CONFERENCE BOOK

BINGOL
1st INTERNATIONAL CONFERENCE ON APPLIED SCIENCES
OCTOBER 27 - 29, 2023
BINGOL

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OCTOBER 27 - 29, 2023
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Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
SALON 1	**Doç Dr. Şeyho Cem YÜCETAŞ**	1	A NOVEL WILD EDIBLE MUSHROOM ISOLATED FROM TIRUMALA FOREST RICH IN MEDICINAL VALUE	Assist. Prof. K.R.Padma K.R.Don
		2	SERVİKAL DİSK HERNİSİ TEDAVİDİNDE İKİ FARKLI YAKLAŞIMIN GEÇ SONUÇLARI	Doç Dr. Şeyho Cem YÜCETAŞ
		3	CATARACT IN CATS AND DOGS	Dr. Sema Dilan KAYAPINAR, Prof Dr. Mehmet Cengiz HAN
		4	EVALUATION OF UMBILICAL LESIONS IN CALVES BROUGHT TO F.U ANIMAL HOSPITAL BETWEEN 2019 AND 2021	Dr. Sema Dilan KAYAPINAR Prof. Dr. Mehmet Cengiz HAN
		5	F.Ü HAYVAN HASTANESİNE 2013- 2014 YILLARI ARASINDA GETİRİLEN BUZAĞILARDA ARTRİTİS OLGULARININ DEĞERLENDİRİLMESİ	Dr. Sema Dilan KAYAPINAR, Prof.Dr. Mehmet Cengiz HAN
		6	IMPACT OF VITAMIN DEFICIENCY DUE TO MALNUTRITION ON HEALTH OF WORKING WOMEN: A CASE STUDY	Saira Akhtar Samra Akram Sumera Khalid Zafer Aslan Zeyneb Kılıç
		7	ANALYZING THE IMPACT OF VEGETABLE FARMİNG ON POVERTY REDUCTİON İN RURAL AREAS	Saira Akhtar Samra Akram Zafer Aslan Zeyneb Kılıç Sumera Khalid

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SALON 2	**Assoc. Prof., Berat KARAAGAC**	1	DESIGN AND ANALYSIS OF THE OPTIMAL CORE OF WIRELESS CHARGING SYSTEM WITH ANSYS-MAXWELL	Dr. YILDIRIM ÖZÜPAK Dr. EMRAH ASLAN
		2	EVALUATION OF ELECTROMAGNETIC FIELD EXPOSURE OF WIRELESS POWER TRANSFER SYSTEM FOR ELECTRIC VEHICLES-A REVIEW	Dr. YILDIRIM ÖZÜPAK Dr. EMRAH ASLAN
		3	PLM SİSTEMLERİ İLE ÜRÜN KALİTESİNİN ARTIRILMASI VE PERFORMASIN OPTİMİZE EDİLMESİ	Mak. Müh., Murat ŞAFAK Prof. Dr., Semih ÖTLEŞ
		4	An Innovating Approach to Solving the Joseph-Egri Equation	Assoc. Prof., Berat KARAAGAC
		5	THE COLLOCATION METHOD FOR SIMPLIFIED MODIFED CAMASSA HOLM EQUATION	Assoc. Prof., Berat KARAAGAC Prof. Yusuf UCAR Prof. Alaattin ESEN
		6	SONLU FARKLAR METODU KULLANILARAK DOĞRUSAL OLMAYAN BIR BOYUTLU YÜZEY TEPKI ANALIZI PROGRAM GELIŞTIRILMESI	Dr. Öğr. Üyesi Fuat KORKUT

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SALON 3	**Doç. Dr., Şenol ÇELİK**	1	Effects of Different Fertilizer Regimes on Soil and Plant Nitrogen Content	Mehdi Nourzadeh Hadad Akbar Hasani
		2	ELEMENTAL ANALYSİS AND HEALTH EXAMİNATİON OF EDİBLE MUSCLE TİSSUE OF Capoeta pestai FİSH	Dr. İdris Yolbaş
		3	GÜREŞ SPORLARI İLE İLGİLİ YAPILAN ÇALIŞMALARA İLİŞKİN BİBLİYOMETRİK BİR ANALİZ	Doç. Dr., Şenol ÇELİK
		4	TÜRKİYE'DE HAMSİ BALIĞI ÜRETİM MİKTARININ YAPAY SİNİR AĞLARI VE BASİT HAREKETLİ ORTALAMA YÖNTEMLERİ İLE MODELLENMESİ	Doç. Dr., Şenol ÇELİK
		5	İNŞAAT SEKTÖRÜNDE İŞ KAZALARINA YOL AÇAN RISKLERIN RESTORASYON İŞLERI ÖZELINDE INCELENMESI	Süleyman KAYA Dr. Öğr. Üyesi, Ahmet GÖKDEMİR Arş. Gör. Ramazan BÜLBÜL
		6	ÇAPRAZ LAMİNE AHŞAP LEVHALARIN (CLT) ARA KATMANINA UYGULANAN PERFORASYON İŞLEMİNİN LEVHALARIN SES YUTMA KATSAYISI DEĞERLERİNE ETKİSİNİN İNCELENMESİ	Ar-Ge Yöneticisi, Zeliha ÇAVUŞ Dr. Musa Kaya Arş. Gör. Ramazan BÜLBÜL
		7	ISPARTA-YALVAÇ'IN TARİHİ MİRASI: GELENEKSEL YALVAÇ EVLERİNDE TAVAN KAPLAMALARI	Abdullah ÇELİKKAN Prof. Dr. İhsan KÜRELİ

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SALON 4	**Dr. Öğr. Üyesi. Ömer TAY**	1	TASAVVUF EHLİ NEZDİNDE BİR EĞİTİM METODU OLAN HALVETİN HİKMET VE FAYDALARI (YAHYÂ EL-BÂHARZÎ ÖRNEĞİ)	Dr. Öğr. Üyesi. Ömer TAY
		2	EBÜ'L-HASEN ALÎ er-RUMMÂNÎ'NİN KELÂMÎ GÖRÜŞLERİNİN KUR'ANÎ REFERENSLARI	Dr. Öğr. Üyesi Hanefi ŞOLA
		3	On the Expressions of al-Mashahid and al-Mashhad in the Early Islamic History Sources	Dr. Öğr. Üyesi, Ramazan TOPAL
		4	ERZURUMLU İBRAHİM HAKKI'NIN MÂRİFETNÂME'SİNDE İRFAN YOLU	Nevin AYDIN

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SALON 5	**Dr. Öğr. Üyesi Enes BALOĞLU**	1	THE RELATIONSHIP BETWEEN FACTORS AFFECTING HEALTH TOURISM SERVICE QUALITY AND THE PERCEIVED IMAGE OF SERVICE PROVIDERS	Dr. Öğr. Üyesi FUAT YALMAN Prof. Dr., Yalçın KARAGÖZ
		2	RELATIONSHIPS BETWEEN HEALTH PROFESSIONALS' PERCEPTIONS OF ORGANIZATIONAL TRUST AND ORGANIZATIONAL SUPPORT AND WHISTLEBLOWING TENDENCY	Prof. Dr. YALÇIN KARAGÖZ Dr. Öğr. Üyesi FUAT YALMAN
		3	MOBİL BANKACILIK UYGULAMALARI KULLANIMINDA TÜKETİCİ MEMNUNİYETİNE ETKİ EDEN FAKTÖRLER	Dr. Öğr. Üyesi Aytaç ERDEM
		4	GMO DISCUSSIONS IN DIGITAL MEDIA: AN ANALYSIS ON HÜRRIYET AND MILLIYET DATA	Dr. Öğr. Üyesi Enes BALOĞLU

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SALON 6	**Dr. Öğr. Üyesi Mehmet YILMAZ**	1	ÇOCUKLARDA MADDE BAĞIMLILIĞI DÜZEYİ VE AİLE-ÇOCUK-MADDE ARASINDAKİ İLİŞKİNİN TOPLUM VE ÇEVRE FAKTÖRÜ İLE SOSYAL HİZMET AÇISINDAN ELE ALINMASI: Bingöl Örneği	Büsra Nur ÖZTÜRKCİ
		2	DOLANDIRICILIK SUÇU VE BEŞERİ SERMAYE İLE İLİŞKİSİ ÜZERİNE BİR ANALİZ DENEMESİ	Dr. Öğr. Üyesi Mehmet YILMAZ
		3	SOSYAL RİSK OLARAK DOLANDIRICILIK VE SOSYAL GÜVEN ÜZERİNDEKİ ETKİLERİ	Dr. Öğr. Üyesi Mehmet YILMAZ
		4	POPULAR MUSIC AND SOCIAL CHANGE: A HISTORICAL PERSPECTIVE	Dr. Öğr. Üyesi Cihan TABAK
		5	BİNGÖL'DE YAŞAYAN SURİYELİ VELİ VE ÖĞRENCİLERİN GÖZÜNDEN OKULA UYUM KONUSUNDA YAŞANAN SORUNLAR	Zeynep ÖYLEK

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SALON 7	**Öğr. Gör. Ziya Kıvanç KIRAÇ**	1	HÜSEYİN KÂZIM KADRİ, ÜNLÜ ESERİ TÜRK LÜGATİ VE DAL HARFİ ÖRNEKLEMİ	Doç. Dr. , Mehmet GÖKTAŞ Esma Nur KOÇAK
		2	TÜRK MÜZİĞİNDE SABİTE TUR GÜLERMAN VE İKİ ŞARKISI	Prof. Dr., Ferdi KOÇ Öğr. Gör., Tuncay KARDAŞ
		3	THE IDEOLOGICAL VIEW OF TRUTH AND MEANING	Öğr. Gör. Ziya Kıvanç KIRAÇ

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SALON 8	**Dr.Öğr.Üyesi ÖZCAN EKİCİ**	1	DEVELOPMENT OF CRITICAL THINKING AND THEORETICAL MODEL GUIDELINES	Algirdas Pupkis
		2	DERİN ÖĞRENME YÖNTEMLERİ İLE OTOMATİK ÇEVİRİ: GELİŞMELER VE GELECEK PERSPEKTİFLERi	Öğr. Gr. Dr, Gülfidan AYTAŞ
		3	SOSYAL BİLGİLER ÖĞRETMENLERİNİN PERSPEKTİFİNDE TOPLUMDA DEMOKRASİ ALGISI	Dr.Öğr.Üyesi ÖZCAN EKİCİ
		4	SOSYAL BİLGİLER ÖĞRETMENLERİNİN VİCDAN ALGISI	Dr.Öğr.Üyesi ÖZCAN EKİCİ Dr.Öğr.Üyesi, FATİH KAYA Dr.Öğr.Üyesi, METİN KIRBAÇ
		5	SÜRDÜRÜLEBİLİRLİK KAVRAMININ COĞRAFYA BİLİMİNDEKİ YERİ VE ÖNEMİ	Doktora Öğrencisi, Ayşegül NARİNÇ Prof. Dr. Mehmet ZAMAN

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SALON 9	**Dr. Öğr. Üyesi Eyüp ZENGİN**	1	RETHINKING THE TWO-STATE SOLUTION: ANALYZING ISRAEL'S GEOPOLITICAL APPROACH IN THE ISRAEL/PALESTINE QUESTION	Seyed Hadi Borhani
		2	HUKUK METİNLERİNİN DİLİ VE AKTARIM SORUNU	Dr. Öğr. Üyesi Eyüp ZENGİN
		3	SİYASAL AKTÖRLERİN POLİTİKA BELİRLEME SÜRECİNDE İKLİM DEĞİŞİKLİĞİNİN ETKİSİ: 2023 YILI CUMHURBAŞKANLIĞI SEÇİMİ VE 28. DÖNEM MİLLETVEKİLİ GENEL SEÇİMİ ÖRNEĞİ	Dr. Öğr. Gör, Mustafa DEMİRCİ
		4	AN ASSESSMENT OF THE CONSTITUTIONAL COURT DECISIONS ON THE SURNAME OF WOMEN IN THE FRAMEWORK OF THE PRINCIPLE OF EQUALITY AND THE ANTI-DISCRIMINATION PRINCIPLE	Arş. Gör. Ayşegül POLAT DOĞAN Doç. Dr. Atıl Cem ÇİÇEK

