altında bulunan submukozada da yer yer EGF ekspresyonu izlendi.

Tartışma: Epidermal Büyüme Faktörü (EGF), EGFR'nin ana ligandlarından biridir. EGF; bağlanma, otofosforilasyon ve mitojenik sinyallerin transdüksiyonuyla sonuçlanan reseptör dimerizasyonunu indüklemektedir. EGF, gastrointestinal sisteminde dahil olduğu birçok sistemde DNA sentezi ve hücrelerin büyümesini uyaran peptitlerden bir tanesidir. Çalışmamızda, EGF eskpreyonunun yoğun olması, kistik yapılarda epitelizasyonun yüksek olduğunu ve gingival dokunun rejenerasyonu için bir marker olarak kullanılabileceğini düşündürmektedir.

Anahtar Kelimeler: Odontojenik Kist, Radiküler Kist, EGF, İmmunohistokimya, Rejenerasyon

ABSTRACT

Introduction: Cysts and tumors that appear in the jaw and are related to the teeth, are called odontogenic cysts or odontogenic tumors. Odontogenic cysts are classified as developmental and inflammatory odontogenic cysts. Of these, developmental odontogenic cysts; are classified as dentigerous, keratocyst, lateral periodontal, and glandular cysts. Inflammatory odontogenic cysts; are classified as radicular,

paradental, and residual cysts. Radicular cysts are one of the most common inflammatory odontogenic cysts that occur at the tip of the tooth roots. Our study aimed to examine radicular cysts from inflammatory odontogenic cysts taken for pathological examination by immunohistochemistry (EGF primary antibody).

Materials and Methods: In our study, radicular cysts, which were previously taken for pathological examination, were taken for immunohistochemical examination. Sections obtained from these tissues were stained with EGF primary antibody and evaluated under a light microscope.

Results: In our study, radicular cysts were evaluated immunohistochemically. Intense EGF expression was observed in cells on the surface of the epithelial layer and basal cells. In addition, EGF expression was also observed in the vascular endothelium and in the submucosa under the epithelial layer.

Discussion: Epidermal Growth Factor (EGF) is one of the main ligands of EGFR. The functions of EGF include binding, autophosphorylation, and receptor dimerization resulting in transduction of mitogenic signals. EGF is one of the peptides that stimulate DNA synthesis and growth of cells in many systems including the gastrointestinal tract. In our study, the intense expression of EGF suggests that epithelialization is high in cystic structures and can be used as a marker for regeneration of gingival tissue.

Keywords: Odontogenic Cyst, Radicular Cyst, EGF, Immunohistochemistry, Regeneration

IMPORTANCE AND APPLICATIONS OF ENGINEERING PROPERTIES IN FOOD INDUSTRIES

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ABSTRACT

Horticultural produce is regarded as significant for human consumption as it is composed of nutrients, minerals, and vitamins. During the transportation and process of agricultural products, some loadings cause cuts and pressure on the product. To avoid mechanical damage, and waste generated during the harvest processes and to elevate the processing devices, it is necessary to evaluate and examine the physical, mechanical and optical attributes of the agricultural produce. The instruments are used to evaluate the physical, optical, and textural but not sensory characteristics. Food engineering characteristics are examined to design the engineering process and to determine the texture and structure. There is a need for appropriate processing and transportation methods that are operated for agricultural produce and required precise data associated with their physical properties including size, shape, surface area, porosity, and density. The two factors density and porosity affect the structural loads and are also regarded as important parameters in designing storage and drying system. The engineering characteristics include its physical, mechanical, frictional, and optical attributes. The physical properties *viz*. dimensional properties such as length (L_{av}), diameter (D_{Wmj}, $D_{Wmd,}$ and D_{Wmn}), arithmetic mean diameter, geometric mean diameter, width, thickness, and gravimetric properties such as weight, bulk density, true density, sphericity, porosity, root mass ratio. Etc. The mechanical properties include the puncture and compression test. The frictional properties involve the angle of repose of seeds and the coefficient of static friction and optical property determine the L* (brightness), a* (greenness), and b* (yellowness) of the whole fruit.

Keywords: Engineering properties; Color; Puncture test; Physical properties; Mechanical properties; Frictional properties

THE EVALUATION OF LOCALIZATION, SURGICAL RESECTION AND RADIOTHERAPY RESULTS OF ATYPIC MENINGIOMAS

ATİPİK MENİNGIOMALARIN LOKALİZASYON, CERRAHİ REZEKSİYON VE RADYOTERAPİ SONUÇLARININ İNCELENMESİ

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ABSTRACT

Aim: It is a brain tumor that develops from the membranes (meninges) covering the brain and spinal cord. It is the most common primary brain tumor in adults. Most meningiomas (85-90 percent) are classified as benign tumors, the remaining 10-15 percent are atypical or malignant (cancerous) tumors. Meningiomas are most common between the ages of 40 and 70 and are more common in women. About 3 percent of people over the age of 60 have meningioma. Few known predisposing factors are prior radiation exposure, long-term hormone use, and hereditary conditions such as neurofibromatosis type 2. Atypical meningiomas are seen in 4.7% to 8.3%. In the previous classification of Central Nervous System (CNS) tumors - meningiomas published by the World Health Organization (WHO) in 2016, he added brain invasion as an independent criterion for "atypia". Although the first target in meningiomas is maximum safe resection, the need for adjuvant radiotherapy has increased due to the increase in the rate of Grade (Gr) II tumor diagnosis with current diagnostic criteria. In this study, it was aimed to present atypical meningiomas (Gr II) operated in the neurosurgery clinic.

Methods: Of the 10 meningioma patients who were operated between 2015-2021, 7 were female and 3 were male. The age range ranges from 10 to 85. 5 parasagittal, 1 sphenoid wing, 1 cerebellopontine corner, 1 convexity, 1 falx, 1 olfactory groove. Results: According to the grade of Simpson resection, 7 Gr I, 2 Gr II,1 were resected. 24 received RT in the postoperative period. One of those who received RT was operated again after 2 years due to recurrence (pathological diagnosis increased to Grade III). The patient, who had a tumor originating from the olfactory groove, had Simpson Gr II resected and did not receive RT. **Monoparesis developed in 2 patients, transient facial paralysis in 1 patient, and 2 patients died.**

Conclusion: Meningiomas Radiosurgery and surgery are the most common initial treatments. If surgery has been used before, radiosurgery can be used for tumors that have recurred, and in some cases some tumors that cannot be completely removed by surgery are also treated with radiosurgery. Chemotherapy is rarely used. Despite increasing knowledge about molecular changes on the tumor/brain surface and efforts to elucidate specific intracellular signaling pathways involved in meningiogenesis, effective targeted therapies for recurrent meningiomas are still lacking.

Keywords: Adjuvant radiotherapy, atypical meningiomaWHO 2016 CNS tumor classification

ÖZET

Amaç: Beyin ve omuriliği kaplayan zarlardan (meninksler) gelişen beyin tümörüdür. Yetişkinlerde en sık görülen birincil beyin tümörüdür. Çoğu meninjiom (yüzde 85-90) iyi huylu tümörler olarak sınıflandırılır, geri kalan yüzde 10-15 atipik veya malign (kanserli) tümörlerdir. Menenjiomlar en sık 40 ila 70 yaşlarında ve kadınlarda daha sık görülür. 60 yaşın üzerindeki insanların yaklaşık yüzde 3'ünde menenjiom bulunur. Bilinen az sayıda predispozan faktör önceden radyasyona maruz kalma, uzun süreli hormon kullanımı ve nörofibromatoz tip 2 gibi kalıtsal durumlardır.Atipik meningiomlar %4,7 ila %8,3 oranında görülmektedirler. Bir önceki Santral Sinir Sistemi (SSS) tümörleri sınıflandırmasında -Dünya Sağlık Örgütü'nün (DSÖ) 2016'da yayımladığı meningiomlarda beyin invazyonunu "atipi" için bağımsız bir kriter olarak eklemişti. Meningiomlarda ilk hedef maksimum güvenli rezeksiyon olmasına rağmen güncel tanı kriterleri ile Grade (Gr) II tümör tanısı oranının yükselmesi nedeniyle adjuvan radyoterapi gerekliliği de artmıştır. Bu çalışmada beyin ve sinir cerrahi kliniğinde opere edilen atipik meningiomları (Gr II) sunmak hedeflenmiştir.

Gereç ve Yöntem: 2015-2021 yılları arasında opere edilen 10 meningioma hastasının 7'si kadın 3'u erkektir. Yaş aralığı 10 ile 85 arasında değişmektedir. 5'si parasagittal, 1'i sfenoid kanat, 1'i serebellopontin köşe, 1'i konveksite, 1'ü falks, 1'i olfaktör oluk yerleşimlidir. Bulgular: Simpson rezeksiyonun derecesine göre 7'si Gr I, 2'si Gr II,1'i rezeke edilmiştir. 24'ü postoperatif dönemde RT almıştır. RT alanlardan 1 tanesi 2 sene sonra nüks (patolojik tanı Grade III'e yükselmiştir) nedeniyle tekrar opere edilmiştir. Olfaktör olukdan köken alan tümörü olan hasta Simpson Gr II rezeke edilmiş ve RT almamıştır. 2 hastada monoparezi, 1 hastada geçici fasial paralizi gelişmiş ve 2 hasta da exitus olmuştur.

Tartışma ve Sonuç: Meningiomlar Radyocerrahi ve cerrahi en yaygın ilk tedavilerdir. Ameliyat daha önce kullanılmışsa, radyocerrahi tekrarlayan tümörler için kullanılabilir ve bazı durumlarda ameliyatla tamamen çıkarılamayan bazı tümörler de radyocerrahi ile tedavi edilir. Kemoterapi nadiren kullanılır. Tümör/beyin yüzeyindeki moleküler değişiklikler hakkında artan bilgiye ve meningiogenezde yer alan spesifik hücre içi sinyal yollarını aydınlatmak için çaba sarf edilmesine rağmen, tekrarlayan meningiomlar için etkili hedefe yönelik tedavilerin hâlâ eksik olduğu söylenebilir.

Anahtar Sözcükler: Adjuvan radyoterapi, atipik meningioma, beyin invazyonu, DSÖ 2016 SSS tümör sınıflaması

SUBACUTE SUBDURAL HEMATOM BLEEDING INTO ARACHNOID CYST: OUR CLINICAL RESULTS

ARAKNOID KIST İÇINE KANAMIŞ SUBAKUT SUBDURAL HEMATOM: KLİNİK SONUÇLARIMIZ

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ABSTRACT

Introduction: Arachnoid cysts are benign lesions that are frequently diagnosed today with the increase in radiological examinations, but do not need treatment and appear during the developmental stages of the arachnoid membrane. These lesions, whose incidence is 5/1000 in autopsy series, are often asymptomatic and elective surgery can be performed in the presence of headache, epilepsy or progressive CRPS. Rarely, they may present as bleeding into the cyst after minor trauma or as a subdural hematoma caused by the rupture of the cyst. The annual bleeding risk is 0.04%, and it has been reported to be 5 times higher than in the normal population.

Materials and Methods: The results of 6 patients between 2015-2021 were evaluated retrospectively. Patients who underwent elective arachnoid cyst surgery were excluded from the study. Our patients with head trauma and postoperative hematoma were included in the study. All of our patients were treated with Burr hole and hematoma drainage.

Results: 4 of our patients were male and 2 were female. All of them had a history of minor head trauma. The average application time was 3.4 days (range 2-6 days). All patients presented to the emergency department. The mean GCS was 13.2. Galassi scores of the patients were 2. Where to burr using anatomical landmarks for all patients; If necessary, the cyst was modified to allow intervention, and it was planned to dominate the temporal region and lateral to the midpupillary line. After the dura was opened, it was seen that the cyst membrane was dropped on, and the cyst membrane was opened in a controlled and wide manner from both burrs, and the pressure subacute hematoma was drained with copious washing, and the subdural space and the cyst were communicated. The patients whose drain was removed on the post op 2nd day did not develop any additional complications and were discharged.

Discussion and Conclusion: Bleeding of arachnoid cysts into the cyst is a rare condition encountered with minor traumas, and it is necessary to meticulously make measurements according to pre-op examinations in every case requiring cranial surgical intervention, and to keep in mind that the anatomical structure and anthropometric measurements of each patient may be different by departing from certain standardizations when necessary. shared for display.

Keywords: Arachnoid cyst, Developmental anomalies, Subacute subdural hematoma

ÖZET

Giriş: Araknoid kistler radyolojik tetkiklerin artmasıyla günümüzde sıklıkla tanısı konulan ancak tedaviye ihtiyaç duyulmayan, araknoid membran gelişim aşamalarında ortaya çıkan benign lezyonlardır. Görülme sıklığı otopsi serilerinde 5/1000 olan bu lezyolar sıklıkla asemptomatik olup baş ağrısı, epilepsi veya progresif KİBAS bulgularında elektif cerrahi yapılabilir. Nadiren minör travma sonrası kist içine kanama ya da kist rüptüyle oluşan subdural hematom olarak karşımıza çıkabilmektedirler. Yıllık kanama riski %0,04 olup normal popülasyona göre 5 kat daha fazla olduğu bildirilmiştir.