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HALL 1	**Assoc. Prof. Rui Antunes**	1	BEHAVIORAL ANALYSIS OF TEAM MEMBERS IN VIRTUAL ORGANIZATION BASED ON TRUST DIMENSION AND LEARNING	Indiramma M., K. R. Anandakumar
		2	IMPROVED AUTOMATED CLASSIFICATION OF ALCOHOLICS AND NON-ALCOHOLICS	Ramaswamy Palaniappan
		3	RHETORICAL COMMUNICATION IN THE COGSCI DISCOURSE COMMUNITY: THE COGNITIVE NEUROSCIENCES (2004) IN THE CONTEXT OF SCIENTIFIC DISSEMINATION	Lucia Abbamonte Olimpia Matarazzo
		4	MORAL REASONİNG AND BEHAVİOUR İN ADULTHOOD	O. Matarazzo, L. Abbamonte, G. Nigro
		5	A COGNITIVE MODEL FOR FREQUENCY SIGNAL CLASSIFICATION	Rui Antunes, Fernando V. Coito
		6	PROBABILITY AND INSTRUCTION EFFECTS IN SYLLOGISTIC CONDITIONAL REASONING	Olimpia Matarazzo Ivana Baldassarre
		7	AN INVESTIGATION INTO KANJI CHARACTER DISCRIMINATION PROCESS FROM EEG SIGNALS	Hiroshi Abe, Minoru Nakayama
		8	REFORM-ORIENTED TEACHING OF INTRODUCTORY STATISTICS IN THE HEALTH, SOCIAL AND BEHAVIORAL SCIENCES – HISTORICAL CONTEXT AND RATIONALE	Rossi A. Hassad
		9	BEHAVIORAL ANALYSIS OF TEAM MEMBERS IN VIRTUAL ORGANIZATION BASED ON TRUST DIMENSION AND LEARNING	Indiramma M., K. R. Anandakumar

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HALL 2	**Asst. Prof. Philip T. Roundy**	1	A COMPUTATIONAL MODEL OF MINIMAL CONSCIOUSNESS FUNCTIONS	Nabila Charkaoui
		2	EXPLORING LIFE MEANINGFULNESS AND ITS PSYCHOSOCIAL CORRELATES AMONG RECOVERING SUBSTANCE USERS – AN INDIAN PERSPECTIVE	Fouzia Alsabah Shaikh, Anjali Ghosh
		3	DEVELOPMENT OF ORGANIZATIONAL JUSTICE IN INCENTIVE ALLOCATION OF THE THAI PUBLIC SECTOR	Kalayanee Koonmee
		4	AUTOBİOGRAPHİCAL MEMORY AND FLEXİBLE REMEMBERİNG: GENDER DİFFERENCES	A. Aizpurua, W. Koutstaal
		5	CULTURAL ANXIETY AND ITS IMPACT ON STUDENTS- LIFE: A CASE STUDY OF INTERNATIONAL STUDENTS IN WUHAN UNIVERSITY	Nadeem Akhtar Shan Bo
		6	TREATMENT OR RE-VICTIMIZING THE VICTIMS	Juliana Panova
		7	THE STORY OF MERGERS AND ACQUISITIONS: USING NARRATIVE THEORY TO UNDERSTAND THE UNCERTAINTY OF ORGANIZATIONAL CHANGE	Philip T. Roundy
		8	A NEW MEASURE OF HERDING BEHAVIOR: DERIVATION AND IMPLICATIONS	Amina Amirat Abdelfettah Bouri

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HALL 3	**Antonios Maniatis**	1	ANALYSIS OF DRIVING CONDITIONS AND PREFERRED MEDIA ON DIVERSION	Yoon-Hyuk Choi
		2	AN ANALYTICAL STUDY ON THE POLITICS OF DEFECTION IN INDIA	Diya Sarkar, Prafulla C. Mishra
		3	POSITION OF THE CONSTITUTIONAL COURT OF THE RUSSIAN FEDERATION ON THE MATTER OF RESTRICTING CONSTITUTIONAL RIGHTS OF CITIZENS CONCERNING BANKING SECRECY	A. V. Shashkova
		4	RECOGNİTİON AND PROTECTİON OF INDİGENOUS SOCİETY İN INDONESİA	Triyanto, Rima Vien Permata Hartanto
		5	NEED OF NATIONAL SPACE LEGISLATION FOR SPACE FARING NATIONS	Muhammad Naveed Yang Caixia
		6	HUMAN RIGHTS IN ARMED CONFLICTS AND CONSTITUTIONAL LAW	Antonios Maniatis
		7	FORENSIC MEDICAL CAPACITIES OF RESEARCH OF SALIVA STAINS ON PHYSICAL EVIDENCE AFTER WASHING	Saule Mussabekova
		8	TOWARDS A PROOF ACCEPTANCE BY OVERCOMING CHALLENGES IN COLLECTING DIGITAL EVIDENCE	Lilian Noronha Nassif

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		2	BA'ALBAKĪ'S INFLUENCE ON 1950S AND 1960S LEBANESE WOMEN WRITERS	Khaled Igbaria
		3	THE INTERACTION BETWEEN HUMAN AND ENVIRONMENT ON THE PERSPECTIVE OF ENVIRONMENTAL ETHICS	Mella Ismelina Farma Rahayu
		4	PROTECTİON OF HUMAN RİGHTS İN EUROPE: THE PARLİAMENTARY DİMENSİON	Aleksandra Chiniaeva
		5	EISENHOWER'S FAREWELL SPEECH: INITIAL AND CONTINUING COMMUNICATION EFFECTS	B. Kuiper
		6	HUMAN SECURITY PROVIDERS IN FRAGILE STATE UNDER ASYMMETRIC WAR CONDITIONS	Luna Shamieh
		7	DEVELOPING NEW MEDIA CREDIBILITY SCALE: A MULTIDIMENSIONAL PERSPECTIVE	Hanaa Farouk Saleh
		8	GENDER DIFFERENCES IN RESEARCH OUTPUT, FUNDING AND COLLABORATION	Ashkan Ebadi Andrea Schiffauerova
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		2	NATURAL DISASTER TOURISM AS A TYPE OF DARK TOURISM	Dorota Rucińska
		3	DEMOCRATIZATION, MARKET LIBERALIZATION AND THE RAISE OF VESTED INTERESTS AND ITS IMPACTS ON ANTI-CORRUPTION REFORM IN INDONESIA	Ahmad Khoirul Umam
		4	ART AND CULTURE İN THE DEVELOPMENT PERİOD TO MODERNİZATİON İN THE REİGN OF KİNG RAMA VI	Weena Eiamprapai
		5	DESIGNING CREATIVE EVENTS WITH DECONSTRUCTIVISM APPROACH	Maryam Memarian, Mahmood Naghizadeh
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		7	EFFECT OF ORGANIZATIONAL RESOURCES ON IMPROVING INDEPENDENCY OF PEOPLE WITH SEVERE DISABILITIES: VOCATIONAL REHABILITATION FACILITIES IN SOUTH KOREA	Soungwan Kim
		8	CAPITAL ACCUMULATION AND UNEMPLOYMENT IN NAMIBIA, NIGERIA, AND SOUTH AFRICA	Abubakar Dikko
		9	WATER CRISIS MANAGEMENT IN A TOURISM DEPENDENT COMMUNITY	Aishath Shakeela

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HALL 6	**Tajudeen Ojo Ibraheem**	1	IMPACT OF REPRODUCTIVE TECHNOLOGIES ON WOMEN'S LIVES IN NEW DELHI: A STUDY FROM FEMINIST PERSPECTIVE	Zairunisha Abadeeh
		2	CURBING ABUSES OF LEGAL POWER IN THE SOCIETY	Tajudeen Ojo Ibraheem
		3	SOCIAL STRUCTURE, INVOLUNTARY RELATIONS, AND URBAN POVERTY	Mahmood Niroobakhsh
		4	KNOWLEDGE TRANSFER AND THE TRANSLATİON OF TECHNİCAL TEXTS	Ahmed Alaoui
		5	THE INFLUENCE OF ISLAMIC ARTS ON OMANI WEAVING MOTIFS	Zahra Ahmed Al-Zadjali
		6	HANDLING COMPLEXITY OF A COMPLEX SYSTEM DESIGN: PARADIGM, FORMALISM AND TRANSFORMATIONS	Hycham Aboutaleb Bruno Monsuez
		7	UNDERSTANDING EUROPE'S ROLE IN THE AREA OF LIBERTY, SECURITY AND JUSTICE AS AN INTERNATIONAL ACTOR	Sarah Barrere
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HALL 7	**Prof. Nathanon Trachoo**	1	A REVIEW ON APPLICATION OF CHITOSAN AS A NATURAL ANTIMICROBIAL	F. Nejati Hafdani, N. Sadeghinia
		2	NEUROGENIC POTENTIAL OF CLITORIA TERNATEA AQUEOUS ROOT EXTRACT–A BASIS FOR ENHANCING LEARNING AND MEMORY	Kiranmai S.Rai
		3	FORMULATION AND EVALUATION OF VAGINAL SUPPOSITORIES CONTAINING LACTOBACILLUS	Sanae Kaewnopparat, Nattha Kaewnopparat
		4	ISOLATİON OF B-SİTOSTEROL DİARABİNOSİDE FROM RHİZOMES OF ALPİNİA GALANGA	N. K. Fuloria, S. Fuloria
		5	DATA MINING CLASSIFICATION METHODS APPLIED IN DRUG DESIGN	Mária Stachová, Lukáš Sobíšek
		6	SALBUTAMOL SULPHATE-ETHYLCELLULOSE TABLETTED MICROCAPSULES: PHARMACOKINETIC STUDY USING CONVOLUTION APPROACH	Ghulam Murtaza, Kalsoom Farzana
		7	ANTIBACTERIAL ACTIVITY OF ETHANOL EXTRACT FROM SOME THAI MEDICINAL PLANTS AGAINST CAMPYLOBACTER JEJUNI	Achara Dholvitayakhun, Nathanon Trachoo
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		2	THREE-PHASE HIGH FREQUENCY AC CONVERSION CIRCUIT WITH DUAL MODE PWM/PDM CONTROL STRATEGY FOR HIGH POWER IH APPLICATIONS	Nabil A. Ahmed
		3	A NEW MAXIMUM POWER POINT TRACKING FOR PHOTOVOLTAIC SYSTEMS	Mohamed Azab
		4	IMPULSE RESPONSE SHORTENİNG FOR DİSCRETE MULTİTONE TRANSCEİVERS USİNG CONVEX OPTİMİZATİON APPROACH	Ejaz Khan, Conor Heneghan
		5	HYBRID ASSOCIATION CONTROL SCHEME AND LOAD BALANCING IN WIRELESS LANS	Chutima Prommak, Airisa Jantaweetip
		6	ESTIMATION OF BROADCAST PROBABILITY IN WIRELESS ADHOC NETWORKS	Bharadwaj Kadiyala, Sunitha V
		7	THEORETICAL ANALYSIS OF CAPACITIES IN DYNAMIC SPATIAL MULTIPLEXING MIMO SYSTEMS	Imen Sfaihi, Noureddine Hamdi
		8	FIBER OPTIC SENSORS	Bahareh Gholamzadeh, Hooman Nabovati

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		2	AUTOMATED HEART SOUND CLASSIFICATION FROM UNSEGMENTED PHONOCARDIOGRAM SIGNALS USING TIME FREQUENCY FEATURES	Nadia Masood Khan Muhammad Salman Khan Gul Muhammad Khan
		3	ADAPTION MODEL FOR BUILDING AGILE PRONUNCIATION DICTIONARIES USING PHONEMIC DISTANCE MEASUREMENTS	Akella Amarendra Babu Rama Devi Yellasiri Natukula Sainath
		4	OPTIMIZED AND SECURED DIGITAL WATERMARKING USING ENTROPY, CHAOTIC GRID MAP AND ITS PERFORMANCE ANALYSIS	R. Rama Kishore Sunesh
		5	A DATASET OF PROGRAM EDUCATIONAL OBJECTIVES MAPPED TO ABET OUTCOMES: DATA CLEANSING, EXPLORATORY DATA ANALYSIS AND MODELING	Addin Osman Anwar Ali Yahya Mohammed Basit Kamal
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		2	SCATTERER DENSITY IN EDGE AND COHERENCE ENHANCING NONLINEAR ANISOTROPIC DIFFUSION FOR MEDICAL ULTRASOUND SPECKLE REDUCTION	Ahmed Badawi J. Michael Johnson Mohamed Mahfouz
		3	T-WAVE DETECTION BASED ON AN ADJUSTED WAVELET TRANSFORM MODULUS MAXIMA	Samar Krimi, Kaïs Ouni, Noureddine Ellouze
		4	BRİDGİNG THE MENTAL GAP BETWEEN CONVOLUTİON APPROACH AND COMPARTMENTAL MODELİNG İN FUNCTİONAL IMAGİNG: TYPİCAL EMBEDDİNG OF AN OPEN TWO-COMPARTMENT MODEL İNTO THE SYSTEMS THEORY APPROACH OF INDİCATOR DİLUTİON THEORY	Gesine Hellwig
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		6	CASE BASED REASONING TECHNOLOGY FOR MEDICAL DIAGNOSIS	Abdel-Badeeh M. Salem
		7	DETECTION OF DIABETIC SYMPTOMS IN RETINA IMAGES USING ANALOG ALGORITHMS	Daniela Matei Radu Matei
		8	ARRIVING AT AN OPTIMUM VALUE OF TOLERANCE FACTOR FOR COMPRESSING MEDICAL IMAGES	Sumathi Poobal, G. Ravindran

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Salon / Hall	Oturum Başkanı / Session Chair		Eser Adı / Art Work	Artist	Tema / Theme
		1	No. 28	Arş. Gör. Ömür Göktepeliler	
		2	''Harmony in Imperfection: Ottoman-Inspired Portraiture Embracing Scars and Stories''	Jörn Fröhlich	
		3	Garip	Dr. Öğretim Üyesi Mustafa TUNÇ	
		4	Maraş Belleğim / My Maraş Memory.	Doç Dr. Mehmet Akif KAPLAN	
		5	Dijital Kimlik	Dr. Öğr. Üyesi Amine Refika	
		6	Yansıma	Dr. Öğr. Üyesi Mehmet Köprü	
		7	Bir yanılsamadan ibaret/It's just an illusion	Doç.Dr. Fırat Çalkuş	
		8	İsimsiz	Doçent, Barış Yılmaz	
		9	Klasik Ebru (Lale)	Dr. Öğr. Üyesi Yıldırım KARADENİZ	
		10	Sudaki Siluet	Doç. Dr. Nermin ÖZCAN ÖZER	
		11	Yosunumsu	Doç. Dr. Nermin ÖZCAN ÖZER	
		12	POPÜLER GEOMETRİ	Doç. Ayşegül Türk	
		13	Doğu ve Batı	Doç.Dr. Bengü Batu Ertung	
		14	Derin Yaralar /Deep wounds	Doç. Pınar Çalışkan Güneş	
		15	Tan Time in The Desert	Arş. Gör. Beyzanur Karakuş	
		16	Flow of Life	Arş. Gör. Bilge ŞENGÜL	
		17	Merhamet	Dr. Öğr. Üyesi Basri Gençcelep	

18	Mavi	Dr.Öğr. Üyesi Murat Han Er
19	Biçim	Arş. Gör. Mihrinaz SÖYÜK GÜVEN
20	Yeşil Saçlı Kız	Nagehan KILINÇ

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A NOVEL WILD EDIBLE MUSHROOM ISOLATED FROM TIRUMALA FOREST RICH IN MEDICINAL VALUE

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Background of the study: It is commonly acknowledged that the accumulated secondary metabolites in medicinal mushrooms are sources of secure and efficient medicines, cosmeceuticals, and nutraceuticals. Edible and medicinal mushrooms are delicacies loved for their wonderful flavour and therapeutic qualities. Mushrooms' nutritional benefits and biologically active ingredients hold enormous promise for the development of novel medications that will greatly improve human health. The use of medicinal mushrooms has increased recently due to the discovery of novel, all-natural chemicals that have the potential to modify immune cell responses and have antibacterial, antioxidant, and anticancer activities.
Aim and Objectives: The aim of this proposal is to examine and comprehend the biological and medicinal qualities of the common wild mushroom species found in Tirumala, with the following specific objectives. To assess the chemical composition of the isolated wild mushroom and evaluate the antioxidant properties of the wild mushroom aqueous extract to understand its ability to scavenge free radicals and protect against oxidative stress. Further, evaluate the cytotoxicity and anticancer potential of the mushroom extract.
Methodology: Aqueous and methanol (70%) solvents were used to extract phytochemicals from *Lactarium resumes*, and subsequently, standard methods were employed to detect the presence of specific classes of compounds, such as alkaloids, flavonoids, tannins, saponins, cardiac glycosides, terpenoids, and phenols. To analyze the aqueous extract of an edible mushroom and identify its organic compounds based on their absorption spectra The UV-Vis spectrophotometer was used.
Results and discussion: We performed a simple cytotoxicity assay of mushroom extract using HeLa cell lines with an extract concentration of 20 all for three different time points (0, 6, and 12 hours). The assay employed a colorimetric cell viability assay, specifically the MTT (3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide) assay. The results clearly indicate that the aqueous mushroom solution has the ability to inhibit the growth of HeLa cell lines by almost 98% within 12 hours. The mushroom demonstrated notable antimicrobial activity, inhibiting the growth of various microorganisms. Additionally, the mushroom extract displayed potent ROS (Reactive Oxygen Species) inhibition, indicating its potential as an antioxidant agent.
Conclusion: These findings suggest that the wild mushroom from Tirumala Forest possesses significant therapeutic potential, making it a promising candidate for further research and exploration in the fields of antimicrobial and anticancer therapies.
Keywords: Reactive Oxygen Species, Cytotoxicity assay, HeLa cell lines, Antioxidant agent, Mushroom.

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SERVİKAL DİSK HERNİSİ TEDAVİDİNDE İKİ FARKLI YAKLAŞIMIN GEÇ SONUÇLARI

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ABSTRACT

Amaç:

Servikal disk hernisi sık rastlanan bir durumdur. Bu hastalarda değişik tedavi yaklaşımları vardır.

Yöntem:

Mağnetik rezonans ile tanı konulan hastalar seçildi. Hastalar 2 gruba ayrıldı. Grup 1 de MR' da servikal disk hernisi olan ve 1 yıl medikal tedavi yapılan hastalardı. Grup 2 MR da servikal disk hernisi olan ve kısa süre sonra 2 hafta medikal tedavi takiben cerrahi karar verildi

Bulgular:

Çalışmaya toplam 35 hasta dahil edildi. Grup 1 de ilk muayeneye geldiğinde 8 ve 1 yıl sonunda ortalama VAS skoru 4 olduğu. Grup ikide ise 10 hasta olup ortalama ilk poliklinik değerlendirmesinde VAS skoru 9, bir yılın sonunda ortalama VAS skorunun 5 de indiği görüldü

Sonuç:

Hasta opee etmeden önce hastanın önemli bir süre medikal tedavi görmesi yararlı olacaktır.

Anahtar kelime:

Boyun ağrısı, servikal disk hernisi, vizüel analog skala

GİRİŞ:

Servikal disk hernileri erişkinlerde sık rastlanılan bir durumdur. Servikal disk hernilerinde bir çok tanı ve tedavi yöntemi vardır. En başta medikal tedavi ve eğer medikal tedaviye cevap

vermiyorsa cerrahi tedavi yapılır(1,2).servikal disk hernileri en sık C5- ve C-7 arasında görülür(3).

Bizim çalışmamızda çalışmadaki amacımız toplumda sık görülen ve sıklıkla farklı nedenler ortaya çıkan boyun ağrılarının değerlendirmek boyun ağrılarında kullanılan değişik tedavi protokollerini inceleme ve bunlar arasında ki farkları tespit etmek ve uzun sürede sonuçlarını bulmak bu ağrı nedenlerinde biri olan servikal disk hernilerin de medikal tedavimi veya ameliyat kararı vermenin güç ve önem arz etiğini vurgulamak istedik

YÖNTEM:

Çalışma nisan 2018 ile mayıs 2023 tarihleri arsında adıyaman üniversitrsi eğitim araştırma hastanesinin kayıtlarının retrospektif olarak incelenmesi ile yapıldı. Magnetik rezonans (MR) da serviksl disk hernisi tanısı konulup ağrısı olan ancak motor kayıp olmayan hastalar yani servikal disk hernisi ve boyun ağrısı ile baş vuran hastalardı.(Resim 1,2). Hastalar 2 gruba ayrıldı. Grup 1 de MR da servikal disk hernisi olan ve 1 yıl medikal tedavi yapılan hastalardı. Grup 2 MR da servikal disk hernis olan ve kısa süre 2 hafta medikal tedavi takiben cerrahi karar verildi. Çalışmaya boyun ağrısı ve MR da tek seviye servikal disk hernisi olan hastalar dahil edildi. Çalışmada dışlanma kriterlerinde ilerleyici motor kayıp olan, sevikal tümörler, servikal travmalar, romatolojik nedenler veya kas hastalıklarında dolayı oluşan boyun ağrıları dışlandı. Hastalar 1 yıllık süreç sonunda değerlendirildi.

BULGULAR:

Çalışmaya toplam 35 hasta dahil edildi. Hastaların en küçüğü 28 en büyüğü 58 yaşında olup ortalama yaş 44 idi. hastaların 25 bayan 10 si ise erkek olarak kaydedildi. Grup birde 25 hasta olup hastalar sadece medikal tedavi ve fizik tedavi görülerek ortalama vizual analog skor(VAS) skoru ilk muayeneye geldiğinde 8 ve 1 yıl sonunda ortalama VAS skoru 4 olduğu. Grup ikide ise 10 hasta olup ortalama ilk poliklinik değerlendirmesinde VAS skoru 9 dan bir yılın sonunda ortalama VAS skorunun 5 de indiği görüldü. Yapılan istatistikler sonucunda kuvvet kaybı olmayan EMG si normal sınırlarda olan hastalarda sadece ağrısı olan hastaların uzun süreli medikal tedavi almaları ile ameliyatın olanların uzun dönemde aynı sonuca vardığı ve anlamlı fark olmadığı görüldü.

TARTIŞMA VE SONUÇ

Boyun ağrısı toplunda sık görülen bir durumdur. İnsanların çoğu hayatların bir döneminde boyun ağrısı yaşarlar. Orta ve ileri yaşlarında yüzde 30- 40 oranında kronik ağrı oluşturabilir(4). Boyun ağrısın bir çok nedeni olup bunlarda bir tanesi de servikal disk hernisidir(5). Bu hastalarda bir çok tedavi yaklaşımı kullanılmaktadır. Bu hastalar genellikle boyun ağrısı ve kola ve parmaklara kadar uzanan ağrı ile baş vururlar.radikülopati ve myelopati bulguları kendini gösterir(6). Bu hastalar iyi bir nörolojik muayene ve fizik tedavi yapmak tedavide daima belirleyici olmuştur. Hastanın kuvvet kaybı yok ise öncelikle cerrahi ön plana alınmaz(7). Bizin hastaların tamamında kuvvet kaybı olmayıp servikal disk hernisi nedeniyle ağrı çeken hastalar idi. Bu hastaların görüntülenmesinde öncelikle direk grafiler aksın ve omurga dizilimi için çekilir. Takiben gerekli ise bilgisayarlı servikal tomografisi ve takiben bizim için en önemli tetkik olan MR çekilip ve ona göre bir değerlendirme yapılır(8). MR görüntüsündeki diskin dermatom ile uyumlu olması lazım yoksa buna disk hernisine bağlı diyemeyiz. MR da disk farklı yerlerde yerleşmiş olabilir en yaygın olanları santral, lateral ve farlateral dediğimiz şekilde görüntü verebilir. Bizim hastalar genellikle latera yerleşimli servikal disk hastaları idi. Bu hastalarda medikal ve cerrahi tedavi tercih edilir. Eğer kuvvet kaybı yok sadece ağrı var ise bir süre medikal tedavi ve fizik tedavi yapılması yararlı olacaktır(9). Cerrahi de ise bir çok yöntem kullanılmaktadır. Cerrahi de anterior ve posterior yaklaşımlar kullanılır(10). Biz hastalarımızı iki gurup şeklinde medikal tedavi, fizik tedavi ve diğer grup ise cerrahi olan hastalar olarak belirledik. Tüm hastalarımızı anterior servikal yöntem ile opere ettik . Medikal tedavide genellikle ödem azaltıcı ve non sterod anti enfamatuar ilaçlar kullanılır(11). Uzun dönemde opere olan hastaların bir kısmının şikayetlerinin tekrar edebileceği yayınlar da bildirilmiştir(12).