Gereç ve Yöntem: 2015-2021 arası 6 hastanın sonuçları retrospektif olarak değerlendirildi. Elektif araknoid kist cerrahisi yapılan hastalar çalışmaya alınmadı. Kafa travması olan ve sonrası hematom saptanan hastalarımız çalışmaya alındı. Tüm hastalarımızda Burr hole ile hematom drenajıyla tedavi edildiler.

Bulgular: Hastalarımızın 4'ü erkek, 2'si kadındı. Hepsinin hikayesinde minör kafa travması hikayesi vardı. Ortalama başvuru süresi 3.4 gündü (2-6 gün arası). Bütün hastalar acil servise başvurdu. Ortalama GKS:13.2 idi. Hastaların Galassi skorları 2idi. Tüm hastaların anatomik landmarklar kullanılarak burr açılacak yerler; lüzum halinde kiste de müdahaleye elverecek şekilde modifiye edilerek midpupiller hattın lateralinde ve temporal bölgeye hakim olabilecek şekilde planlandı. Dura açıldıktan sonra kist membranı üzerine düşülmüş olduğu görülüp kist membranı kontrollü ve geniş bir şekilde her iki burrden de açılarak basınçlı subakut hematom bol yıkama ile drene edildikten sonra subdural mesafe ve kist komünike edildi. Post op 2. gün direni çekilen hastalar ek komplikasyon gelişmedi ve taburcu edildi.

Tartışma ve Sonuç: Araknoid kistlerin kist içine kanaması minör travmalar ile karşılaşılan nadir bir durum olup olgularımızda ayrıca kranial cerrahi müdahale gerektiren her olguda pre-op incelemelere göre ölçümlerin titizlikle yapılması, belli standardizasyonlardan gereğinde uzaklaşılarak her hastanın anatomik yapısı ve antropometrik ölçümlerinin farklı olabileceğinin akılda tutulmasının gerektirdiğini göstermesi açısından paylaşılmıştır.

Anahtar Sözcükler: Araknoid kist, Gelişimsel anomaliler, Subakut subdural hematom

ÇEKİŞMELİ ÜRETİCİ AĞLAR İÇİN DEĞERLENDİRME METRİKLERİNİN GÖZDEN GEÇİRİLMESİ

REVIEW OF EVALUATION METRICS FOR GENERATIVE ADVERSARIAL NETWORKS

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ABSTRACT

Data sets are a key place for academic studies to be carried out today. At the heart of all of these academic studies, data sets of areas that are difficult to access and difficult to find, especially in the field of health, are sometimes impossible. There are many situations that can be encountered and difficult to overcome, such as the ethics board report or the rare data on diseases. The proposed solution to help eliminate these types of problems is the deep neural network architecture called the Generative Adversarial Networks (GANs). Using the GAN architecture, called the Generator and Discriminator, which consists of two cross-border networks that are in conflict with each other, synthetic data is produced and used data sets of these data in academic and scientific studies, to cover this deficiency. Some quantitative and qualitative metrics are needed to assess the success of synthetic images produced by GANs, which are such an important place in academic studies. In this study, a number of sample-based assessment metrics have been reviewed for GAN. In these metrics reviewed, it was first determined that the manual evaluation of the images generated was a good starting point. Another result was the result that quantitative measurements such as the Start score and the Frechet starting distance could be combined with qualitative evaluation to ensure a strong assessment of the GAN models. Finally, the most important part of the reviews has been concluded that models should be evaluated using the quality of synthetic images produced.

Keywords: Generative Adversarial Networks, synthetic data, evaluation criteria

Özet

Günümüzde akademik çalışmaların yapılabilmesi için veri setleri önemli bir yer tutmaktadır. Bütün bu akademik çalışmaların temelinde, özellikle sağlık alanında erişilmesi ve bulunması zor olan alanların veri setlerinin oluşturulması çok zor hatta bazen imkânsızdır. Etik kurul raporu ya da nadir hastalıkların az bulunan verileri gibi karşılaşılabilecek ve aşılması güç birçok durum mevcuttur. Bu tarz sorunların ortadan kaldırılmasına yardımcı olmak için önerilen çözüm önerisi ise Çekişmeli Üretici Ağlar (GANs) isimli derin sinir ağları mimarisidir. Üretici ve Ayırıcı olarak adlandırılan ve birbiriyle çekişme halinde olan iki sinir ağından oluşan GAN mimarisi kullanılarak sentetik veriler üretilip, bu verilerden oluşan veri setlerini akademik ve bilimsel çalışmalarda kullanmak bu eksiği kapatmaktır. Akademik çalışmalarda bu kadar önemli bir yer tutan GAN'ların ürettiği sentetik görüntülerin başarısını değerlendirmek için bazı nicel ve nitel metriklere ihtiyaç duyulmaktadır. Bu çalışmada GAN için birkaç örnek tabanlı değerlendirme metriği incelenmiştir. İncelenen bu metriklerde ise oluşturulan görüntülerin manuel olarak değerlendirilmesinin ilk olarak iyi bir başlangıç noktası olduğu saptanmıştır. Sonrasında varılan bir başka sonuçta ise Başlangıç puanı ve Frechet başlangıç mesafesi gibi nicel ölçülerin, GAN modellerinin güçlü bir değerlendirmesini sağlamak için nitel değerlendirme ile birleştirilebileceği sonucu elde edilmiştir. Son olarak ise incelemelerin en önemli kısmı olan modellerin, üretilen sentetik görüntülerin kalitesi kullanılarak değerlendirilmesi gerektiği sonucuna varılmıştır.

Anahtar Kelimeler: Çekişmeli Üretici Ağlar, Sentetik Veri, Değerlendirme Kriterleri

VISUALIZING THE WORLD'S HAPPINESS ACROSS THE WORLD AND ANALYZING ITS CONTRIBUTING FACTORS

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ABSTRACT

For most of the people happiness is a mental state, an unmeasurable emotion that is a common goal for millions of people around the world. This paper aims to analyze the history, application areas and users of Big Data Analytics. The World Happiness dataset is used to build a statistical analysis, and for making the data more visible we use Google Data Source and Gephi is used to draw the relationships of factors that have influence on world happiness. The paper discusses different types of Data Analytical techniques and application areas. The study is represented by a dataset of World Happiness data collected by the Gallup World Poll. The research is mainly based on Google Data Studio capabilities and uses Google Sheet as a data source.

Keywords: World Happiness; World Happiness Index; Google Data Source and Big Data Analytics.

COMPARISON BETWEEN PROFESSIONAL 3D SCANNING AND FREE SCANNING

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ABSTRACT

3D scanning has brought significant challenges to the industry in general. To create a 3D image, professional scanners are used, but you can also use various free programs that turn the 2D image into 3D, and this form is called free scanning, which can be done using a smartphone or a tablet. 2D images have a length, width and depth which elements are obtained with a smartphone where each image has its own focus points from which a 3D model is built. We must bear in mind that the background and lighting of the object that we will photograph must be sufficient, and strong shadows that would cause confusion and interference with the object being photographed must also be avoided. Various software can automatically analyze a large number of 2D digital images for 3D reconstruction but sometimes a manual intervention may be needed if the program cannot automatically find the photo positions. Various software packages are available including Photo Modeler, Autodesk ReCap and RealityCapture, Agisoft Metashape, Meshroom, etc. This paper will compare the methods of scanning with a professional scanner and free scanning. Free 3D scanning has proven to be effective in many cases, especially when the object being scanned is not complex or when the 3D image is not required to be very professional. In this paper, a comparison will be made of scanning with a professional scanner and free scanning.

Keywords: Professional scanner; free scanning; 2D image; 3D image; comparison.

DESIGNED AND IMPLEMENTATION OF MAJOR NIGERIAN LANGUAGES TRANSLATION MOBILE APP, USING THE DEEP-TRANSLATE APPROACH

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ABSTRACT

According to the information by the International Literacy Day (ILD) adult illiteracy rate as at September 6, 2022 was 31% across rural and urban areas in Nigeria. This has created a lot of drawback in the way we interact and carryout any productive activities. The language barrier has placed limitation to the extent at which we could enjoyably transact with our products of interest and money. Nigeria as ethnically diverse has 250 numbers of ethnic groups, and also, there exist about 500 numbers of different languages. As a result, the entire ethnic group found one or more of the existing Nigerian major languages as a language of interest he or she can conveniently communicate with. In a nut shell, Nigeria has 64% speakers of major three languages (Hausa-25%, Yoruba-21%, Igbo-18%) more than our official English language speakers and as such, English language is the only language we used in Nigeria to practice in our corporate world. To this end, the language barrier due to the level of illiteracy has blinded the concerned Nigerian in these categories, from seeing how most of them could tap into how to use the current technology of internet of Things (IoT) through mobile app to enrich them. In this work, NLP was built and embedded in the mobile app to translate from English to the three major Nigerian languages (I.e. Yoruba, Igbo, and Hausa) and due to our francophone neighbouring countries, French was added to aid translation between Nigerians and her neighbouring countries. The app was developed using React-native and Axios to build both the frontend and backend of the mobile App, while the language translator was developed using Deep-Translate through transfer learning approach as embedded in the Deep-translate API, and was deployed and deployed on a Techno camon-17 mobile phone. The mobile app was tested and analysed and it was observed that it worked perfectly well. Additional feature of the built mobile app include a text reader that reads the translated messages in the translated language, so that the user who cannot read can hear the voice in his or her preferred dialects.

THE VALIDITY OF ESTIMATED HEART BEAT PARAMETERS ON ESTABLISHING EXERCISE INTENSITY IN HEALTHY MALES

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ABSTRACT

Introduction: Lactate threshold (LT) concept has been designate to determine aerobic exercise intensity. It has been introduced that the range of 64% to 76% of age predicted maximal heart beat can be use to establish aerobic exercise intensity.

Aim: We were aimed to comparatively evaluate heart beat at the LT and its correlation with the intensity of 64% and 76% of maximal predicted heart beat parameters in young healthy male subjects.

Material and Methods: Total of 25 male age between 18-25 (20.7±2.0 yr) with normal body mass index (22.5±1.5 kg/m^2) performed an incremental ramp exercise test with a work load increments of 15 W/min until the subject's limit of tolerance. Twelve lead EKG were placed and recorded beat by beat throughout the test. The subject breathed in to the turbine volume transducer connected with metabolic gas analyser. The LT estimated non-invasively using V-slope method. Paired t test and Pearson correlation analysis was used significance accepted as $p<0.05$.

Results: The subjects work capacity at the LT and maximal were found to be 136±23 W and 220±26 W, respectively. LT occurred 61±4% of maximal work capacity. Heart beat at the LT and maximal exercise was found to be 141±11 beat/min and 185±8 beat/min, respectively. The achieved hart beat at the end of the maximal exercise was occurred 93±4 % of predicted heartbeat. The estimated heart beat at the 64% and 76% were found to be 127±1 beat/min and 151±1 beat/min, respectively. Heart beat at the LT was occurred 76.7±3 % of achieved maximal heart beat values and 73.3±4% of predicted maximal heart beat values.

Conclusion: The significance differences between achieved and predicted heart beat parameter could easily affect the exercise intensity establishment. Thus it should be cautious to use age predicted heart beat parameters in subjects with reduced fitness status.

Key Words: Heartbeat, lactate threshold, exercise, fitness, VO_2max

INVESTIGATION OF THE USAGE OF FERROCHROME SLAG AS FILLERS IN BITUMINOUS HOT MIXTURES

FERROKROM CÜRUFUNUN BİTÜMLÜ SICAK KARIŞIMLARDA FİLLER OLARAK KULLANILABİLİRLİĞİNİN ARAŞTIRILMASI

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ABSTRACT

Biomass is the waste that is formed as a result of meeting the various needs of living things. These wastes are generally classified as agricultural, forestry, animal, industrial and domestic wastes. These wastes, which are tried to be evaluated by using them in almost every sector, have also started to be used by road engineers in recent years. In this study, the usability of ferrochrome slag, a biomass-based industrial waste, as filler in bituminous hot mixtures (BSK) were investigated. For this, firstly, various characteristic properties of aggregate were determined with pure B 50/70 bitumen. Then, the optimum bitumen content of BSKs was determined by using the Marshall mix design method in the preparation of the mix specimens. After determining the optimum bitumen content, Marshall briquette specimens were first prepared with pure binder based on this ratio. Then, in order to determine the usability of ferrochrome slag as filler material in the hot mixture, the filler ratio in the hot mixture was reduced by 25, 50, 75 and 100 wt%, and slag-added BSK specimens were prepared by replacing it with ferrochrome slag in the same proportions. All prepared pure and slag substituted briquette specimens were subjected to Marshall stability and flow test. When the test results obtained were evaluated, it was observed that the stability values of the hot mix specimens increased by 8.1% with the slag substitution, and this was obtained from the specimens with 50% slag substitution. This result shows that asphalt pavements substituted with ferrochrome slag are more resistant to permanent deformations that may occur in pavements under traffic loads. As a result, it has been seen that ferrochrome slag, which is an industrial waste, can be used as a substitute for fillers in hot mixes, and it can have a positive effect on the stability of BSKs.