Sonuç olarak bu tedavi yaklaşımlarından biri fizik tedavi diğeri ameliyattır. Eğer hastanın kuvvet kaybı yok ise medikal tedavi operasyon sonuçları uzun dönemde benzer olduğu ve cerrahi tedavinin hemen ilk plana alınmaması ve yapılmamasını faydalı olacağını vurgulamak istedik

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F.Ü HAYVAN HASTANESİNE 2019- 2021 YILLARI ARASINDA GETİRİLEN BUZAĞILARDA GÖBEK BÖLGESİ LEZYONLARININ DEĞERLENDİRİLMESİ

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ÖZET

Doğum sonrası buzağılarda sık görülen omfalitis, omfalofilebitis, omfaloarteritis, urakus fistülü, evantrasyon ve hernia umbilikalis gibi göbek lezyonlan büyüme ve gelişme geriliği ile önemli ekonomik kayıplara yolaçmaktadır. Göbek kordonu fötal maternal bir yapıdadır. Bu oluşum, doğumdan önce fötusa karaciğer ve portal ven yolu ile temiz kan taşıyan bir ven, internal iliac arterden orjin alarak plasentaya kirli kan taşıyan iki arter, fötal vesika urinaria ile allantoik kese arasında bağlantıyı sağlayan urakus ve bunları çepeçevre saran Warton jelatininden ibarettir. Doğumdan sonra göbek kordonunun kopması, daha sonra bölgedeki düz kaslann kontraksiyonu ile umbilikal arterler ve urakus hızla karın boşluğuna retrakte olurken, umbilikal ven ve amniyonik membran kalıntıları vücut dışında kalır. Daha sonra göbek bölgesindeki yara 3-4 gün içerisinde iyileşir. Fakat göbeğe ait dokularının atılması 3-4 hafta sonunda olur.Alınan anemnezde doğumu takiben barınak ortamının uygun olmadığı, göbek kordonunun hijyenik koşullarda ve kısa kesildiği, kalıtsal predispozisyonlar, genel durum bozukluğu enfeksiyon için uygun ortam oluşturduğu saptandı. Hernia umbilikalis olgularının genellikle kongenital olarak şekillendiği ve oluşumunda herediter faktörlerin etkili olduğu belirlendi. Bölgede şekillenen omfalitis subkutan yangı ve apseler karın dışı lezyonları oluştururken, omfaloflebitis, omfaloarteritis, urakus fistülü karın içi şekillenmiştir. Urakus fistülü görülen vakalarda üretral kanal sondalandı, fistül ağzı dikişle kapatıldı. Diğer vakalarda operatif olarak tedavi edildi. 2019 ve 2021 yılları arasında Fırat Üniversitesi Hayvan Hastanesine getirilen 85 adet buzağının göbek lezyonları yönünden değerlendirilmesi amaçlanan bu çalışmada, hayvan sahiplerinin bu konuda bilinçlendirilmesi ve yapılacak çalışmalara ışık tutacağı düşünülmektedir.

Anahtar Kelimeler: Buzağı, Göbek, omphalitis, omphaloblebitis, urachus fistülü

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EVALUATION OF UMBILICAL LESIONS IN CALVES BROUGHT TO F.U ANIMAL HOSPITAL BETWEEN 2019 AND 2021

ABSTRACT

Umbilical lesions such as omphalitis, omphalophilebitis, omphaloarteritis, urachal fistula, evantration and hernia umbilicalis, which are common in postnatal calves, cause growth and developmental retardation and significant economic losses. The umbilical cord is a foetal maternal structure. Before birth, it consists of a vein that carries clean blood to the foetus via the liver and portal vein, two arteries that originate from the internal iliac artery and carry dirty blood to the placenta, the urachus that provides the connection between the foetal vesica urinaria and the allantoic sac, and Warton's gelatin that surrounds them. After birth, the umbilical cord is severed and the umbilical arteries and urachus are rapidly retracted into the abdominal cavity by contraction of the smooth muscles in the region, while the umbilical vein and the remains of the amniotic membrane remain outside the body. The wound in the umbilical region then heals within 3-4 days. In the anamnesis taken, it was found that the shelter environment was not suitable following the birth, the umbilical cord was cut short and under hygienic conditions, hereditary predispositions, general condition disorder created a suitable environment for infection. Hernia umbilicalis cases were generally congenital and hereditary factors were found to be effective in its formation. While omphalitis, subcutaneous inflammation and abscesses were extra-abdominal lesions, omphalophlebitis, omphaloarteritis and urachal fistula were intra-abdominal lesions. In cases with urachal fistula, the urethral canal was catheterised and the fistula mouth was closed with sutures. Other cases were treated operatively. In this study, which aimed to evaluate 85 calves brought to Fırat University Animal Hospital between 2019 and 2021 in terms of umbilical lesions, it is thought that it will shed light on the studies to be carried out and to raise awareness of animal owners on this issue.

Key Words: Calf, Umbilicus, Omphalitis, Omhaloblebitis, Uracus Fistula

F.Ü HAYVAN HASTANESİNE 2013- 2014 YILLARI ARASINDA GETİRİLEN BUZAĞILARDA ARTRİTİS OLGULARININ DEĞERLENDİRİLMESİ

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ÖZET

Eklemler, iskelet sistemini oluşturan kemikler arasındaki fonksiyonel bağlantıyı sağlayan yapılardır. Eklemde oluşan yangılara artritis denilmektedir. Buzağılarda artritis vakaları genellikle bir aylığın altında olan hayvanlarda sık görülür. Bu çalışmada 2013 ve 2014 yılları arasında Fırat Üniversitesi Hayvan Hastanesine getirilen farklı yaş, cinsiyet ve ırktan 60 adet buzağı materyali oluşturdu. Eklemlerde şişlik şikayetiyle getirilen buzağıların yürüyüş, lokal semptomlar ve sinoviyal sıvı yönünden klinik muayeneleri yapıldı. Hastalığın dağılım oranları ırk, yaş, cinsiyet ve mevsimlere göre belirlenip kaydedildi. Buzağılara medikal sağaltım uygulandı. Sonuç olarak buzağılarda karşılaşılan artritis vakalarının yaş, cinsiyet, ırk ve mevsimsel dağılımının değerlendirilmesinin amaçlandığı bu çalışmada buzağı gelişim ve büyümesinde ciddi etkileri olan ve ekonomik kayıplara yolaçan artritis vakalarının oluşmaması için koruyucu hekimliğin önem arzettiği görülmektedir. Hastalığa yakalanmış olguların erken teşhisi ve tedavileri hayvan sağlığına katkı sağlıyacağı gibi ekonomik kayıpları da en aza indireceği kanaatindeyiz

Anahtar kelimeler: Eklem, Artritis, Buzağı

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ABSTRACT

Joints are the structures that provide the functional connection between the bones that make up the skeletal system. Inflammation in the joint is called arthritis. Arthritis cases in calves are generally common in animals under one month of age. In this study, 60 calves of different age, sex and breed, which were brought to Fırat University Animal Hospital between 2013 and 2014, constituted the material. Clinical examinations were performed in terms of gait, local symptoms and synovial fluid in calves brought with the complaint of swelling in the joints. The distribution rates of the disease were determined and recorded according to breed, age, sex and seasons. Calves were treated medically. In conclusion, the aim of this study was to evaluate the age, sex, breed and seasonal distribution of arthritis cases in calves. It is seen that preventive medicine is important to prevent arthritis cases which have serious effects on calf development and growth and cause economic losses. We believe that early diagnosis and treatment of arthritis cases will contribute to animal health and minimise economic losses.

Key words: Joint, Arthritis, Calf

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KEDİ VE KÖPEKLERDE KATARAKT

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ÖZET

Katarakt, göz içi kristal lensin herhangi bir opaklaşması anlamına gelir. Mercek çoğunlukla kollajenden yapılmış bir dış kapsülden ve yaklaşık %60 protein ve %40 sudan oluşan hassas bir şekilde organize edilmiş dahili mercek liflerinden oluşur. Lensin biyomekanik ve fizyolojik süreçleri çok karmaşık olsa da lens temel olarak tek bir maddeden, proteinden oluşur. Böylece merceğin çeşitli hasarlara tepkisi esasen tek bir temel sonuçla, katarakt oluşumuyla sonuçlanır. Bu nedenle katarakt oluşumu altta yatan herhangi bir patolojik sürece özgü değildir, yalnızca lensteki bir anormalliği belirtir. Katarakt tipik olarak merceğin genel tutulumuna ve şiddetine göre karakterize edilir. Yeni başlayan kataraktlar merceğin <%15'ini etkiler, olgunlaşmamış kataraktlar merceğin %15-100'ünü içerir ve şerit yansımayı ortadan kaldıracak kadar yoğun değildir, olgun katarakt merceğin tamamını tutar ve şerit yansımayı önler ve hipermatür Katarakt merceğin tamamını kapsar ve mercek içinde hiperreflektif, "parlak" alan olarak görülen erimeye kadar ilerlemiştir. Hipermatür kataraktlarda sıklıkla lens kırışıklığı ve lensin neden olduğu ciddi üveit bulunur. Köpek ve kedilerde kataraktın genetik, yaş, travma ve diyabet gibi metabolik hastalıklar dahil olmak üzere çeşitli nedenleri vardır. Yapılan muayeneler kataraktın varlığını doğrulayabilir ve ameliyat gerekip gerekmediğini ortaya konur. Kataraktın giderilmesinde yüksek başarı oranı ve iyi bir prognoz vardır; görüş genellikle normale yakın hale gelir. Ancak kataraktı olan tüm köpek ve kediler ameliyata aday değildir ve tedavilerinde konservatif bir yaklaşım benimsenebilir.

Anahtar Kelimeler: Lens, Katarakt, Kedi, Köpek

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CATARACT IN CATS AND DOGS

SUMMARY

Cataract refers to any opacification of the crystalline intraocular lens. The lens consists of an outer capsule made mostly of collagen and precisely organised internal lens fibres consisting of approximately 60% protein and 40% water. Although the biomechanical and physiological processes of the lens are very complex, the lens is basically composed of a single substance, protein. Thus, the response of the lens to various damages essentially results in one basic outcome, cataract formation. Cataract formation is therefore not specific to any underlying pathological process, but merely indicates an abnormality in the lens. Cataracts are typically characterised by the overall involvement and severity of the lens. Incipient cataracts affect <15% of the lens, immature cataracts involve 15-100% of the lens and are not dense enough to eliminate stripe reflection, mature cataracts involve the entire lens and prevent stripe reflection, and hypermature cataracts involve the entire lens and have progressed to melting, seen as a hyperreflective, "bright" area within the lens. Hypermature cataracts often have lens wrinkling and severe uveitis caused by the lens. There are several causes of cataracts in dogs and cats, including genetics, age, trauma and metabolic diseases such as diabetes. Examinations can confirm the presence of cataracts and determine whether surgery is required. Removal of cataracts has a high success rate and a good prognosis; vision usually returns to near normal. However, not all dogs and cats with cataracts are candidates for surgery and a conservative approach may be adopted in their management.

Keywords: Lens, Cataract, Cat, Dog

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IMPACT OF VITAMIN DEFICIENCY DUE TO MALNUTRITION ON HEALTH OF WORKING WOMEN: A CASE STUDY

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ABSTRACT

Globally, malnutrition is a major nutritional disorder especially in developing economies. Poor dietary habits and imbalance nutrient's intake result in adverse consequences on the normal body functionality. For millennia, women have been facing different problems of discrimination, inequality, low level of living standards, poor food habits and malnutrition. On the other hand, women are the important and integral segment of society and they have great contributions in the development of the economic sector, but still they are not treated according to their efforts as compared to men. With the passage of time, the trend of young women in the workforce has been rising, which is also sort of attractive for industrialists, they prefer recruitment of women due to women's cheap labor, docility, being less problematic and higher productivity. Women at work have rare opportunities for healthy food; however, unhealthy food eating is a universal phenomenon prevalent among people. Besides, health outcomes of unhealthy eating such as obesity, high levels of uric acid and cholesterol, and deficiency of iron, calcium, iodine, vitamin A, B, and D also significantly vary among them. Dietary behavior of working women is a multi-dimensional concept and available literature precisely illustrates its effects. Keeping in view the factors, the current research explicates the facts of dietary behavior of working women in relation to their productivity at workplace. Multistage sampling techniques were used to collect data. For the collection of data, the total sample size of two hundred respondents (females). Interview schedule was planned, and analysis was done by using SPSS for social sciences. It is anticipated that the results of the study could be helpful for developing a sustainable program to improve dietary behavior of working women at their workplace to improve productivity and their health and nutrition status. The workplace as a framework for interventions to improve nutrition and promote physical activity". Promoting workplace health has generally focused on promoting the health of workers by reducing behaviors of individual risk such as smoking. The result shows that 73.5% of the respondents out of 200 worked for 30-40 hours per week. Further 48.5% respondents agreed and acknowledged the importance of the help of other people in choosing healthy eating options, when they were asked about the intake of vitamins, majority of the respondents responded in no, only 16% responded to yes which reflect the deficiency of vitamin in them, which are necessary for them.

Keywords : Vitamin, Malnutrition, Women, Health, Food.

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ANALYZING THE IMPACT OF VEGETABLE FARMİNG ON POVERTY REDUCTİON İN RURAL AREAS

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ABSTRACT

Vegetables uses in the country provide healthy and nutrient body to every person. Vegetable farming is a source of earning for poor farmers. Vegetable farming is playing best role in increasing production and economy of Pakistan. The famers are facing problems in vegetable growing. They have problems of vegetable diseases, pest attacks, irrigation issues, least access on hybrid seeds and resources, costly inputs, fertilizer and pesticide. The small farmers also facing the problems of marketing, they are receiving less income output and have market facilities far away from the rural areas. Rural women are performing great role in vegetable production. Above 60% women farmers are involved in vegetable production. They are participating in seeding, irrigation, picking, weeding, and cultivation of vegetables. The aim of this was study to analyze the effects of vegetable farming on poverty reduction in the rural areas of District Nankana Sahib. Data was collected through quantitative method. The simple random sampling technique was used for data collection. The total respondents were 200 females. Well prepared interview schedule was used as instrument for data collection. Quantitative data was analyzed through statistical package for social sciences (SPSS). The study identify all the respondents were involved in vegetable farming activities. While 86.0% of the respondents were illiterate. About 56.0 % of respondent had vegetable farming as main source of income. More than half 64.0% of women respondents had wages equal to male farmers. About 80.0% of respondent were not satisfied to their wages. Majority 77.0% of women informed vegetable farming fulfilling their needs to some context. Majority 46.5% of women reported their life style had not improved due to vegetable farming. While 13% of the respondents had land resources and 25.0% had water resources. About 57.5% respondents were under the age of 15-30.

Keywords : Vitamin, Malnutrition, Women, Health, Food.

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VİRAL ENFEKSİYONLARIN PATOGENEZİ

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ÖZET

Viruslar, konağı enfekte ettiklerinde farklı mekanizmalarla hastalık oluştururlar. Virusların konak hücrede hastalık oluşturma mekanizmalarına patogenez adı verilir. Virusların konağa giriş için çeşitli yolları kullandıkları bilinmektedir. Viral enfeksiyonlarda hastalık tablosu, etkenin konağın çeşitli hücrelerinde başarılı bir şekilde üremesine bağlı olarak gelişir. Bazı viruslar, konağa girdikleri bölgede çoğalarak lokal enfeksiyon oluşturmalarına rağmen, bazıları primer replikasyondan sonra farklı yollarla organizmada farklı doku ve organlara yayılarak ikinci bir viral replikasyon geçirirler. Viruslar konakta akut ve persiste gibi farklı enfeksiyon tablolarına neden olabilirler. Viral patogenezi belirleyen en önemli faktörler, virusun tipi, konakçı hücre ile ilişkileri ve konağın buna yanıtıdır. Hastalığa özgül belirtiler, virusun konakta çoğalmasına bağlıdır. Ancak virusların konakta kalabilmeleri, konak cevabına karşı savunmaları ile mümkün olabilmektedir.Virusların konakta oluşturdukları primer patolojik etki, enfekte hücrede çoğalarak hücrenin ölümüne neden olmalarıdır. Diğer bir deyişle, virus çoğalması apoptotik mekanizmaların çalıştırılmasına yol açmakta ve serbest kalan viruslar da yeni hücreleri enfekte edebilmektedir. Ancak bu gelişim konağın immun sistemini durdurmaktadır. Çoğu kez hücrenin apoptozise gitmesi virusun işine gelmemektedir. Özellikle bazı viruslar apoptozisi inhibe ettikleri gibi, immun sistemde rol alan bazı mekanizmaları da ortadan kaldırarak immun sistemden kaçmaktadırlar. Bazı viruslar ise immun sistem hücrelerinde üreyerek konağın immun cevabını baskılarlar.

Anahtar Kelimeler: Enfeksiyon, Virus, Patogenez

ABSTRACT

Viruses cause disease through different mechanisms when they infect the host. The mechanisms which viruses cause disease in the host cell are called viral pathogenesis. It is known that viruses use various ways to enter the host. In viral infections, clinical symptoms depend on the reproduction of the virus in various cells of the host. Although some viruses replicate in the area where they enter the host and cause local infection, some of them undergo second viral

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replication by spreading to different tissues and organs in the organism through different means after primary replication. Viruses can cause different infection conditions in the host, such as acute and persistent.The most important factors that determine viral pathogenesis are the type of virus, its relationships with the host cell, and the host's response to it. Specific clinical symptoms of the viral infection depend on the proliferation of the virus in the host. However, viruses can survive in the host by defending themselves against the host response. The primary pathological effect of viruses on the host is that they replication in the infected cell and cause cell death. In other words, virus proliferation leads to the activation of apoptotic mechanisms, and the released viruses can infect new cells. However, this development stops the host's immune system. Most of the time, it is not beneficial for the virus if the cell undergoes apoptosis. In particular, some viruses not only inhibit apoptosis but also escape from the immune system by eliminating some mechanisms that play a role in the immune system. Some viruses suppress the host's immune response by reproducing in immune system cells.

Keywords: Infection, Virus, Pathogenesis

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ANSYS-MAXWELL İLE KABLOSUZ ŞARJ SİSTEMİNİN OPTİMUM NÜVENİN TASARIMI VE ANALİZİ

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ÖZET

Enerjinin kablosuz aktarımı endüktif tabanlı kablosuz şarj sistemleri, tıbbi cihazlar, tüketici elektroniği ve elektrikli araçlar gibi uygulamalarda yaygın olarak kullanılmaktadır. Bu teknoloji, gücün herhangi bir elektrik teması olmadan aktarılması nedeniyle kullanıcılara büyük kolaylık sağlıyor. Kablosuz şarj sistemlerine yönelik temel tasarım zorlukları ve hedefleri arasında verimliliği en üst düzeye çıkarmak ve cihazın şarj süresini azaltmak için güç yoğunluğunu artırmak yer alır. Ek hedefler arasında termal performansın optimize edilmesi ve çeşitli ekranlama topolojilerinin etkilerinin dikkate alınması yer almaktadır. Bu çalışmada Kablosuz Güç Aktarım (KGA) sisteminin farklı nüvelerle tasarımı, analizi ve verimliliği ele alınmıştır. Burada amaç şarj süresini azaltmak, yüksek verimlilik için optimum tasarımı elde etmektir. Tasarım ve analiz için ANSYS-Maxwell-Simplorer bütünleşik platformu kullanılmıştır. Elde edilen sonuçlar grafikler halinde sunulmuştur.

Anahtar Kelimeler: Tasarım, Verimlilik, ANSYS-Maxwell, KGA

DESIGN AND ANALYSIS OF THE OPTIMAL CORE OF WIRELESS CHARGING SYSTEM WITH ANSYS-MAXWELL

ABSTRACT

Wireless transfer of energy inductive-based wireless charging systems are widely used in applications such as medical devices, consumer electronics and electric vehicles. This technology provides great convenience to users as power is transferred without any electrical contact. Key design challenges and goals for wireless charging systems include increasing power density to maximize efficiency and reduce device charging time. Additional objectives include optimizing thermal performance and considering the effects of various shielding topologies. In this study, the design, analysis and efficiency of the Wireless Power Transfer (WPT) system with different cores are discussed. The aim here is to reduce charging time and achieve optimum design for high efficiency. ANSYS-Maxwell-Simplorer integrated platform was used for design and analysis. The results obtained are presented in graphs.

Keywords: Design, Efficiency, ANSYS-Maxwell, WPT

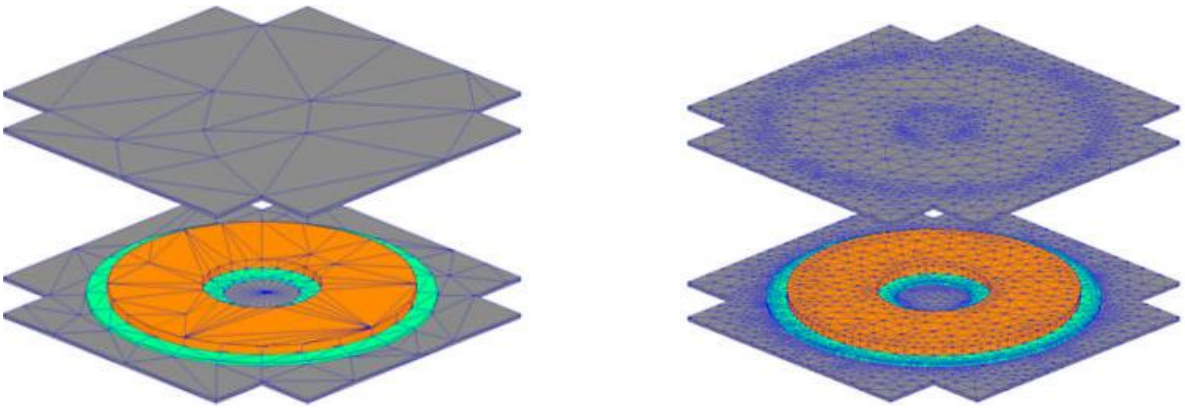
1.GİRİŞ

Kablosuz güç aktarım teknolojisi hızla ilerlemekte ve bu alanda çok büyük ilerlemeler kaydedilmektedir. Bu teknoloji, tıbbi cihazlarda, cep telefonu şarj istasyonlarında ve Elektrikli Araç (EA) şarj sisteminde [1-5] çok sayıda uygulaması nedeniyle büyük ilgi görmektedir. Kablosuz Güç Teknolojisi (KGT), bir güç kaynağının enerjisini bir hava boşluğu aracılığıyla bir elektrik yüküne aktardığı teknolojidir [6]. KGT teknolojisi, teoriden pratik, kullanışlı ve ticari teknolojiye doğru ilerleyerek üreticilerin aşağıdaki gibi gelişmiş özellikler sunmasına olanak tanır: kablosuz cep telefonu şarj sistemi, kalp pili, dizüstü bilgisayar, TV ve EA'lar için kablosuz şarj edilebilir pil, otoyol ve alışveriş merkezlerindeki büyük şarj istasyonları.