Keywords: Bituminous hot mixture, Biomass, Industrial waste, Ferrochrome slag, Marshall stability, Permanent deformation.

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ÖZET

Biyokütle, canlıların, çeşitli ihtiyaçlarını gidermesi sonucunda meydana gelen atıklardır. Bu atıklar genellikle tarımsal, ormansal, hayvansal, endüstriyel ve evsel atıklar olarak sınıflandırılmaktadır.

Hemen hemen her sektörde kullanılarak değerlendirilmeye çalışılan bu atıklar, son yıllarda yol mühendisleri tarafından da kullanılmaya başlamıştır. Bu çalışmada, biyokütle esaslı endüstriyel bir atık olan ferrokrom cürufunun bitümlü sıcak karışım (BSK)'larda filler olarak kullanılabilirliği araştırılmıştır Bunun için, ilk olarak, saf B 50/70 bitüm ile agreganın çeşitli karakteristik özellikleri belirlenmiştir. Daha sonra, karışım numunelerinin hazırlanmasında Marshall karışım tasarım yöntemi kullanılarak BSK'ların optimum bitüm içeriği tespit edilmiştir. Optimum bitüm içeriğinin tespit edilmesinden sonra, bu oran esas alınarak ilk olarak saf bağlayıcı ile Marshall briket numuneleri hazırlanmıştır. Ardından, ferrokrom cürufunun filler malzeme olarak sıcak karışımda kullanılabilirliğini belirleyebilmek amacıyla sıcak karışımdaki filler oranı ağırlıkça %25, 50, 75 ve 100 oranlarında azaltılarak bunun yerine aynı oranlarda ferrokrom cürufu ikame edilerek cüruf ilaveli BSK numuneleri hazırlanmıştır. Hazırlanan saf ve cüruf ikameli tüm briket numuneleri Marshall stabilite ve akma deneyine tabi tutulmuştur. Elde edilen deney sonuçları değerlendirildiğinde, cüruf ikamesiyle sıcak karışım numunelerinin stabilite değerlerinin %8,1 kadar artış gösterdiği ve bunun %50 cüruf ikameli numunelerden elde edildiği görülmüştür. Bu sonuç, ferrokrom cürufu ikameli asfalt kaplamaların trafik yükleri altında iken kaplamalarda meydana gelebilecek kalıcı deformasyonlara karşı daha dirençli olduğunu göstermektedir. Sonuç olarak, endüstriyel bir atık olan ferrokrom cürufunun sıcak karışımlarda filler yerine ikame edilerek kullanılabileceği ve bununla birlikte BSK'ların stabilitesi üzerinde olumlu bir etkiye sahip olabileceği görülmüştür.

Anahtar Kelimeler: Bitümlü sıcak karışım, Biyokütle, Endüstriyel atık, Ferrokrom cürufu, Marshall stabilite, Kalıcı deformasyon.

TEŞEKKÜR: Bu çalışma, İnönü Üniversitesi Bilimsel Araştırma Projeleri (BAP) Koordinasyon Biriminin İÜ-BAP FBG-2021-2270 numaralı projesi ile desteklenmiştir. Desteklerinden dolayı BAP Koordinasyon Birimine teşekkür ederiz.

EFFECTS OF SODIUM HYDROXIDE ON THE UNCONFINED COMPRESSIVE STRENGTH OF CLAY-SAND SOILS

KİLLİ KUM ZEMİNLERİN SERBEST BASINÇ DAYANIMI ÜZERİNDE SODYUM HİDROKSİTİN ETKİLERİ

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ABSTRACT

Today, due to increasing environmental problems, environmentalist projects are being tried to be realized in the field of engineering as in many other fields. In this study, a clayey-sand soil with poor bearing strength was stabilized with sodium hydroxide (NaOH) and improved, and the effects of NaOH on the unconfined compressive strength of this soil were investigated. For this purpose, the soil was first subjected to sieve analysis, hydrometer, pycnometer and consistency limit (Atterberg) tests to determine its geotechnical properties. After determining the soil properties, pure and stabilized soil samples were prepared by adding 8 Molar (M) (320 g/lt) NaOH solution to the soil in order to stabilize the soil. The prepared pure and stabilized soil samples were subjected to the standard proctor test in accordance with the ASTM D698 standard, and the maximum dry unit weights and optimum water contents of the samples were determined. Based on these values, unconfined pressure test samples were prepared in accordance with ASTM D2166 standard. The prepared test samples were subjected to unconfined pressure test after being exposed to curing times of 1 and 7 days. As a result of the experimental studies, at the end of 1 day curing, a lower value was obtained for the unconfined compressive strength values of the soil samples with the addition of NaOH compared to the unconfined compressive strength value of the pure soil. However, after 7 days of curing, it was determined that the unconfined compressive strength values of soil samples with NaOH added increased 1.79 times compared to pure soil. As a result, it was observed that the NaOH additive had a positive effect on the cohesion and internal friction resistance of the soil in the stabilization performed by the addition of NaOH.

Keywords: Soil, NaOH, Stabilization, Unconfined compressive strength, Cohesion.

ÖZET

Günümüzde artan çevre problemleri nedeniyle birçok alanda olduğu gibi mühendislik alanında da çevreci projeler gerçekleştirilmeye çalışılmaktadır. Bu çalışmada, taşıma gücü zayıf olan killi-kumlu bir zemin, sodyum hidroksit (NaOH) ile stabilize edilerek iyileştirilmiş ve NaOH'nin bu zeminin serbest basınç dayanımı üzerindeki etkileri araştırılmıştır. Bu amaçla, zemin ilk olarak elek analizi, hidrometre, piknometre ve kıvam limit (Atterberg) deneylerine tabi tutularak geoteknik özellikleri belirlenmiştir. Zemin özelliklerinin belirlenmesinin ardından, zemini stabilize etmek amacıyla zemine 8 Molar (M) (320 g/lt) NaOH solüsyonu ilave edilerek saf ve stabilize zemin numuneleri hazırlanmıştır. Hazırlanan saf ve stabilize zemin numuneleri ASTM D698 standardına uygun olarak standart proktor deneyine tabi tutulup numunelerin maksimum kuru birim hacim ağırlıkları ile optimum su muhtevaları tespit

edilmiştir. Bu değerler esas alınarak ASTM D2166 standardına uygun olarak serbest basınç deney numuneleri hazırlanmıştır. Hazırlanan deney numuneleri 1 ve 7 günlük kür sürelerine maruz bırakıldıktan sonra serbest basınç deneyine tabi tutulmuştur. Deneysel çalışmalar neticesinde, 1 günlük kürleme sonunda NaOH ilaveli zemin numunelerinin serbest basınç dayanım değerlerinin saf zemin serbest basınç dayanım değerine kıyasla daha düşük bir değer elde edilmiştir. Ancak, 7 günlük kürleme sonunda NaOH ilaveli zemin numunelerinin serbest basınç dayanım değerlerinin saf zemine kıyasla 1,79 kat artış gösterdiği belirlenmiştir. Sonuç olarak, zemine NaOH ilavesiyle gerçekleştirilen stabilizasyonda, NaOH katkısının zeminin kohezyonu ve içsel sürtünme direnci üzerinde olumlu bir etkiye sahip olduğu görülmüştür.

Anahtar Kelimeler: Zemin, NaOH, Stabilizasyon, Serbest basınç dayanımı, Kohezyon.

MODELLING THE PREDICTION OF NIGERIAN INSURANCES DATA

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ABSTRACT

The occurrences of risk are always very devastating. Recently, with the aftermath of COVID-19 there are global occurrences of so many risks involving monetary or economic, non- monetary, assets and so on. Insurance which is a way of managing risk has become imperative. This study employed the autoregressive integrated moving average (ARIMA) method to modelled the available Nigerian insurance data from 1981 to 2021. The ARIMA (0,2,3) Model was chosen as the best fitted model since it has the least Akaike information criteria (AIC), Hannan-Quinn criteria (HQC) and Schwarz criterion(SC). It was estimated and tested statistically. ARCH test for residual, Jarque-Bera test for non-normality and portmanteau test was found sufficient and best model fitting for forecasting. The model forecast ten(10) years observation from 2022 to 2031.

Keywords: Insurance, ARIMA, forecasting, risk, Akaike, Hannan-Quinn and Schwarz

CLASSIFICATION OF CHEST X-RAY IMAGES OF LUNG DISEASES USING DEEP CONVOLUTIONAL NEURAL NETWORK

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ABSTRACT

The accurate diagnosis of lung disease in infected patients is a crucial step in coping with and combating such diseases. COVID-19, viral pneumonia, tuberculosis, bacterial pneumonia, and lung opacity are examples of infectious diseases that similarly affect the lungs. Deep learning models have produced significant results within the past decade for the detection of these diseases. In this research work, two convolutional neural network models, MobileNetV2, Resnet-50, were empirically analysed for the classification of lung diseases from chest X-ray images. The models were utilised in three classification modes: 6-subclass (COVID-19, viral pneumonia, tuberculosis, bacterial pneumonia, lung opacity, normal), 5-subclass (COVID-19, viral pneumonia, tuberculosis, lung opacity, and normal), and 4-subclass (COVID-19, viral pneumonia, lung opacity and normal); to investigate the effect of high interclass similarity. The pretrained ResNet-50 architecture provided the best classification accuracy with 97.22%, 92.14.%, 96.08% for 6-subclass, 5-subclass, and 4-subclass respectively while the pretrained MobileNetV2 has the lowest classification accuracy of 92.29%, 84.04%, 88.89% for 6-subclass, 5-subclass, and 4-subclass respectively. The results imply that the ResNet-50 model can be used to accurately diagnose lung diseases from chest X-ray images even with high interclass similarity. Also, this corroborates the success of adopting computer-aided detection (CAD) systems for decision support in early detection of lung diseases.

Keywords: Lung disease, Deep Learning, ResNet-50, MobileNetV2, COVID-19

SOLIDWORKS'TE TASARIMI YAPILAN DRONUN V-REP ROBOTIK SIMÜLATÖR ORTAMINDA PERVANE HIZ KONTROLÜNÜN MATLAB'TA HAZIRLANAN KODLARLA YAPILMASI

MAKING PROPELL SPEED CONTROL OF THE DRON DESIGNED IN SOLIDWORKS IN V-REP ROBOTIC SIMULATOR ENVIRONMENT WITH CODES PREPARED IN MATLAB

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ÖZET

Otonom sistemlerin gerçek zamanlı uygulamalarının hatasız veya minimum hatalı bir şekilde çalışabilmesi için; tasarımı yapılan otonom veya robotik sistemler bilgisayar ortamında simüle edilerek test edilmektedir. Bu alanda kullanılmakta olan V-REP (Coppeliasim), sanal bir dünya yaratmak ve çalışma süresi içinde onunla etkileşim kurmak için çok sayıda örnek, robot, sensör ve aktüatör modelinin birlikte kullanıldığı platformdur. V-REP sahip olduğu geniş araç kutusu, otonom araç eğitimi ve sanal gerçeklik bakımından çok kullanışlıdır. V-REP'in, yaygın ve güçlü bir çizim-tasarım programı olan Solidworks ile birlikte uyumlu çalışması da büyük avantaj olarak görülmektedir.

CoppeliaSim bu özelliklerinden dolayı farklı birçok uygulamada ortaya çıkabilecek sorunların öngörülmesi ve giderilmesi bakımından bütün kullanıcılar açısından oldukça önemlidir. Çalışmamda kullanmak için Solidworks 2020 programı ile tasarladığım ve Solidworks 2020-URDF exporter yöntemini kullanarak V-REP (Virtual Robotic Education Programming) platformuna aktardığım dronun, V-REP simülatörü bünyesinde bulunan özellik ve araçlar ile dron pervane hareketi gerçekleştirilmiştir. Yaptığım çalışmada, otonom sistemlerde kullanılan V-REP simülatörü ve MATLAB senkronize edilmiştir. V-REP' platformunda dronun çalışma anındaki pervanelerinin açısal hız kontrolü ve zamanlama kontrolü, MATLAB programında hazırladığım kodlar kullanılarak gerçekleştirilmiştir. Bu çalışma V-REP simülatör ve MATLAB programı kullanılarak farklı amaçlarda, dron veya otonom sistemlerin gerçek zamanlı çalışma öncesi başarılı bir şekilde kontrol edilebileceğini ve tasarlanabileceğini göstermektedir.

Anahtar Kelimeler: Robotik, V-REP, Pervane Açısal Hız Kontrolü, Simülasyon, Matlab

ABSTRACT

In order for the real-time applications of autonomous systems to work without error or with a minimum of errors; autonomous or robotic systems designed are simulated and tested in a computer environment. V-REP (Coppeliasim), used in this field, is a platform where a large number of examples, robots, sensors and actuators models are used together to create a virtual world and interact with it during working time. The compatibility of V-REP with Solidworks, a common and powerful drawing-design program, is also seen as a great advantage.