Kontroller, güç elektroniği ve yük devreleri de sistem performansının önemli bir parçasıdır. Günümüzde simülasyon teknolojisi, uygulama için kullanılan manyetik akı yoğunlaştırıcıların ve koruyucuların yanı sıra verici ve alıcı bobinlerin elektromanyetik (EM) ve termal performansının 3-boyutlu fizik modellemesine olanak sağlamaktadır. Bunu ve daha fazlasını entegre eden Ansys, bu tür hedeflere ulaşmak için fizik tabanlı devre ve sistem modelleme ile uçtan uca kablosuz güç kaynağı sistemi analizi sunar. Bu çalışmada Kablosuz Güç Aktarım (KGA) sisteminin farklı nüvelerle tasarımı, analizi ve verimliliği ele alınmıştır. Burada amaç şarj süresini azaltmak, yüksek verimlilik için optimum tasarımı elde etmektir. Tasarım ve analiz için ANSYS-Maxwell-Simplorer bütünleşik platformu kullanılmıştır. Elde edilen sonuçlar grafikler halinde sunulmuştur.

2.MATERYAL VE YÖNTEM

Kablosuz şarj sistemlerinin EM analizi için Ansys Maxwell'in sonlu elemanlar yöntemi (SEY) tekniği, herhangi bir yanlış hizalama koşulu altında herhangi bir boyuttaki bobin için bobin kuplaj endüktansını tahmin etmek üzere otomatik uyarlamalı ağ oluşturma teknolojisini kullanır. Bu ağ oluşturma teknolojisi, modellerin, Şekil 1'de gösterildiği gibi çözülen fizik için uygun, verimli ve doğru bir ağ kullanmasını sağlar. Ayrıca, iletken kalkanlardaki girdap etkilerinden kaynaklanan kalıcı mıknatısların, manyetik malzemelerin ve kayıpların etkilerini de hesaba katar veya cihazın kapladığı alan dışında bulunabilecek başıboş alanlardan korunmayan yakındaki nesneler.



Şekil 1. (a) İlk ağ grafiği (b) uyarlanabilir şekilde geliştirilmiş ağ grafiği

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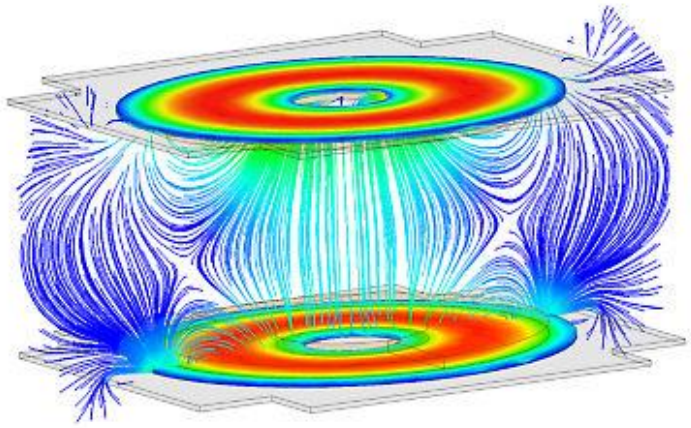
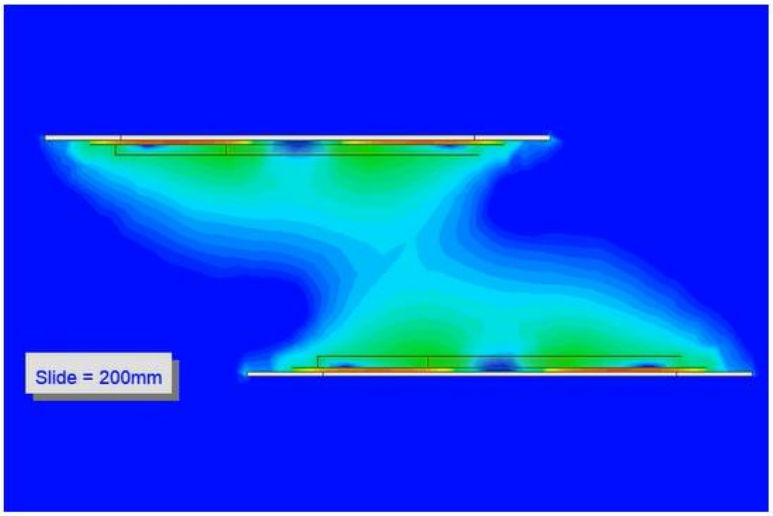
3. ARAŞTIRMA BULGULARI

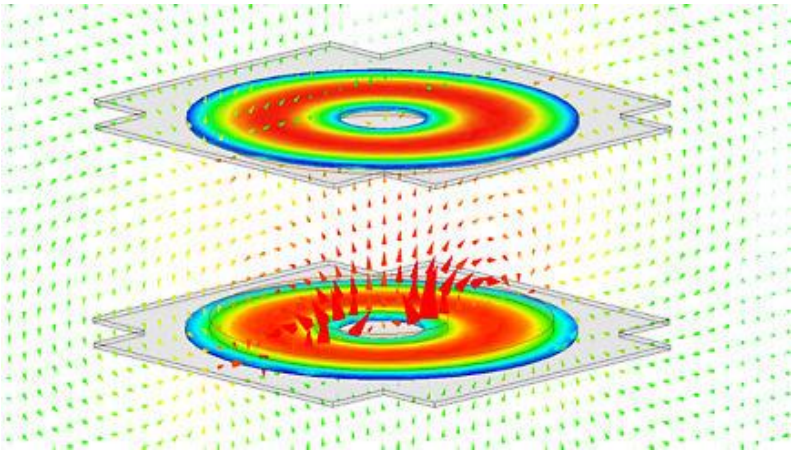
Her ne kadar kablosuz şarj cihazlarında hizalama için kalıcı mıknatıslar sıklıkla kullanılsa da, ferrit çekirdeği doyurabilen ve bobin akımları sinüzoidal olarak zamanla değişen manyetik alanlar oluşturduğunda girdap efektleri yaratabilen güçlü statik manyetik alanlar oluşturabilirler. Bu durumda direnç-indüktör parametreleri etkilenecek ve dikkate alınmadığı takdirde verimlilik analizinin doğruluğunu etkileyecektir.



Şekil 2. H alanı düzeneği

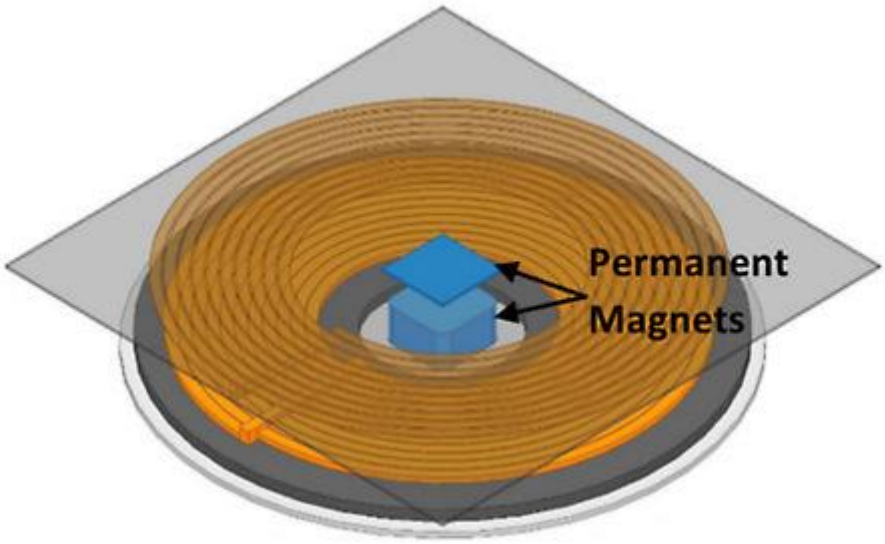


Şekil 3. Yanlış hizalama altındaki kesitte B alanı konturu



Şekil 4. Çekirdekte B alanı konturu ve kesit düzleminde H alan vektörü

Ansys, kablosuz şarj bobinlerini kalıcı mıknatıslarla modellemek için iki çözüm sunar. İlk çözüm, kalıcı mıknatıstan yayılan doğru akım (DC) alanını, alıcı ve verici bobinlerinden üretilen zamanla değişen alanla birleştirerek manyetik alan dağılımını sağlayan geçici çözümleyici yaklaşımıdır. İkinci çözüm, kablosuz şarj sisteminden gelen RL parametrelerini invertör veya pil gibi ek alt sistemlerle entegre ederek sistem düzeyinde bir analiz yürütmek için tercih edilen iş akışı olan geçirgenlik bağlantı yöntemidir. Tüketici elektroniği alanında sektörde en çok kabul gören standart, Kablosuz Güç Konsorsiyumu tarafından geliştirilen ve kablosuz şarj sistemlerini standartlaştırmaya yardımcı olduğu bilinen Qi standardıdır.



Şekil 5. Kalıcı mıknatıslarla kablosuz şarj

Ansys Maxwell'deki Qi standardı 3DC iş akışı basittir. Geometri, uyarımlar, çözüm kurulumu ve parametreler her bileşen için zaten ayarlanmıştır. Model, alıcı ve verici bileşenlerini

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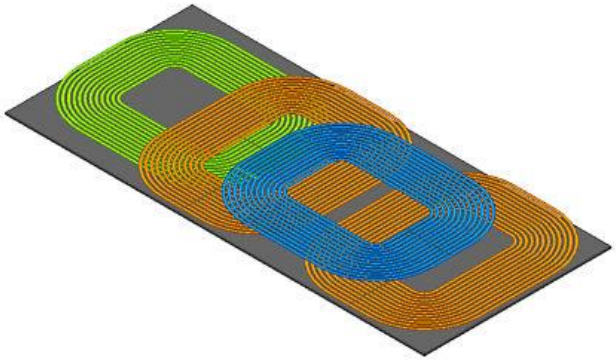
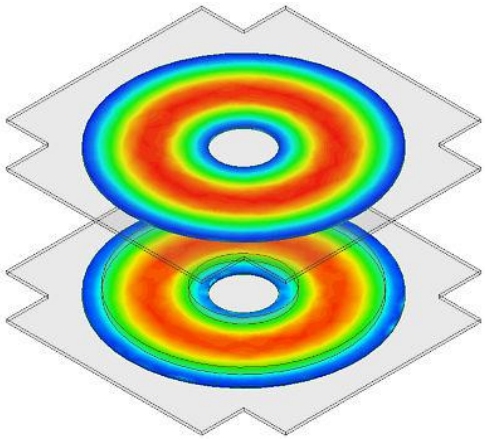
Maxwell tasarımına sürükleyip bırakarak kolayca oluşturulabilir. Tasarım daha sonra birkaç temel model kurulum adımıyla analiz edilmeye hazırdır.

Şekil 6. Dikdörtgen bobinli Qi standart güç vericisi

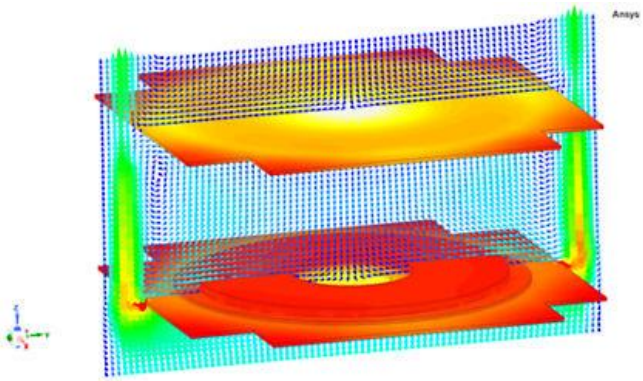


Şekil 7. Genişletilmiş güç profili için birden fazla bobine sahip Qi standart güç vericisi

Gücün kablosuz olarak iletilmesi, verici ve alıcı bobinlerin yanı sıra kablosuz şarj cihazlarının manyetik ve iletken kısımlarında da ısı üretecektir. Yakın kısımlarda istenmeden de ısı oluşabilir. Sıcaklık sınırlarını karşılamak veya aşmak için, ısının nereden kaynaklandığını tahmin etmek ve optimum tasarımı elde etmek amacıyla farklı şarj yükleri altında termal performansı planlamak zorunludur.