Due to these features, CoppeliaSim is very important for all users in terms of predicting and solving problems that may arise in many different applications. The drone propeller movement of the drone, which I designed with the Solidworks 2020 program to use in my work and transferred to the V-REP(Virtual Robotic Education Programming) platform using the Solidworks 2020-URDF exporter method, was carried out with the features and tools included in the V-REP simulator. In my study, V-

REP simulator and MATLAB used in autonomous systems are synchronized. Angular speed control and timing control of the propellers of the drone at the time of operation on the V-REP platform were carried out using the codes I prepared in the MATLAB program. This study shows that drone or autonomous systems for different purposes can be successfully controlled and designed before real-time operation by using V-REP simulator and MATLAB program.

Key words: Robotics, V-REP, Propeller Angular Speed Control, Simulation, Matlab

ANALOG LOWPASS FILTER DESIGN USING PASCAL POLYNOMIALS

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ABSTRACT

In this study, Pascal polynomials have been utilized in the design of a lowpass filter approximation. Necessary steps to be taken for reaching the approximation has been shown in the paper. The used transfer function is a stopband edge optimized, third order Pascal-type lowpass. It is based on numerical results because no known analytical solutions are possible for the overall design of filters using Pascal polynomial method. The stability criteria for the transfer function have been considered in terms of bounded-input bounded-output (BIBO) stability. The characteristics of some of the Pascal polynomials have also been reviewed with figures. Since the original polynomials in their standart form are not suitable for actual filter design, the required modifications to them have been shown. In the actual circuit implemantation, the scaled and shifted versions of the original polynomials have been used and necessary relations have been shown to satisfy the realizable filter transfer function requirements. Finally, the consequent filter approximation that is based on modified Pascal polynomials have been given with its magnitude and phase characteristics in figures. Its features for the third order lowpass design have been discussed. Although there are some passive filter implementations, active filter realizations are very limited in the literature. In order to further investigate the aspects of the method, using SPICE program, the proposed circuit realization of the transfer function has been given using operational transconductance amplifier (OTA) blocks. The related simulation results and figures have also been added to the paper. It is found that the method of the modified Pascal polynomials and the proposed design of the third order Pascal lowpass filter circuit have performed well. It can be said that according to the simulation figures and the mathematical results, this method is suitable for analog filter realizations, and it can be used as promising alternatives to the classical analog filter approximations.

Keywords: Pascal polynomials, analog filters, filter approximation.

YAVRU VE ERİŞKİN YENİ ZELANDA TAVŞANINA AİT DİL DOKULARINDA GENEL HİSTOLOJİK ÖZELLİKLERİN KARŞILAŞTIRILMASI

COMPARISON OF GENERAL HISTOLOGICAL FEATURES IN TONGUE TISSUES OF PUPPY AND ADULT NEW ZEALAND RABBIT

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ÖZET

Tavşan doğada yaygın olarak bulunan ve hem laboratuvarlarda deneysel amaçlı olarak, hem de ekonomik olarak üretilen bir canlıdır. Çok sayıda tıbbi deney için önemli bir model olan ve kapsamlı bir şekilde araştırmalarda kullanılan bu canlı, özellikle kesici dişlerinde görülen farklılık sebebiyle dikkat çekicidir. Tavşan, sulu yeşil bitki örtüsüyle beslenmek üzere tasarlanmış bir herbivordur. Dil, iki yüzey ve iki kenardan oluşan kaslı bir organdır. Dil, son derece hareketli, kaslardan oluşmuş bir organ olarak kabul edilir. Dil yüzeyi, tüm hayvanlarda bulunan (filiform, fungiform ve sirkumvallat) gibi şekil ve boyut bakımından farklı olan, lingual papilla adı verilen çok sayıda çıkıntı ile karakterizedir. Tavşan dilinde dört tip lingual papilla bulunur; bunlar filiform, fungiform, foliat ve sirkumvallat papillalardır. Filiform papillalar koni şeklinde ve dilin çeşitli bölgelerinde farklı yükseklik ve kalınlıklar gösteren papilla tipidir. Fungiform papilla yuvarlak bir şekle sahip olup, filiform papillalarla çevrili bir konumda bulunur. Fungiform papillalar, dilin ventral yüzeyinin ucunda da görülebilirler. Yüzeylerinde tat tomurcukları (gemma gustativa) vardır. Tüm memelilerde beslenme alışkanlıklarına bağlı olarak dilin hem morfolojik hem de histolojik özelliklerinin farklılık gösterdiği bilinmektedir. Herbivor bir hayvan olan tavşana ait dil dokuları ile ilgili olarak sınırlı sayıda literatür bulunmakla beraber, yavru ve erişkinler arasında nasıl bir farklılık olabileceği ile ilgili veri bulunmamaktadır. Yapılan çalışmada farklı boyama türleri kullanılarak erişkin ve yavru tavşanların dil dokularının histolojik olarak benzerlik ve farklılıkları ortaya konmaya çalışılmıştır.

Anahtar kelimeler: Tavşan, yavru tavşan, dil, histoloji

ABSTRACT

Rabbit is a creature commonly found in nature and produced both for experimental purposes and economically in laboratories. This creature, which is an important model for many medical experiments and extensively used in research, is particularly striking due to the difference in its incisors. The rabbit is an herbivorous designed to feed on succulent green vegetation. The tongue is a muscular organ consisting of two surfaces and two edges. The tongue is considered a highly mobile, muscular organ. The tongue surface is characterized by multiple projections called lingual papillae, which differ in shape and size as found in all animals (filiform, fungiform, and circumvallate). Rabbit tongue has four types of lingual papillae; these are filiform, fungiform, foliate and circumvallate papillae. Filiform papillae are cone-shaped papillae with different heights and thicknesses in various parts of the tongue. Fungiform papilla has a round shape and is surrounded by filiform papillae. Fungiform papillae may also be seen

at the tip of the ventral surface of the tongue. They have taste buds (gemma gustativa) on their surface. It is known that in all mammals, both morphological and histological features of the tongue differ depending on their eating habits. Although there is a limited amount of literature on the tongue tissues of rabbits, which is an herbivorous animal, there is no data on how there may be a difference between puppies and adults. In the study, it was tried to reveal the histological similarities and differences of the tongue tissues of adult and baby rabbits by using different staining types.

Keywords: Rabbit, puppy rabbit, tongue, histology

WALLETGATE: SERVİS ODAKLI BİR AÇIK CÜZDAN YAKLAŞIMI

WALLETGATE: A SERVICE-BASED OPEN WALLET APPROACH

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ÖZET

Dijital Cüzdan, son yıllarda gelişen ve internetten yapılan işlemler için para yönetimi sağlayan bir uygulamadır. Dijital cüzdanlar sayesinde, kart bilgileri paylaşılmaksızın internet üzerinden alışveriş yapılabilir. Ayrıca banka hesabına sürekli ihtiyaç duymadan kolay ve hızlı biçimde para transferi gerçekleştirilebilir. Sektörde bulunan cüzdan çözümleri belirli akış kalıpları dâhilinde Web tabanları çözümler üretmektedir. Bu akışlara müdahale etmek ve farklı ihtiyaçlara göre dönüştürmek zaman açısından oldukça maliyetli olmaktadır. Buna ek olarak bu Web tabanlı akışlar günümüzün ana teknoloji trendlerinden biri olan servis odaklı ve arayüzü olmayan çözümlerden uzakta kalmaktadır. Sipay Walletgate; markaları zaman, maliyet ve regülasyon süreçlerine maruz bırakmadan; elektronik para yatırma, çekme, kendi kartını çıkartma, sadakat programları ile markaların mobil cüzdanını sıfırdan başlayarak tamamen işlevsel bir platform haline getirmektedir. Sahada birçok cüzdan uygulaması olmasına rağmen bunların çoğu kapalı devre olarak çalışmakta ya da lisans sahibi şirketin kendi marka ve operasyonu ile iş birliği sağlanarak yapılabilmektedir. Fakat günümüz koşullarında her kurum kendi markası ve pazarlama stratejisiyle çözümlerini sunmak istemektedir. Bu altyapı sayesinde Sipay finansal kurum özelliklerini kullanarak kurumlar tamamen kendi stratejileri ve çözümlerine uygun olarak açık devre cüzdan, kart, QR gibi özelliklerle piyasaya ürün çıkarabilmektedirler. Bu bildiride Walletgate mimari tasarımı servis odklı biryaklaşım olarak sunulacak ve özgün yanları vurgulanacaktır. Mevcuttaki web tabanlı uygulamalara karşın burada sunacağımız yaklaşımın yenilikçi yönü belirli bir akışı gerçekleştirmek yerine farklı ihtiyaçlara ve ödeme tiplerine göre dönüştürülebilen servis odaklı esnek bir yapıdır. Dolayısıyla temelde modüler bir mimariye sahip olan çözüm servis odaklı yapısı sayesinde farklı akışlar için oluşacak ihtiyaçlara yönelik küçük maliyetli değişikliklerle markette ortak bir cüzdan platformu olarak yer alabilecektir.

Anahtar Kelimeler: Finansal teknolojiler, dijital cüzdan, servis odaklı yaklaşım

ABSTRACT

Digital Wallet is an application that has developed in recent years and provides money management for transactions made online. Thanks to digital wallets, shopping can be done online without sharing card information. In addition, money can be transferred easily and quickly without the need for a bank account. Wallet solutions in the industry produce Web bases solutions within certain flow patterns. Interfering with these flows and transforming them according to different needs is very costly in terms of time. In addition, these Web-based flows are far from service-oriented and interfaceless solutions, which is one of the main technology trends of today. Sipay Walletgate; without exposing brands to time, cost and regulatory processes; It transforms the mobile wallet of brands into a fully functional platform, starting from scratch, with electronic money deposits, withdrawals, own card issuance, loyalty

programs. Although there are many wallet applications in the field, most of them work as a closed circuit or can be done in cooperation with the licensee company's own brand and operation. However, in today's conditions, every institution wants to present its solutions with its own brand and marketing strategy. Thanks to this infrastructure, institutions can launch products with features such as open-circuit wallet, card, QR, in accordance with their own strategies and solutions, by using Sipay financial institution features. In this paper, Walletgate architectural design will be presented as a service-oriented approach and its original aspects will be emphasized. Despite the existing web-based applications, the innovative aspect of the approach we will present here is a service-oriented flexible structure that can be transformed according to different needs and payment types, instead of performing a specific flow. Therefore, the solution, which basically has a modular architecture, will be able to take place in the market as a common wallet platform with small cost changes for the needs that will arise for different flows, thanks to its service-oriented structure.

Keywords: Financial technologies, digital wallet, service-oriented approach

AN OPTIMIZATION-BASED VIDEO STABILIZATION APPROACH

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ABSTRACT

Nowadays, videos find their place in education, health and military fields besides daily use. However, visual instabilities such as shaking and jittering may occur in videos taken with moving cameras. To overcome this problem, various video stabilization approaches have been proposed. Earlier in the literature, video stabilization studies were carried out with feature-based methods in which features are extracted with a feature extraction algorithm and tracked among the video frames. The video is stabilized by correcting the feature trajectories. Supervised learning-based studies were another branch of work. In supervised approaches, deep learning models were trained for stabilization purposes. In recent years, interpolation-based unsupervised video stabilization methods obtain successful results for certain situations. However, the quality of the results is directly related to the performance of the utilized interpolation method. In addition, these interpolation methods can not perform well when there is a complex motion between input frames. Although these methods provide significant progress, many challenges still need to be solved to obtain successful results.

In this study, we proposed an optimization-based video stabilization method to overcome the shortcomings of the interpolation-based video stabilization strategy. In our method, we predict the warping field transforming the input unstable video frame to a stable one. Moreover, we define a new objective function to optimize a smooth warping field, so that output video does not contain unintended camera motion. Experiment results demonstrate that our proposed video stabilization algorithm achieves promising results. Our method produces up to 17.65% more successful results than the baseline interpolation-based method.

Keywords: Video stabilization, interpolation, optimization, warping

EVALUATION OF THE IMPACT OF THE CORONAVIRUS (COVID-19) PANDEMIV ON THE WORKING CONDITIONS OF COMPUTER ENGINEERS IN TÜRKİYE

KORONAVİRÜS (COVID-19) SALGININ TÜRKİYE'DEKİ BİLGİSAYAR MÜHENDİSLERİNİN ÇALIŞMA ŞARTLARINA ETKİSİNİN DEĞERLENDİRİLMESİ

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ABSTRACT

After the coronavirus (Covid19) pandemic reached dangerous levels for public health, relevant public institutions took a series of actions to keep the spread of the disease under control and to manage the risks that may arise in terms of public order. One of these actions is the curfew.

With the curfew, many businesses have suggested their employees work from home according to the character of the job. This method, which was initially applied (temporarily) for specific date ranges, became permanent in many businesses after the restrictions were lifted, with the hybrid model of permanent remote working and working from the office on certain days and from home on certain days.

The surveys revealed that after the pandemic, businesses switched to a working-from-home model at a rate of 27% and a hybrid working model at 50%. Necessary legal arrangements have also been made for Technology Development Zones, and the time that can be spent outside the zone for R&D personnel has been determined as 75% until 2023-12-31.

Another innovation with the remote and hybrid working models was that the recruitment processes for computer engineers took place online to a great extent. This outcome has opened the door for computer engineers to work remotely not only for domestic but also for businesses abroad.

This study will discuss the working models that gained popularity with this revolutionary process experienced through surveys and examples, the gains offered by the working conditions, and the difficulties it brings.

Keywords: Remote Working, Hybrid Working, Computer Engineering, The Effect Of The Pandemic On Working Life

ÖZET

Koronavirüs (Covid-19) salgınının toplum sağlığını tehdit seviyesinin tehlikeli boyutlara ulaşması sonrasında ilgili kamu kurumları hastalığın yayılma hızını kontrol altında tutmak ve kamu düzeni açısından oluşabilecek riskleri yönetmek maksadıyla bir dizi önlemler almıştır. Bu önlemlerden bir tanesi de sokağa çıkma kısıtlamasıdır.

Sokağa çıkma kısıtlamasının uygulanması ile birlikte işletmelerin birçoğu işin niteliğine göre çalışanlarını evden çalışmaya yönlendirmiştir. Başlarda belirli tarih aralıkları için (geçici olarak)

uygulanan bu yöntem kısıtlamalar kalktıktan sonra da daimî uzaktan çalışma ve belirli günlerde ofisten belirli günlerde ise evden çalışılan hibrit model ile birçok işletmede kalıcı hale gelmiştir.

Gerçekleştirilen anketlerde, işletmelerin pandemi sonrasında %27 oranında tamamen evden çalışma modeline, %50 oranında ise hibrit çalışma modeline geçtiği ortaya konmuştur. Teknoloji Geliştirme Bölgeleri için de gerekli yasal düzenlemeler gerçekleştirilmiş olup, ar-ge personeli için bölge dışında geçirilebilecek süre 31.12.2023 tarihine kadar %75 olarak belirlenmiştir.

Uzaktan ve hibrit çalışma modelleriyle birlikte gelen bir diğer yenilik ise bilgisayar mühendisleri için işe alım süreçlerinin çok büyük oranda tamamen çevrimiçi olarak gerçekleşmesi olmuştur. Bu gelişme bilgisayar mühendislerinin yalnızca yurt içindeki değil, yurt dışındaki işletmeler için de uzaktan çalışabilmesine kapı aralamıştır.

Bu çalışmada anketler ve örnekler üzerinden yaşanan bu devrimsel süreç ile popülerlik kazanan çalışma modelleri ile çalışma şartlarının sunduğu kazanımlar ve beraberinde getirdiği zorluklar ele alınacaktır.

Anahtar Kelimeler: Uzaktan Çalışma, Hibrit Çalışma, Bilgisayar Mühendisliği, Salgının İş Hayatına Etkisi

ÇANAKKALE BOĞAZINDA AVLANAN MİDYELERDE GSBL VE KARBAPENEMAZ POZİTİF ENTEROBACTERİACEAE SUŞLARI VE GENOTİPLERİNİN ARAŞTIRILMASI

INVESTIGATION OF ESBL AND CARBAPENEMASE POSITIVE ENTEROBACTERIACEAE STRAINS AND GENOTYPES IN MUSSELS CAUGHT IN THE ÇANAKKALE STRAIT

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ÖZET

Bu çalışma; Çanakkale boğazında avlanan midyeler (Mytilus galloprovincialis) üzerinde gerçekleştirilmiştir. Midyelerde genişlemiş spektrumlu beta laktam (GSBL) ve karbapenem antibiyotiklere dirençli Enterobacteriaceae ailesinden bakterilerin varlığı ve bunların genotiplerinin belirlemesi amaçlanmıştır. Aseptik koşullar altında yumuşak doku ve vücut sıvıları yaklaşık 10gr örnekler oluşturulmuştur. Örnekler mikrobiyolojik analiz için 1/9 oranında steril peptonlu su ilave ederek stomacher torbasında homojenize edildi. Homojenizattan Eosin Methylene Blue (EMB) besiyerine, meropenem katkılı(1mg/L) EMB besiyerine, sefotaksim katkılı(1mg/L) EMB besiyerine yayma plak yöntemi ile 100'er µl ekim yapıldı. Bakterilerin tanımlanmasında klasik identifikasyon testlerinden Triple Sugar Iron agar (TSI), indol, metil kırmızısı, Voges-Proskauer, Sitrat (IMVIC) kullanılmıştır. İzolatların Disk difüzyon yöntemi ile sefotaksim (5µg), seftazidim (10µg) meropenem (10µg), ertapenem (10µg) antibiyotiklerine karşı duyarlılıklarına bakılmıştır (EUCAST). İzolatların otomatik tanımlama ve antimikrobiyal duyarlılıklarını belirlemek için BD Phoenix™ 100 otomatize sistem bakteri identifikasyon ve antibiyogram hassasiyet testi (NMIC/ID-435) kullanılmıştır. Karbapenem direnç genlerinin belirlenmesi için IMP, NDM, VIM, OXA-48 primerleri ile PCR işlemi gerçekleştirilmiştir. Dirençli suşların genotiplerinin belirlemesi amacıyla The Enterobacterial Repetitive Intergenic Consensus-Polymerase Chain Reaction (ERIC-PCR) yöntemi kullanılmıştır. Meropenem ve Sefotaksim ilave edilmiş EMB besiyerinde üreme sonuçlarına göre; *Escherichia coli* (n:2), *Klebsiella pneumoniae* (n:2), *Enterobacter cloacae* (n:1), bakterileri izole edilmiştir. BD Phoenix aracılığıyla *E. coli* (n:2) ve *K. pneumoniae* (n:2) suşlarında Genişlemiş spektrumlu β-laktamaz (GSBL) pozitif bulunmuştur. Bir izolatın (*E. cloacae)* ise karbapenemlere karşı dirençli olduğu ancak karbapenem direnç genlerinden taşımadığı tespit edilmiştir. GSBL pozitif suşlardan *E. coli* ve *K. Pneumoniae* izolatlarının kendi aralarında ilişkisiz klonlarda oldukları tespit edilmiştir.

Bu proje Ç.O.M.Ü. BAP Koordinasyon Birimi tarafından TSA-2019-2937 nolu proje kapsamında desteklenmiştir.

Anahtar kelimeler: Enterobacteriaceae, GSBL, karbapenem, ERIC.

ABSTRACT

It was carried out on mussels (Mytilus galloprovincialis) caught in the Dardanelles. It was aimed to determine the presence of bacteria from the Enterobacteriaceae family and their genotypes resistant to extended-spectrum beta-lactam (ESBL) and carbapenem antibiotics in mussels. Approximately 10 g samples of soft tissue and body fluids were created under aseptic conditions. The samples were homogenized in a stomacher bag by adding 1/9 sterile peptone water for microbiological analysis. 100 µl of the homogenate was inoculated into Eosin Methylene Blue (EMB) medium, meropenem added (1mg/L) EMB medium, and cefotaxime added (1mg/L) EMB medium using the spread plate method. For the identification of bacteria, Triple Sugar Iron agar (TSI), indole, methyl red, Voges-Proskauer, Citrate (IMVIC) were used. The susceptibility of the isolates to cefotaxime (5µg), ceftazidime (10µg),

meropenem (10µg), ertapenem (10µg) antibiotics was measured by the disk diffusion method (EUCAST). The BD Phoenix™ 100 automated system bacterial identification and antibiogram susceptibility testing (NMIC/ID-435) was used to determine the automatic identification and antimicrobial susceptibility of the isolates. PCR was performed with IMP, NDM, VIM, OXA-48 primers to identify carbapenem resistance genes. The Enterobacterial Repetitive Intergenic Consensus-Polymerase Chain Reaction (ERIC-PCR) method was used to determine the genotypes of resistant strains. According to the results of growth in EMB medium with added Meropenem and Cefotaxime; *Escherichia coli* (n:2), *Klebsiella pneumoniae* (n:2), *Enterobacter cloacae* (n:1), bacteria were isolated. Extended-spectrum β-lactamase (ESBL) was found positive in *E. coli* (n:2) and *K. pneumoniae* (n:2) strains through BD Phoenix. It was determined that one isolate (*E. cloacae*) was resistant to carbapenems but did not carry carbapenem resistance genes. *E. coli* and *K. pneumoniae* isolates from ESBL positive strains were found to be in unrelated clones.

This project was developed by Ç.O.M.Ü. It was supported by the BAP Coordination Unit within the scope of the project numbered TSA-2019-2937.

Keywords: Enterobacteriaceae, ESBL, carbapenem, ERIC.

KANATLI ETLERİNDE MİKROBİYOLOJİK TEHLİKELER

MICROBIOLOGICAL HAZARDS IN POULTRY

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ÖZET

Dünya nüfusunun hızlı bir şekilde artmasıyla birlikte gıda üretimine duyulan ihtiyaç da artmaktadır. Sağlıksız gıda tüketiminden kaynaklanan gıda infeksiyon ve intoksikasyonlarına bağlı olarak ülkeler milyonlarca dolar sağlık gideri harcamak zorunda kalmaktadır. Gıda üretiminin değişik aşamalarında karşılaşılan hijyenik problemlere bağlı olarak hem halk sağlığı açısından riskler ortaya çıkmakta hem de gıdalar tüketiciye ulaşmadan bozulabilmektedir. Gıda güvenliğini etkileyecek en sık karşılaşılan tehlike ise mikrobiyolojik tehlikelerdir. Mikrobiyolojik tehlikeler bakteriyal, fungal, viral ve paraziter olabilir. Kanatlı eti başta tavuk olmak üzere, hindi, kaz, ördek gibi hayvanların kas doku, bağ doku, deri ve yenilebilir iç organlarından oluşmaktadır. Yüksek besleyici değere sahip kompozisyonunun yanında, farklı etmenlere bağlı olarak mikroorganizmaların kontaminasyonu ve gelişmesi için uygun bir ortam oluşturmaktadır. Kanatlı etinde karşılaşılan mikroorganizmalar *Enterobacter, Escherichia, Bacillus, Flavobacterium, Micrococcus, Salmonella, Acinetobacter, Pseudomonas* spp., *Staphylococcus* ve *Campylobacter* türleridir. *Salmonella* ve *Campylobacter* türleri gıda kaynaklı hastalıkların meydana gelmesine sebep olan temel mikroorganizmalardır. Mikrobiyolojik tehlike ajanları zoonotik kaynaklı veya işleme, depolama, nakliye aşamalarında kanatlı et ve et ürünlerine bulaşmış olabilmektedir. İnsanda tifo, paratifo, gastroenterit, mide-bağırsak hastalıklarına yol açarlar. Ayrıca tedavide antibiyotiklere direnç göstermeleri sebebiyle de toplum sağlığı açısından önem arzeder. Sonuç olarak, kanatlı eti üretim tesislerinde hijyenik koşullara uyulması, HACCP (**Hazard Analysis and Critical Control Point)** gibi gıda güvenliği sistemlerinin işletmelerde etkin hale getirilmesi, hayvancılık sektöründe antibiyotik ve benzeri ilaç kullanımlarının kontrol altına alınması gıda güvenliği açısından önemlidir.

Anahtar Kelimeler: Kanatlı eti, Mikrobiyolojik tehlikeler, Gıda güvenliği.

ABSTRACT

With the rapid increase in the world population, the need for food production is also increasing. Countries have to spend millions of dollars in health expenses due to food infections and intoxications caused by unhealthy food consumption. Depending on the hygienic problems encountered at different stages of food production, risks arise in terms of public health and foods can deteriorate before they reach the consumer. The most common hazard that will affect food safety is microbiological hazards. Microbiological hazards can be bacterial, fungal, viral and parasitic.

Poultry meat consists of muscle tissue, connective tissue, skin and edible internal organs of animals such as chicken, turkey, goose and duck. In addition to its composition with high nutritional value, it creates a suitable environment for the contamination and development of microorganisms depending on different factors. Microorganisms encountered in poultry meat are Enterobacter, Escherichia, Bacillus, Flavobacterium, Micrococcus, Salmonella, Acinetobacter, Pseudomonas spp.,

Staphylococcus and Campylobacter species. Salmonella and Campylobacter species are the main microorganisms that cause foodborne diseases. Microbiological hazard agents may be of zoonotic origin or contaminate poultry meat and meat products during processing, storage and transportation. They cause typhoid, paratyphoid, gastroenteritis, gastrointestinal diseases in humans. In addition, it is important for public health due to resistance to antibiotics in treatment.

As a result, it is important for food safety to comply with hygienic conditions in poultry meat production facilities, to activate food safety systems such as HACCP (Hazard Analysis and Critical Control Point) in enterprises, to control the use of antibiotics and similar drugs in the livestock sector.

Keywords: Poultry meat, Microbiological hazards, Food safety.