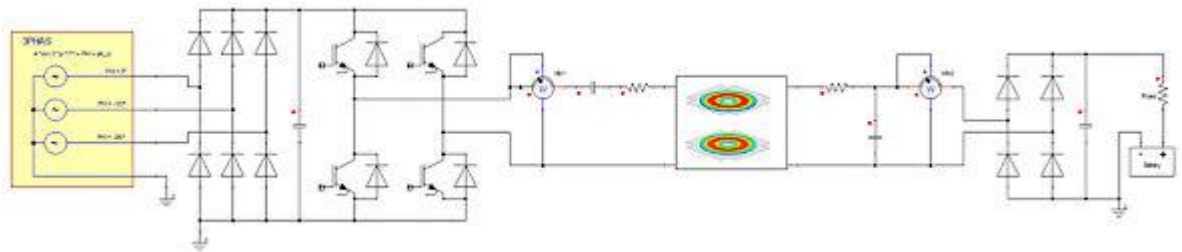


Şekil 8. Çekirdeklerde histerezis kaybı dağılımı

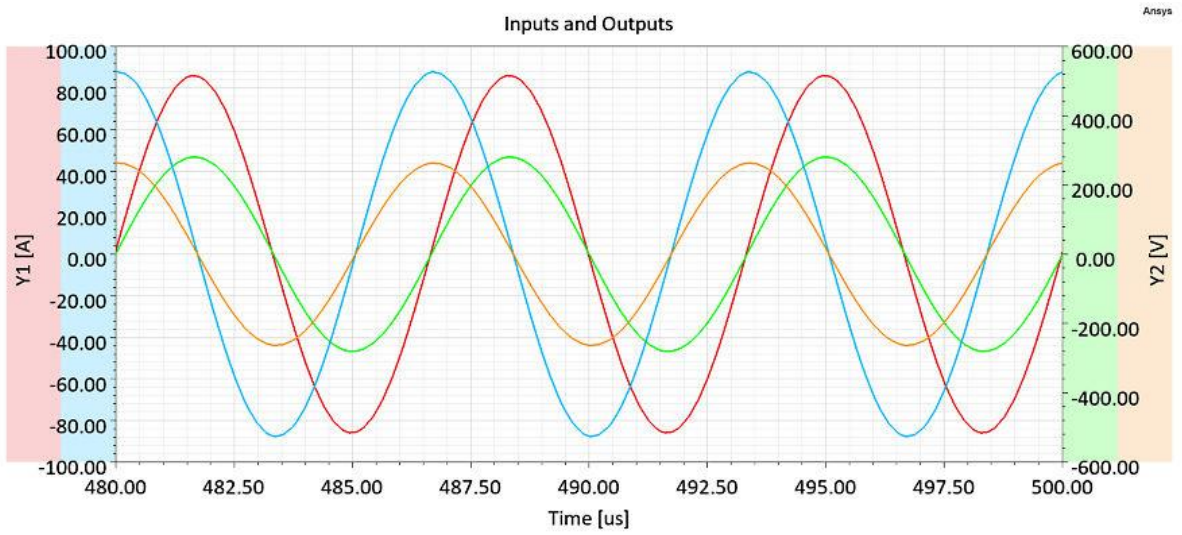


Şekil 9. Hava akışıyla birlikte sıcaklık grafiği

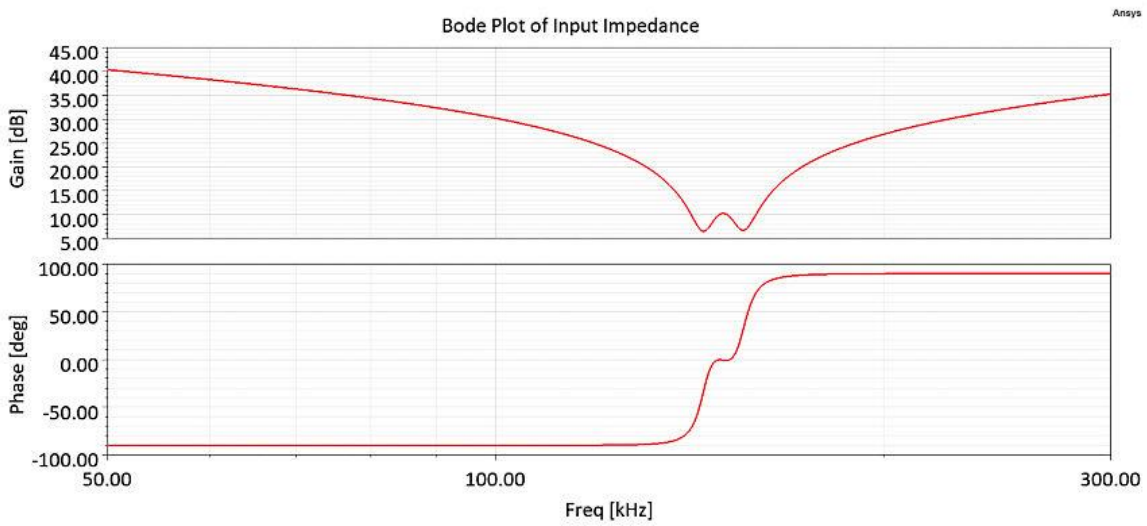
Kablosuz şarj sisteminin verimliliği, bobin kalitesi faktörleri, kayıplar ve kontrol stratejileri dahil olmak üzere birçok faktöre bağlıdır. Devre ve sistem simülasyonu için frekansa bağlı manyetik sonlu eleman analizinin (FEA) indirgenmiş sıralı modellerinin (ROM'lar) etkinleştirilmesi, zaman ve frekans alanında sistem verimliliğinin doğru tahmin edilmesine olanak tanır. Ayrıca algılama ve kontroller için farklı güç elektroniği topolojilerinin değerlendirilmesine olanak sağlar.



Şekil 10. Maxwell'den oluşturulan ROM'lu kablosuz şarj sistemi [8]



Şekil 11. Giriş ve çıkış akımları ve gerilimleri [8]



Şekil 12. Giriş empedansının Bode grafiği [8]

Ansys'in simülasyon çözümleri manyetik, termal ve elektrik sistem performansını entegre eder ve elektrikli araçlar, tüketici elektroniği ve tıbbi cihazlar için kablosuz şarj cihazlarının optimum tasarımını sağlar. Bu iş akışı, mühendislerin yeni güç seviyelerine, daha yüksek verimliliğe ulaşmalarına ve yeni veya mevcut tasarımların ürün maliyetlerini azaltmalarına olanak tanır.

4. SONUÇLAR

Bu çalışmada, elektrikli araçların şarj uygulamalarında kullanılan ve endüktif güç aktarıma dayanan KGA sistemleri için bir transformatörün farklı nüve konfigürasyonlarının tasarımı ve analizi sunulmuştur. Bu transformatör tasarımları SEY tabanlı ANSYS-Maxwell-Simplorer

platformu kullanılarak simüle edilmiş ve sonuçlar analiz edilmiştir. Bu çalışmada çeşitli konfigürasyonlar için ayrıntılı manyetik alan yoğunluğu grafikleri de elde edilmiştir. Farklı nüve yapıları için elektrik alan dağılımı, akım yoğunluğu, endüktans değerleri, kalite faktörü ve verimlilik gibi önemli değerler grafiklere aktarılarak sunulmuştur.

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ELEKTRİKLİ ARAÇLAR İÇİN KABLOSUZ GÜÇ AKTARIM SİSTEMİNİN ELEKTROMANYETİK ALAN MARUZİYETİNİN DEĞERLENDİRİLMESİ-DERLEME

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ÖZET

Kablosuz güç aktarım (KGA) teknolojisi, otonom elektrikli araçlar için çok önemlidir. Elektrikli araçlar (EA) mekanik güç ve elektronik donanım açısından geliştirildikçe ihtiyaç duyulan güç çıkışı talebi de artmaktadır. KGA sisteminde yüksek güç yüksek elektromanyetik alan yoğunluğu demektir. Bu nedenle, kablosuz güç aktarım sisteminde üretilen elektromanyetik dalgalara insan vücudunun maruz kalmasının zararlılığının araştırılması gerekmektedir. Bu çalışma, elektrikli araçlar için kablosuz güç aktarım sisteminin maruziyeti ele alınmıştır. Kablosuz güç aktarım sisteminin elektromanyetik alan dağılımı, verici ve alıcı bobinlerin küçük aralıkta hizalandığı ve büyük aralıkta hizalanmadığı iki durum için analiz edilmiş ve deneysel ölçüm sonuçlarıyla karşılaştırılmıştır. Son olarak insan vücudunun aracın etrafına yerleştirildiği maruz kalma senaryosu üzerinde dozimetri yapılarak insan vücudunda indüklenen değerler uluslararası kılavuzlarla karşılaştırılmıştır. İndüklenen değerler insan vücudundaki yağ ve kaslara yönelik temel maruziyet sınırlarını aştığı ancak merkezi sinir sistemi için bu durumun geçerli olmadığı anlaşılmıştır.

Anahtar Kelimeler: KGA, Manyetik alan, Maruziyet.

EVALUATION OF ELECTROMAGNETIC FIELD EXPOSURE OF WIRELESS POWER TRANSFER SYSTEM FOR ELECTRIC VEHICLES-A REVIEW

ABSTRACT

Wireless power transfer (WPT) technology is crucial for autonomous electric vehicles. As electric vehicles (EVs) are developed in terms of mechanical power and electronic hardware, the required power output demand also increases. In the WPT system, high power means high electromagnetic field intensity. Therefore, it is necessary to investigate the harmfulness of exposure of the human body to electromagnetic waves generated in the wireless power transmission system. This study addressed the exposure of wireless power transfer system for

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electric vehicles. The electromagnetic field distribution of the wireless power transmission system was analyzed and compared with the experimental measurement results for two cases in which the transmitting and receiving coils were aligned in the small gap and unaligned in the large gap. Finally, dosimetry was performed on the exposure scenario in which the human body was placed around the vehicle and the values induced in the human body were compared with international guidelines. It has been understood that the induced values exceed the basic exposure limits for fat and muscle in the human body, but this is not the case for the central nervous system.

Keywords: WPT, Magnetic field, Exposure.

1.GİRİŞ

Yüksek enerji verimliliği ve düşük karbon ayak izi elektrikli araç sistemlerine olan ilgiyi her geçen gün artırıyor. Elektrikli aracın aküsü kablolu ve kablosuz olmak üzere iki şekilde şarj edilebilmektedir. KGA sistemleri, şarj sistemini kablolu şarjın neden olduğu kablo karmaşasından kurtarır. Ayrıca kablolu şarja göre daha güvenilir ve pratik bir çözüm sunuyor. Otomobiller son yıllarda elektrik, elektronik, bilgi ve iletişim haline gelme sürecine girmiştir. Bu bağlamda otonom araçlar çeşitli şirketlerin, araştırma enstitülerinin ve üniversitelerin araştırmalarının ana odak noktası haline gelmiştir. Otonom sürüş teknolojisine sahip elektrikli araçların kablosuz şarj teknolojisi ile herhangi bir ek işlem yapılmasına gerek kalmadan şarj edilmesi hayati önem taşımaktadır.

Elektrikli araçların yüksek hızda şarj edilmesini gerektiren ağır hizmet tipi elektrikli araçların şarjı için kablosuz şarj sisteminin çıkış gücünün yüksek olmasını gerektirmektedir. Buna göre, yüksek güçlü kablosuz şarj sisteminin oluşturduğu elektromanyetik alana maruz kalan kişilerin sağlık üzerindeki olumsuz etkileri de önemli bir sorun teşkil etmektedir. Ayrıca üretilen bu elektromanyetik alanlar, sistemlere yakın çalışan implante tıbbi cihazların arızalanmasına neden olabilmektedir [1]. Bunun için otomobil üreticilerinin insanların manyetik alana maruz kalma limitlerine uyması gerekmektedir. Bu amaç doğrultusunda elektrikli araçların kablosuz şarj sistemlerinin maruziyet değerlendirmesi üzerine bazı araştırma makaleleri yayınlanmıştır [2-4]. Bu makalelerin sonuçları simülasyonlara veya düşük güçlü sisteme dayanmaktadır. Mohamed ve diğerleri, elektrikli araca monte edilen 25 kW kablosuz güç sistemini el almışlardır [5]. Ancak insan vücudunda indüklenen miktarların analizi olmadan deneysel değerlendirme ve ölçüm metodolojisi ile sınırlı kalmışlardır. Chakarothai ve diğerleri, kablosuz güç aktarım sistemi ile donatılmış gerçek aracı dikkate almadan araç gövdesinin koruma etkisini doğrulamak için metal bir plaka kullanmışlardır [6].