PLIOCENE DEPOSITIONAL STAGES IN ERZURUM BASIN; AN EXAMPLE OF BASIN INVERSION. EASTERN ANATOLIA . TURKIYE

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ABSTRACT

Erzurum Basin basin presents the best evidences of currently active tectonic inversion mechanism. It lies within a broad zone of ENE-trending dextral strike slip Erzurum Fault Zone (EFZ), which has approximately the same age as North and East Anatolian Faults (NAF and EAF). However it has a more complex role in the displacement of crustal material, mobilized by the northward collision of Arabian Plate with Eurasian plate, at the end of the Miocene. The EFZ interacts with strike slip tensional faults of different orientation, like NNE-trending sinistral Dumlu and Cobandede Faults. Major elements of the EFZ, Ermecik Faults (North margin), Kandilli- Palandoken Faults (South margin) and Dumlu faults outline the approximately triangular shaped Erzurum Basin. This basin was formed by a combination of normal and strike slip activity which has prevented the east-west extension of a fault bound wedge in response to north-south tectonic shortening. Although these fault elements are present in pull-apart basins, the structural-tectonic evolutionary history of Erzurum Basin is quite **distinct** from pull-apart basins which are common along the NAF and EAF Zones. Simultaneous activity of these three master fault types has led to the common development of oblique slip faults. Other complications in this region include the rotation and folding of faults, and their later reuse.

North margin of Daphan Plain defined by left lateral oblique revers Emrecik Faults- and South margin by right lateral oblique reverse Kandilli Faults. Both of these combined at West point. The Karasu Basin, as East sub-basin, bounded by Palandoken Faults along South margin and by Aribahce-Akdag Faults along North margin. East Margin by Dumlu Faults and western margin by Ilıca faults. Karasu basin shortened by N-S compression, resulted in inversion of N and S marginal faults into reverse even thrust faults. Basin floor dips eastward. Lateral extension prevented by Dumlu Tectono-Volcanic threshold. Basin experienced N-S shortening without E-W extension, compression compensated by thrusts, reverse and overturned faults, concentric rotational structures, fan deltas and slump structures formed inside Pliocene mud- sand-diatomite- bentonite- fine pyroclatic sedimentary sequeences.

In general, volcanic basement wide-spread in Eastern Turkiye reveal circular volcanic morpho-tectonic structures outcrope around Erzurum Basin. At the centre, roughly circular depresion formed during Late Miocene-Early Pliocene. Marginal master fault surfaces were dipping to basin centre, but as N-S compression increased in time, Fault Planes along N and S margins gradually gained vertical positions and in later stages of compression they turned into revers and thrusts. Basin internal architecture experienced inversion as result of N-S shorthening/narrowing dimensions-caused deepening of Karasu Basin>1000 m. Repeated (overturned antclines) thrust planes along the Telsizler Ranges, striking across Erzurum Urban Area-South of University Dormitories. Repeated series of Alluvial Fans, Fan Deltas along Ermecik-Gelinkaya segment, provides many evidences of inversion.

Key words: Daphan Plain, Karasu Basin, Submarine Slump, Ilıca Faults.

NEW DENIAL OF SERVICE ATTACKS DETECTION APPROACH USING HYBRIDIZED NEURAL NETWORKS AND BALANCED DATASET

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ABSTRACT

Denial of Service (DoS) intrusions are damaging cyber-attacks, and their identification is of great interest in the Intrusion Detection System (IDS). Neural Networks (NN) and Metaheuristic Algorithms typify two of the best-used approaches in the IDS research. On another side, CICIDS2017 provides an efficient dataset for the design of any IDS solution, due to the multiplicity of attacks and attributes that it encompasses (with 15 classes and 78 features). The purpose of this work is to improve a neural network-based DoS detection system by using three metaheuristic algorithms, such as Particle Swarm Optimization (PSO), Genetic Algorithm (GA) and Ant-Lion Optimizer (ALO). Thus, five DoS attack classes, including Benign, GoldenEye, Hulk, SlowHTTPTest and Slowloris, are used in a balanced ratio. For data balancing, a new approach by means of the K-means clustering method is developed. Hybrid NN-based approaches are explored in order to select the best features and to improve detection efficiencies. In this context, the optimization of the NN input layer is achieved by only 24 features, and the NN size is reduced to five layers. Performance metrics extracted from confusion matrices, such as efficiency, purity and F_1-score are used. The experimental result, based on the used DoS-CICIDS2017 dataset, indicated that PSO-based NN completes promising DoS detection, providing a tested accuracy, recall and F_1 score of 99.92 %, 99.63% and 99.75 %, respectively.

Keywords: Neural Networks, Metaheuristic Algorithm, Denial of Service, Intrusion Detection System, CICIDS2017.

IMPACTS OF HUMIC ACID PRACTICES ON NITROGEN, PHOSPHORUS AND POTASSIUM UPTAKE OF BEANS IN SALINE CONDITIONS

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ABSTRACT

Salt causes both osmotic and ionic stresses by inhibiting plant growth and mineral uptake. Humic substances play an important role by controlling the chemical and biological properties of the environment surrounding the plant roots, affecting the nutrient uptake of plants in soil salinity conditions. The positive effects of humic acid (HA) on reducing salt stress in the soil are being investigated in the cultivation of salt-sensitive plants such as beans. In this work, the impacts of several HA application methods (control, soil, foliar and soil+foliar) on nitrogen (N), phosphorus (P), and potassium (K) uptake of bean plants that were exposed to increasing salt (0, 50, 100 and 150 mM) has been aimed. The bean plants were grown in a controlled environment until the flowering period and then, NPK uptake of roots and aboveground parts was determined after harvest. The results showed that NPK uptake in the root and stem of the bean plants was considerably improved when HA is applied especially from the soil and then, from the soil+foliar. We observed that while the amount of salt dose application is increased, NPK uptake descreased in parallel. It was concluded that the application of 50 mM HA directly into the soil improves the NPK uptake as well as protects the plant against the adverse effects of salt.

Keywords: Bean, humic acid, NPK uptake, salt stress.

STRATEJİK KARAR VERME YAKLAŞIMIYLA DÖKME GEMİ SEÇİMİNDE YAKIT TÜKETİMİNİ ETKİLEYEN FAKTÖRLERİN BULANIK ANALİTİK HİYERARŞİ PROSESİ YÖNTEMİYLE SIRALANMASI

WITH A STRATEGIC DECISION-MAKING APPROACH, ORDERING THE FACTORS AFFECTING FUEL CONSUMPTION IN BULK CARRIER VESSEL SELECTION BY USING FUZZY ANALYTICAL HIERARCHY PROCESS METHOD

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ÖZET

Dünya ticaretinin yaklaşık olarak %80'i uluslararası ve iç sular olmak üzere deniz yolu ile yapıldığı bilinmektedir. Deniz yolu taşımacılığında stratejik hedef mümkün olan en düşük maliyet kapsamında elde edilebilecek en yüksek verimlilik olarak belirlenmektedir. Deniz yolu taşımacılığında taşıma maliyetleri diğer taşıma türlerine göre daha azdır. Var olan bu maliyetler içerisinde en yüksek paya sahip olan gideri yakıt masrafları oluşturmaktadır. Yakıt ve yakıt ikmal maliyetleri navlun taşımacılığındaki fiyat değişimlerinin en temel etkenlerinden olup fiyat artışıyla doğrudan ilişkilidir. Dünya ticaret sektöründe yakıt tüketimini düşürmenin, bununla beraber geminin ticari ve operasyonel maliyetlerini düşürmenin çeşitli yolları aranmaktadır. Yakıt tüketiminin azaltılmasına yönelik olarak yapılabilecek işlemlerden biri sefer bölgesi ve yük çeşidine göre optimum performans ve yakıt tüketimi sağlayacak gemi seçimi önemli bir husustur. Uygun gemi seçimi için gemi sahipleri ve gemi kiracıları yoğun mesai ve bütçe harcamaktadırlar. Gemilerin yakıt tüketimini etkileyen birçok faktör vardır ve bu faktörlerin değerlendirilmesine yönelik literatürde birçok çalışma mevcuttur. Bu çalışmada, yakıt tüketimini doğrudan etkileyen kriterlerin kıyaslanması amaçlanmıştır. Elde edilen literatür çalışmaları ve uzman görüşleri göz önüne alınarak yakıt tüketimini etkileyen faktörleri şu şekilde belirtilebilir; Karina temizliği, Geminin hızı, Geminin detveyt tonajı, Geminin yükü, Kullanılan yakıt tipi, Geminin makinesi, Atık ısıdan geri dönüşüm, Pervane çeşidi, Baş iter, Otomasyon Sistemleri. 23 uzmanın online ortamda katıldığı anketler vasıtasıyla yakıt tüketimini etkileyen 10 kriterin bulanık AHP yöntemiyle uzmanların karşılıklı olarak kıyaslanması istenmiştir. Tutarlı olarak kabul edilen 18 anket cevabının geometrik ortalaması alınarak tek bir karar verme matrisi oluşturulmuştur. Daha sonra her bir kriterin bulanık ağırlıkları hesaplanarak elde edilen kriter ağırlıkları en yüksekten en düşüğe doğru sıralanmıştır. Kriter ağırlıklarının sıralaması; Geminin makinesi (K6)> Geminin detveyt tonajı (K3)> Geminin yükü (K4)>

Karina temizliği (K1)> Geminin hızı (K2)> Kullanılan yakıt tipi (K5)> Atık ısıdan geri dönüşüm (K7)> Baş iter (K9)> Pervane çeşidi (K8)> Otomasyon sistemler (K10) elde edilmiştir.

Anahtar Kelimeler: Gemi seçimi, Yakıt tipi, Bulanık AHP, Karar verme

ABSTRACT

It is widely known that about 80% of world trade is carried out by vessels, including international and inland waters. The strategic target in maritime transport is determined as the highest efficiency that can be achieved within the lowest possible costs. Shipping costs in maritime transport are less than in other modes of transport. Freight that has the highest share among these existing costs is fuel costs. Fuel and refueling costs are one of the main factors of price changes in freight transportation and are directly related to price increases. In the world trade sector, various ways are sought to reduce fuel consumption, as well as to reduce the commercial and operational costs of the ships. One of the actions that can be taken to reduce fuel consumption is the selection of a ships that will provide optimum performance and fuel consumption according to the trade area and cargo type. Ship owners and charterers spend a lot of time and money on choosing the right ship. There are many factors that affect the fuel consumption of ships and many studies in the literature on the evaluation of these factors. In this study, it is aimed to compare the criteria that directly affect fuel consumption. Considering the literature studies and expert opinions, the factors affecting fuel consumption can be stated as follows; hull cleaning, ship's speed, ship's deadweight tonnage, loaded cargo, type of fuel, ship's engine, waste heat recycling, propeller type, bow thrusters and automation systems. The 23 experts were asked to compare the 10 criteria that affecting fuel consumption with the fuzzy AHP method through the online surveys. A single decision matrix was formed by taking the geometric mean of 18 survey responses, which were considered consistent. Then, the fuzzy weights of each criterion were calculated, and the criterion weights were ordered from the highest to the lowest. Ordering of criterion weights resulted as ship's engine (C6)> ship's deadweight tonnage (C3)> loaded cargo (C4)> hull cleaning (C1)> ship's speed (C2)> type of fuel used (C5)> waste heat recycling (C7)> bow thrusters (C9))> propeller type (C8)> automation systems (C10).

Keywords: Vessel selection, Type of fuel, Fuzzy AHP, Decision making

BENEFICIAL EFFECT OF MAILLARD CONJUGATION ON EMULSIFYING BEHAVIOR OF PEA PROTEIN

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ABSTRACT

In recent years, there has been an orientation in the scientific literature and industry to plant-based proteins as an alternative to animal ones. The reasons behind this trend are the positive effect of plant-based proteins on health, the increase in vegan/vegetarian, and private (celiac patients) consumer groups, *etc*. However, the lack of techno-functional properties of plant-derived proteins at desired levels is notable drawback of these materials. In order to increase these properties to the desired levels, modification processes could be conducted to change the natural structure of the protein by using different applications including ultrasound treatment, glycosylation/conjugation steps, cross-linking applications. Based on these approaches, pea protein-carboxymethylcellulose conjugates (2:1, w/w) were synthesized via Maillard reaction in the current study. The conjugation was ratified by FTIR spectroscopy. The water holding capacity was 493.67% for the unconjugated mixture of pea protein and carboxymethylcellulose, 461.52% for Maillard conjugates, and 455.43% for pea protein alone. The superior oil binding capacity was found in the conjugates (204.34%), followed by unconjugated mixture (190.66%) and pea protein alone (174.99%). The conjugates exhibited the maximum emulsion activity index (64.49 m^2/g) and emulsion stability index (463.28 ESI30) compared to unconjugated mixture (emulsion activity index: 60.68 m^2/g; emulsion stability index: 324.39 ESI30) and pea protein alone (emulsion activity index: 40.30 m^2/g; emulsion stability index: 153.92 ESI30). Also, stability index, stability coefficient, and centrifugal precipitation rate analyses supported the favorable action of Maillard reaction on emulsifying behavior of proteins. The results demonstrated the feasibility of the Maillard reaction for improving the techno-functional properties of plant-based proteins.

Keywords: Maillard conjugation, Pea protein, Carboxymethylcellulose, Emulsifying behavior, Techno-functional properties

A NEW METHOD OF SIMPLIFIED JOHNSON COOK MODEL PARAMETER OPTIMIZATION FOR DP600 AND DP800 STEELS

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ABSTRACT

Dual-phase steels are widely used in the automotive and industrial sectors. The main properties of dual-phase steels are strength and ductility, or the ability to form them into the desired shape. The ferrite phase and martensite phase dominate the microstructure of the above-mentioned steels. Due to the mechanical properties that dual-phase steels possess, research on them is still growing. Therefore, this study provides an experimental investigation and a new finite element modeling optimization method for the prediction parameters of the simplified Johnson-Cook constitutive model. All investigations are based on the determination of the true flow curves of the DP600 and DP800 steels. Therefore, the uniaxial tensile tests for the experimental and numerical simulations were performed with three different strain rates. The aim was to calibrate or define the Simplified_Johnson_Cook_MAT_98 parameters known as A, B, n, and C through a finite element modeling optimization procedure; LS-OPT was used for the prediction of the parameters. Since the necessary numerical results were obtained, the results were validated by comparing the numerical simulation results with the experimental data.

DESIGN NEW CYCLOHEXANE-1,3-DIONE DERIVATIVES AS ANTI-NSCLC CANCER AGENTS USING QSAR AND DOCKING STUDIES

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ABSTRACT

An interesting anti-cancer target is the C-met receptor tyrosine kinase. We present a theoretical study of the quantitative structure-activity relationship, QSAR, inhibitor of C-met enzymatic activity. We studied 38 molecules derived from cyclohexane-1,3-dione, dimedon, as anticancer agents capable of inhibiting C-met receptor tyrosine kinase using statistical techniques, RLM, RNLM and Y-randomization assays. After conducting this study, we developed models that showed excellent statistical results for multiple linear regression (R2 = 0.913; R2CV = 0.85; R2test = 0.934) and multiple nonlinear regression (R2 = 0.991; R2CV = 0.82; R2test = 0.997). According to these results, multiple linear regression shows great potential to predict the inhibitory activity of C-met protein enzymatic activity and its inhibitory activity. Based on these results, we plan to design new molecules for the treatment of non-small cell lung cancer (NSCLC) to evaluate the properties of ADMET in silico, supplemented by molecular docking.

Keywords: QSAR, ADMET, Molecular Docking, NSCLC, C-met

IDENTIFICATION OF *SOLANUM NIGRUM (*LEAVES EXTRACT) PHENOLIC COMPOUNDS, THEIR EFFECTS ON BEHAVIOR AND BLOOD BIOCHEMISTRY OF ROTENONE INDUCED PARKINSON'S RAT MODEL

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ABSTRACT

Parkinson disease (PD) is a chronic disease of the central nervous system which is mostly induced by chemicals. Rotenone is an inducer of Parkinson's rat model in this project which is an active compound of insecticides. The study aimed to find out the toxic effect of chemicals on level of neurotransmitters, interlinked disfunction of body organs and possible therapy by *Solanum nigrum* leaves active compounds in rotenone induced Parkinson's disease rat model. SN leaves extract contents were identified by Gas chromatograph mass spectrometry (GCMS) analysis and Identified compounds might be having phenolic compounds with rich antioxidant capacity. First group was considered as control, second group was administered with rotenone, third group with rotenone + SNE and the fourth one with SN leaves extract only. Our results demonstrated that consecutive 8 days treatment of rotenone create oxidative stress in brain and body as well confirmed by blood biochemistry, serum and neurochemical analysis. 28 days treatment of SN leaves extract significantly decreased symptoms of PD by decreasing oxidative stress in whole body. Behavior analysis of our study indicated that PD carriers lost basal ganglion movement, muscle strength, coordination, balance and muscle stability. In blood serology low level of hemoglobin is associated with iron deficiency, an indicator of reduce dopaminergic activity and basic cause of PD. Similarly high level of glucose is also reduced dopaminergic activity. SNE treated groups have higher level of hemoglobin as compared to control and rotenone treated groups alternatively platelets count was also very low in SN treated group. In antioxidant assay ROS level was significantly low in SNE group as compared to control, rotenone and Solanum+ rotenone groups. It concludes that *Solanum nigrum* contents have antioxidant and therapeutic effect on PD.

BIOLOGICAL SCREENING AND MOLECULAR DOCKING STUDIES OF SULPHUR CONTAINING HETEROCYCLES FOR THE INHIBITION OF α-GLUCOSIDASE ENZYME

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ABSTRACT

Alpha glucosidase is a well-known hydrolyztic enzyme that breaks the higher carbohydrates such as starch into smaller carbohydrates which our body can easily accumulate. However, due to improper functioning or declined production of insulin the glucose level in the blood is ultimately elevated that leads to the diabetes mellitus, a serious body disorder. A common way to handle this disease is to control the blood glucose level and for this purpose a variety of alpha-glucosidase inhibitors (AGIs) have been presented but these AGIs also affect the body via different types of side effects. 1,2-Benzothiazine ring system, having nitrogen and sulphur atoms, has gained much attraction among various classes of heterocycles because of its prevailed biological and industrial applications. In this context, a variety of S-heterocycles were evaluated for their inhibitory effects against the alpha-glucosidase enzyme. Biological screening studies concluded the S-heterocycles **1, 8** and **9** as the best AGIs. Their IC_{50} values were found 5.9, 7.8 and 3.9 µM respectively, better than the standard drug, acarbose (IC_{50} value 38.3 µM). During molecular docking analysis of these S-heterocycles most of the scaffolds exhibited better results with good docking scores, low rmsd values and important binding interactions with the receptor enzyme. However, the derivatives **1, 8** and **9** were witnessed as the best AGIs of the alpha-glucosidase enzyme. The presented S-heterocycles can function as effective anti-diabetic agents after some further screening steps.

Key words: Benzothiazine, S-heterocycles, molecular docking, α-glucosidase inhibitors, diabetes mellitus.

STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTE WATER AND PRESENT WORK IN SUR SAROVAR BIRD SANCTUARY IN KEETHAM LAKE AGRA UTTAR PRADESH INDIA

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ABSTRACT

Water quality parameters were examined seasonally to scrutinize associations through bird numbers and species. This beautiful lake is located inside the Sur Sarovar Bird Sanctuary on the Agra Delhi Highway It is small but important bird sanctuary in the state of Uttar Pradesh. To examine relationships with bird numbers and species in the keetham lake, water quality parameters were estimated and analyzed seasonally.In the present study the water quality assessment of keetham lake was carried out to analyze water with the help of some physico-chemical variables like-temperature (19.50 to 25.00 0C), pH (7.39 ± 0.04 to 8.02 ± 0.06) , dissolved oxygen (4.75 ± 0.55 to 6.48 ± 0.87 mg/l), biological oxygen demand (6.60 ± 0.043 to 3.20 ± 0.02 mg/l), free carbon dioxide (CO2) (11 ± 0.055 to 14.20 ± 0.02 mg/l), alkalinity (180.73 ± 5.09 mg/L to 240.27 ± 5.05 mg/l), total hardness (239.33 ± 9.06 mg/L to 320.93 ± 8.07 mg/l), nitrate (0.78 ± 0.02 mg/L to 1.79 ± 0.02 mg/L), nitrite (0.27 ± 0.01 to 0.47 ± 0.02 mg/L), phosphate (0.24 ± 0.03 mg/L to 0.36 ± 0.05 mg/L) etc., Globally Harmful algal blooms are becoming increasingly common in freshwater ecosystems.

Key words: Water Quality, Parameter, Physico-Chemical, Aquatic Productivity, Bird.

VECTOR CONTROL BASED A NONLINEAR TECHNIQUE APPLIED ON THE PERMANENT MAGNET SYNCHRONOUS MACHINE

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ABSTRACT

This work deals a vector control based on a nonlinear technique applied to the Permanent Magnet Synchronous Machine (PMSM). The classical control has been applied on the PMSM successfully; however, these controls are less effective due to their linearity which uses the PI regulator which causes to deteriorate the system performance. To overcome this problem should be applied a control that meets the conditions of the nonlinearity with disturbances, uncertainties, and speed level variation. Therefore, non-linear techniques were applied in order to obtain good performance characteristics in light of the changes that the drive goes through and under the influence of the aforementioned factors. One of the most famous non-linear controls is the backstepping control (BSC), and the most important advantage of this control is that it is based on the stability of the system, where the control law is calculated by achieving the stability condition of the error using the Lyapunov function. Furthermore of; the obtained results by simulation prove the validity of the application of BSC to the PMSM control with higher performance.

Keywords: PMSM, nonlinear control, backstepping technique, stability method.

MAGNETICALLY RECOVERABLE AND HIGHLY EFFICIENT SUN-LIGHT-ACTIVE Clay/CN/ M/AgW NANOCOMPOSITES FOR PHOTOCATALYTIC DEGRADATIONS OF GM

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ABSTRACT

In this paper, we synthesize by coprecipitation a magnetically recoverable photocatalyst Clay/CN/ M/ AgW nanocomposites, as a greatly effective visible-light-active photocatalyst, and they were characterized by XRD, EDX, SEM, UV – vis, and FT- IR analysis. Sun-light-convinced photocatalytic performances were studied by the degradation of GM as a pollutant. It was verified that the nanocomposites are effective in the reduction of e-/ h+ recombination via the matched relations between energy bands of CN, M, and AgW semiconductors. The loftiest photocatalytic declination effectiveness was observed for the CN/ M/ AgW nanocomposite after 2h of radiation by more than 90% degradation of MG, more than every semiconductor independently.

In addition, a mechanism for photocatalytic performances was proposed using reactive species scavenging trials and characterization results.

THE PATHOGENESIS AND RISK FACTORS OF LUNG INJURY IN SEVERE ACUTE PANCREATITIS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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ABSTRACT

Background: As a common cause of clinical acute abdomen, severe acute pancreatitis (SAP) often leads to multiple organ damage. In the process of SAP, the lung is the most vulnerable organ except the pancreas, This study aim to systematic review and meta analyze the pathogenesis and risk factors of lung injury in severe acute pancreatitis.

Methods: We have systematically searched databases including PubMed, Scopus, Embase, and Web of Science for cohort and case-control studies based on the PRISMA guideline. We have also performed a descriptive meta-analysis on different CVDs. Random effects models were used for data analysis, where heterogeneity was tested through I^2. Egger's test was used to analyze the literature publication bias.

Results: This study included 25 literature, the combined data indicated that the prevalence of lung injury in SAP was 29% [95% confidence interval (CI) = 0.26–0.34]. Moreover, the prevalence of lung injury in SAP has declined in the past decade. Patients presented a high risk of lung injury in SAP in terms of age≥65 [Odds Ratio (OR) 2.35, 95% CI 1.53–3.42, p< 0.0001], hyperglycemia (OR 1.73, 95% CI 1.26-2.53, p< 0.0001), tobacco use (OR 1.54, 95% CI 1.18-2.03, p< 0.0001), heart failure (OR=3.25, 95%CI 1.92-5.86, p< 0.0001), acidosis (OR 1.65, 95%CI 1.23-2.76, p< 0.0001), C-reactive protein≥10 mg/L (OR 1.96, 95%CI 1.58-2.84, p< 0.0001).

Conclusions: This study highlight the high prevalence of lung injury in SAP. Healthcare workers should provide patients with noninvasive positive pressure ventilation at the early stage, and protect them from lung injury by optimizing airway management and fluid resuscitation.

Keywords: pathogenesis; lung injury; pancreatitis; meta-analysis

PREVALENCE AND FACTORS ASSOCIATED WITH WORKPLACE VIOLENCE AMONG NURSING STUDENTS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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ABSTRACT

Background: Workplace violence affects the physical and mental health of nursing students, such as causing nurses' job burnout, post-traumatic stress disorder and other adverse consequences. The current systematic review and meta-analysis aimed to present the pooled estimated prevalence and associate factors of nursing students workplace violence.

Methods: Systematic review and meta-analysis. Cochrane Library, PubMed, Embase and Web of Science were searched for cohort and cross-sectional studies investigating the prevalence and associate factors of nursing students workplace violence from inception to October 31st, 2022. Stata 16.0 was used for statistical analysis. Fixed-effect or random-effect model was adopted according to heterogeneity, which was evaluated by Cochran's Q and I2 values.

Results: Of the citations evaluated, 18 reported the prevalence of nursing students workplace violence. Pooled prevalence in all studies was 53.2% (95% CI: 45.3% to 60.7%). I2 = 99.3%, P <0. 001), with a random-effect model. Female (OR 1.82, 95%CI 1.05-3.15), low education level (OR 1.54, 95%CI 1.14-2.08), intern experience (less than 4 month) (OR 1.59, 95%CI 1.05-2.41), surgical ward (OR 2.07, 95%CI 1.05-4.06), night shift (OR 1.93, 95%CI 1.23-3.02) are the associated factors with workplace violence among nursing students.

Conclusions: This study highlight the high prevalence of workplace violence among nursing students in nursing workplace. We suggest that stakeholders can commit to early risk identification and management of violence events, and use situational strategies to establish violence reporting and sanctions mechanisms to prevent workplace violence against nurse students.

EFFECT OF CORNCOB ASH AS A PARTIAL REPLACEMENT OF CEMENT ON MECHANICAL PROPERTIES OF FIBROUS CONCRETE

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ABSTRACT

Concrete is versatile building material which is used in almost all construction works. Key factor of fibrous concrete is that enhance the properties of concrete. It can be used in humid environments with significant role. Utilization of concrete is increasing day by day and considered as 2nd largest building construction material. By the use of fibrous concrete, few environmental issues have been addressed. Keeping in this view, an experimental study is conducted to evaluate the strength of fibrous concrete made with corncob ash of different percentages 0%, 2%, 4%, 6%, 8% and 10% as a partial replacement of cement. In this connection, fifty-four cylinders of six mixes are prepared. Workability of fresh concrete is checked during the pouring of concrete cylinders. Poured cylinder samples are left for different curing ages at 7, 14 and 28 days. After curing, compression and split tensile tests are performed on hardened concrete cylinders to evaluate the strength properties. Workability of six mixes lies between 40mm - 80mm. Test results shows that compressive and tensile strength of concrete gives the better results at 2% of corncob ash which increases 8% increase in strength as compared to normal concrete but more addition of corncob ash have a minor impact on strength. Fibrous concrete is suitable for humid environment where high strength and voids less concrete are required. Addition of waste corncob ash improves the strength parameters as well as the acoustical properties. Addition of waste corncob ash improves the strength parameters as well as the acoustical properties. After checking the evaluations of concrete strength and durability, fibrous concrete can recommend to modify the structure as per cultural demand.

Keywords: Corncob ash, Fiber reinforced concrete, mechanical properties, Eco friendly, sustainability

TRANSITION MODELLING

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ABSTRACT

Low Re number flows involving stochastic and three-dimensional unstable processes and the transition to turbulence is still not fully understood. Measuring, modeling, and predicting the transition to laminar separation bubbles and turbulence are still challenging tasks. In addition, there is a knowledge gap in determining turbulence and transition to turbulence in fluid mechanics, these are defined as the most important unsolved problems in classical physics. To address this shortcoming in predicting the separated flow transition, studies on turbulent transition models have been conducted in the last 20 years and a modification has been made to the well-known k-w SST turbulence model by Langtry and Menter (2005). The turbulent kinetic energy (k) was allowed to grow rapidly when the laminar boundary layer was separated. The main idea behind the split-induced transition fix is; is to allow the local intermittency (ɣ - intermittency) to exceed 1 when the laminar boundary layer separates. The size of the laminar separation bubble can be controlled by one or more constants. A mixing function change is disabled when the viscosity ratio is large enough to cause re-adhesion. Such a transition model, also used in commercial computational fluid dynamics (CFD) software, is considered an experimental transition model combined with two-equation shear stress transport (SST) models. It also provides two additional transport equations for the discontinuity (ɣ) and the momentum thickness Re number (Reθ) to predict the transition flow. In the k-kL-w transition model, which is another turbulent transition model developed by Walters and Stork (2002), a three-equation turbulent viscosity model is solved for the transition flow simulation. It includes the terms of the turbulent kinetic energy per unit mass, k, and the laminar kinetic energy per unit mass, kL, and the specific dispersion ratio (ω) terms. Although these differential equations include turbulent generation, bypass transition, natural transition, near-wall damping terms, viscous damping function, intermittent damping function, wall turbulence length scale, turbulent viscosity coefficient, the necessary terms or functions for separated transition and laminar separation bubble do not include. This deficiency should be brought to both the literature and CFD models as a result of the correlations to be obtained with new studies.

Keywords: Transition, boundary layer, CFD

FSI ANALYSIS OF CARBON REINFORCED RECYCLABLE COMPOSITE WIND TURBINE BLADE

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ABSTRACT

Due to the increasing energy needs, the use of energy resources is increasing day by day. In this context, as a result of NO_2, CO, SO_2, and gases released as a result of increased resource use, research and studies have been carried out on clean energy sources in recent years. Considering this development, the use of wind turbines, which enable the conversion of wind energy, which is one of the renewable energy sources, into electrical energy is also becoming widespread. However, since the service life of wind turbine blades is between 20 and 30 years, it becomes essential to make wind turbine blades using recyclable materials, since in such a case, more limited and challenging situations may be encountered, both economically and environmentally, as well as raw materials. Since the structures of the wind turbine blades produced today are made of thermoset resins, it becomes more difficult to recycle. The project aims to recycle the blades by using thermoplastic that is in the same polymer group as them instead of thermoset resins in the wind turbine blade structure. In this study, analyzes were performed on the NACA 4412 airfoil using ANSYS FLUENT software. The CFD simulation was carried out with carbon fiber-reinforced material with a thermoplastic matrix at $Re = 7 \times 10^4$. As a result of the calculations, the deformation, stress, and tension conditions of the wind turbine blade made of thermoplastic matrix and carbon fiber material were measured.

Keywords: Thermoplastic, Thermoset, Carbon fiber, FSI, Deformation, Stress, Tension

FLOW CHARACTERISTICS ON NACA2415 AIRFOIL AT LOW REYNOLDS NUMBER

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ABSTRACT

In the aviation and energy sectors, aircrafts and airfoils which is a component of aircrafts may be studied in twofold, including experimental investigation and numerical simulation. In this study, NACA2415 airfoil which was suitable for wind turbine blades and unmanned air vehicles was investigated. ANSYS Fluent software was utilized for the flow analysis and the boundary conditions were taken as a reference. Analysis was performed at $0^{\circ} \leq \alpha \leq 26^{\circ}$ and Reynolds number of $1.0x10^{5}$. The power coefficients were ensured at the end of the analysis. The obtained data ensured by numerical analysis was compared with the experimental data in the literature. Velocity profiles were provided to understand and visualize some flow phenomena including flow separation of laminar separation bubble. The result showed that the force coefficient result obtained by numerical simulation was consistent with the experimental data.

Keywords: Airfoil, ANSYS Fluent, CFD analysis.

NUMERICAL ANALYSIS OF BICYCLE HELMET

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ABSTRACT

In this study, three different models of bicycle helmet designs were made. By creating an external flow area on these designs, mesh assignments with different values were tried and the appropriate mesh was selected. The analyzes on the helmets were carried out at three different speeds (7 m/s, 10 m/s, 13 m/s). The appropriate helmet design was selected by examining and comparing the drag numbers, pressure, velocity, turbulence and kinetic energy analysis results at these speeds. It has been observed that the use of one of the helmets is more convenient due to its lower drag coefficient value than the other helmets. In addition, it has been found that it is most suitable for use in all helmets at a speed of 7 m/s.

Keywords: Helmet modelling, ANSYS, analysis.

CASE STUDY ON THE EVALUATION OF WIND MEASUREMENTS PERFORMED BY LIDAR AND CUP ANEMOMETER

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ABSTRACT

The use of remote sensing devices are increasing in the wind energy sector. Reason of this aim that remote sensing devices are more mobile than conventional measurement stations and can measure wind speed at hub height. However, considering the working principle of remote sensing devices and difference in measurements made in different sites, the use of remote sensing deices alone in wind measurement has not yet become widespread. In this context, there are many studies in worldwide on the comparison of anemometer and remote sensing devices. Since the use of remote sensing devices is not widespread in Turkiye yet. So number of such studies is quite low. The presented study is a comparative analysis of wind measurements carried out in Turkiye performed by LIDAR and cup anemometer. Measurements began in Feb 2018, took 363 days for LIDAR and 312 days for anemometers. The average wind speed, Daily wind speeds, hourly average wind speeds, wind power densities and statistical distributions have made comparatively analyzed with different methods. The analyzes have prepared for wind measurements at 9 different heights with LIDAR and for 5 wind measurements at 4 different heights with anemometers. When the average wind speeds of the measurements evaluate at the same heights, it have observed that the LIDAR and anemometer wind speeds have good fit. However the hourly values are examined, it have observed that the average wind speeds measured by LIDAR are higher between 08:00-13:00. Furthermore, when the average wind speeds of the anemometers have examined, it have observed that the measurement performed at 58m is higher than the performed at 75m. Although the cause of this situation can not be estimated precisely, it is thought to be caused by wind shear. Finally, Weibull scale and shape parameters have found by 4 different methods. Weibull parameters obtained by WAsP and Openwind methods have found acceptable with measured data distribution.

Keywords: Wind Energy, LIDAR, Wind Resource Assessment

ÖZET

Uzaktan algılama cihazlarının kullanım payı rüzG3ar enerjisi sektöründe gün geçtikçe artarak devam etmektedir. Bu durumun sebebi uzaktan algılama cihazlarının klasik ölçüm istasyonlarına göre daha mobil olması ve türbin göbek yüksekliğinde ölçüm gerçekleştirebilmesidir. Ancak uzaktan algılama cihazlarının çalışma prensibi ve farklı sahalarda yapılan ölçümler dikkate alındığında uzaktan algılama cihazlarının rüzgâr ölçümü konusunda tek başına kullanımı henüz yaygınlaşmamıştır. Bu kapsamda literatürde çeşitli anemometre türleri ve uzaktan algılama cihazlarının karşılaştırılmasına dair birçok çalışma söz konusudur. Bu çalışmalarda farklı saha ve farklı analiz yöntemleri kullanılmıştır. Türkiye'de ise uzaktan algılama cihazlarının kullanımı yaygın olmadığı için bu tür çalışmaların sayısı oldukça azdır. Söz konusu çalışma, LIDAR ve kepçe anemometre kullanılarak Türkiye'de gerçekleştirilmiş rüzgâr ölçümlerinin karşılaştırmalı analizidir. Şubat 2018'de başlayan ölçümler, LIDAR için 12

ay (363 gün) ve anemometre için 10 ay (312 gün) sürmüştür. Çalışmada iki ölçüme dair, ortalama rüzgâr hızı, günlük ortalama rüzgâr hızları, saatlik ortalama rüzgâr hızları, güç yoğunlukları ve farklı yöntemler ile gerçekleştirilen istatiksel dağılımları karşılaştırmalı olarak analiz edilmiştir. Belirtilen analizler LIDAR ile gerçekleştirilen 9 farklı yükseklikteki ölçümler için ve anemometre ile gerçekleştirilen 4 farklı yükseklikte 5 ölçüm için hazırlanmıştır. Aynı yüksekliklerde yapılan ölçümlerin ortalama rüzgâr hızları incelendiğinde Saatlik ortalama incelendiğinde, ortalama rüzgâr hızının düşük olduğu 08:00 – 13:00 saatleri arasında LIDAR ile ölçülen ortalama hızların daha yüksek olduğu gözlemlenmiştir. Ek olarak anemometreler ile alınan verilerin ortalama hızları değerlendirildiğinde 58m gerçekleştirilen ölçümün 75m ile gerçekleştirilen ölçümden yüksek olduğu gözlemlenmiştir. Bu durum sebebi kesin olarak tahmin edilememek ile birlikte doğal rüzgâr kesmesi kaynaklı olduğu düşünülmektedir. Weibull parametreleri 4 farklı metot ile bulunmuş olup. WAsP ve Openwind yöntemleri ile elde edilen şekil ve ölçek parametreleri oluşturulan dağılımlar uygun bulunmuştur.

EVALUATION OF GREENGROCER WASTES IN KAYSERI FOR BIOGAS PRODUCTION

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ABSTRACT

Every day, millions of tons of fruit and vegetable waste are released as garbage all over the world. The deformed and unpreferred products in the fruit and vegetable aisle are called extruded products. These wastes can be reused by using them in biogas production. However, It is of great importance that the wastes are transported to the production point with the lowest carbon emission. In order to conduct a study in this approach, a case study was conducted in the Kayseri province. Data were collected from 109 large grocery stores in Kayseri. The amount thrown away corresponds to a very large figure, approximately 13873,450 tons per year. Firstly, grocery stores were divided into clusters with the K-means algorithm. While creating the aggregation network, routing was done by using operations research techniques for an effective and efficient system design by using arcGIS, a GIS-based software, on our digital map, which we marked and divided into zones using CitySurf and Google map. The optimum route covering all points for the collection point and each region is established. A mathematical model was written and solved using a solver (CPLEX). Secondly, biogas production was investigated for two different waste situations, the first case being 100% fruit and vegetable waste (MSA) and the second case being a mixture of 17% cow manure (BHG) + 17% chicken manure (TG) + 67% fruit and vegetable waste.

Keywords: Energy, Biogas production, Waste evaluation.

EXPERIMENTAL STUDY ON THE EFFECT OF GRAPHENE IN FLAT-PLATE COLLECTORS

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ABSTRACT

Solar energy is commonly used to a large degree through solar flat plate collectors in Turkey which has a high solar energy potential. However, the thermal efficiency of this collector is limited by the absorption properties of the water for these collectors. Nanofluids are mixed with water to enhance the collector's thermal efficiency nowadays. In the presented study, it is aimed to perform an experimental study for the effect of nanofluid on the performance of a flat-plate collector. Fort his aim, graphene having a higher thermal conductivity parameter than water is used as nano-fluid. In addition, the effect of natural and forced circulation are also investigated. In the study, measurements were done at different times by using a mixture of water and graphene in three different ratios and time-dependent temperature graphs were obtained. Increasing the density of graphene allowed more heat to be absorbed in the fluid. Thus, the efficiency was increased. Moreover, it was observed that higher efficiency was obtained from forced circulation between the forced and natural circulation system by using water in the system.

Keywords: Solar energy, Nanofluid, Graphene, Flat-plate collector