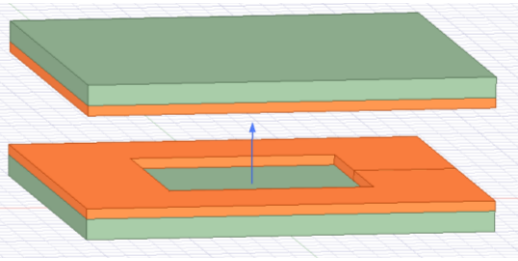
Bu çalışmada, elektrikli araçların kablosuz şarj sisteminin maruziyet değerlendirmesi açıklanmıştır. Geliştirilen kablosuz şarj sistemini temel alarak elektromanyetik simülasyon yoluyla kablosuz şarj sisteminin etraftaki elektromanyetik alanı hesaplanmıştır. Ayrıca kablosuz şarj sistemiyle donatılmış araçla elektromanyetik simülasyonlar ve deneysel değerlendirmeler incelenerek anatomik insan vücudunun voksel modeli kullanılarak insan vücudunda indüklenen miktarlar değerlendirilmiştir. Son olarak bu değerlerin uluslararası standartlarla uygunluk derecesi araştırılmıştır.

2. MATERYAL VE YÖNTEM

Bu makalenin maruz kalma değerlendirmesine konu olacak kablosuz güç aktarım sistemi yüksek frekansta çalıştığından insan vücudunda indüklenen miktarların hesaplanabilmesi için bu frekans bandında sayısal analiz yapılması gerekmektedir. Sonlu fark zaman alanı (FDTD) yöntemi esas olarak anatomik insan vücudu voksel modeliyle sayısal dozimetri için kullanılmıştır. Ancak düşük frekans bandında uzun bir simülasyon süresi gerektiğinden sayısal analiz Park ve ark.. önerilen iki aşamalı yöntem kullanılarak gerçekleştirilmektedir. İlk adım, kablosuz güç aktarım sistemi etrafındaki 3 boyutlu elektromanyetik alanı elde etmek için moment yöntemi tabanlı elektromanyetik simülasyon çözücüyü kullanmaktır [7]. İkinci aşamada 3 boyutlu elektromanyetik alan insan vücuduna gelen bir alan olarak kabul edilir ve empedans yöntemi kullanılarak insan vücudunda indüklenen miktarlar hesaplanır. İyonlaştırıcı Olmayan Radyasyondan Korunma Uluslararası Komisyonu (ICNIRP), elektromanyetik alana maruz kalmaya karşı koruma için güvenlik yönergeleri yayınlamaktadır. Bu yönergeler Temel Kısıtlamaları ve Referans Düzeylerini sağlar. Geliştirilen kablosuz güç aktarım sisteminin çalışma frekansı bandına karşılık gelen genel kamu maruziyetine ilişkin referans seviyeleri, 1998 versiyonunda, elektrik alan kuvveti için 87 V/m ve manyetik alan kuvveti için 5 A/m'dir (ICNIRP, 1998). Düşük frekans bandında baskın uyarım etkisi için referans değerlerinin revize edildiği 2010 versiyonundaki referans seviyesinde, elektrik alan kuvveti 83 V/m, manyetik alan kuvveti ise 21 A/m'dir (ICNIRP, 2010). Yüksek frekans bandında baskın olan termal etki için temel kısıtlamalar 100 kHz'den 10 GHz'e kadar sağlanmaktadır. 85 kHz'de, genel halkın maruz kalması için temel kısıtlamaların ölçümleri, 1998 versiyonunda 0,17 A/m2 akım yoğunluğu (J) ve 2'de 11,475 V/m'lik indüklenen elektrik alanının yüzdelik değeridir (ICNIRP, 1998; ICNIRP, 2010).

3. ELEKTRİKLİ ARAÇLAR İÇİN KABLOSUZ GÜÇ AKTARIM SİSTEMLERİ

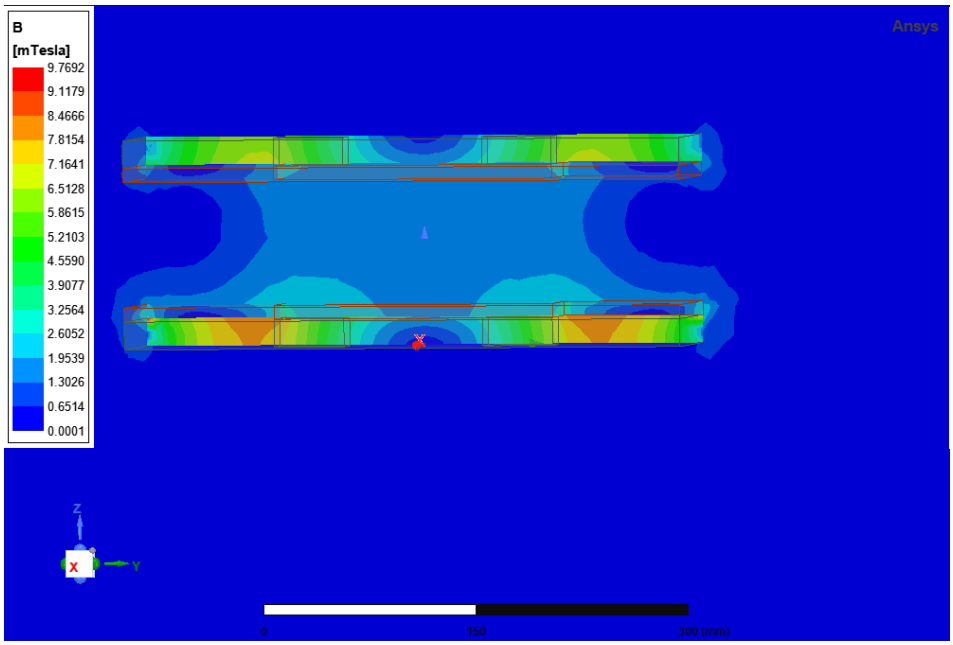
Bu çalışmada bir elektrikli araç için geliştirilen kablosuz şarj sisteminin verici ve alıcı yapısı boyutu Şekil 1'de verilmiştir. KGA, kablosuz şarj pedinin elektromanyetik alanının simülasyonunun çekirdeği olan bobin (bakır), ferrit ve koruyucu iletkenden (alüminyum) oluşur.



Şekil 1. KGA sisteminin transformatör yapısı.

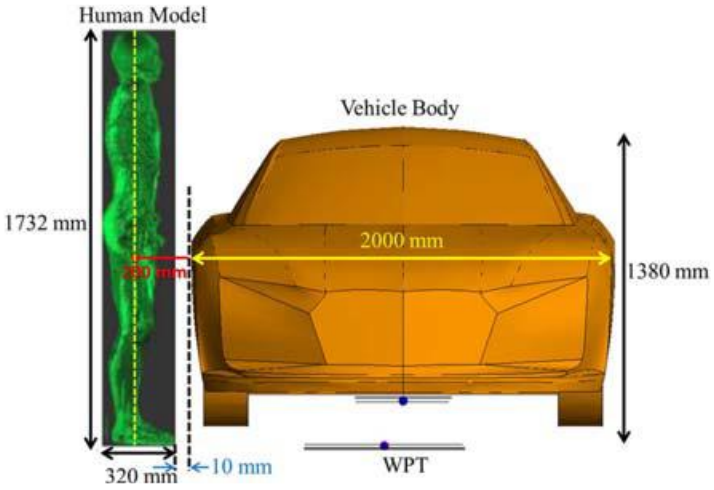
Bu çalışmada kablosuz şarj sistemindeki elektromanyetik alana maruz kalma düzeyi iki duruma göre araştırılmıştır. Bunlardan biri, verici ve alıcı yapının hizalandığı ve boşluğun en küçük

olduğu durumdur. Diğeri ise verici ve alıcı sargıların hizalanmadığı ve boşluğun en büyük olduğu durumdur. İkinci durum en kötü maruziyet senaryosu olarak bilinmektedir. Verici ve alıcı sargılar arasındaki boşluk, vericinin kurulum koşullarına ve alıcının monte edildiği aracın alt tarafının yüksekliğine bağlı olarak değişebilir. Elektrikli araçlar için kablosuz güç aktarımına ilişkin Amerikan standardı olan SAE J2954'te tanımlanan boşluk, vericinin alt kısmından alıcının üstüne kadar olan mesafeyi ifade etmektedir. SAE J2954'ün minimum aralığı 140 mm, maksimum aralığı ise 210 mm'dir. Şekil 2'de kablosuz güç aktarım sistemleri etrafındaki elektromanyetik alan dağılımlarını göstermektedir.



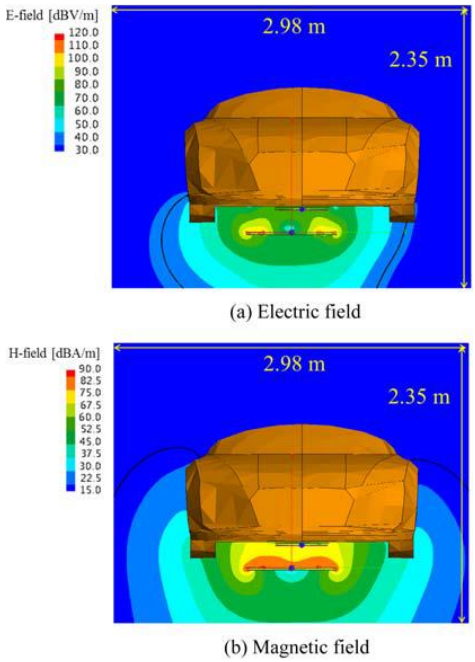
Şekil 2. Manyetik alan dağılımı

Düz siyah çizgi, ICNIRP kılavuzunun 1998 versiyonundaki referans seviyesinin (87 V/m elektrik alan gücü ve 85 kHz'de 5 A/m manyetik alan) konumunu gösterir. Durum 1 ile karşılaştırıldığında Durum 2'de daha güçlü elektromanyetik alan dağılımı mevcuttur. Bu nedenle, Şekil 4'te gösterildiği gibi Durum 2'deki kablosuz güç aktarım sisteminin aracın alt kısmına monte edildiği en kötü maruz kalma senaryosunu araştırıyoruz. Araç gövdesini mükemmel bir elektrik iletkeni olarak görüyoruz. Araç tekerleklerinin lastikleri de dahil olmak üzere aracın metalik olmayan nesnelerinin, araç modelini basitleştirdiği ve lastiğin geçirgenliği düşük olsa bile yalnızca elektrik ve manyetik alanların dağılımını en önemli şekilde etkileyen metalleri hesaba kattığı düşünülmez. İnsan modeli ve verici yapı zeminde konumlandırılmıştır. Gerçekçi ortamı hesaba katmak için Şekil 3'te lastiksiz araç tekerlekleri de dahil olmak üzere araç gövdesi yerin üzerindedir.



Şekil 3. Bir araç gövde modeline göre insan modeli konumu. Lastiksiz araç tekerlekleri dikkate alınır [10]

En kötü maruz kalma senaryosuna göre aracın etrafındaki elektromanyetik alanın dağılımı Şekil 4'te verilmiştir. Burada düz siyah çizgi aynı zamanda ICNIRP kılavuzunun 1998 versiyonundaki referans seviyesini de göstermektedir. İnsan modelinin ayak konumu, elektrik alanının düz siyah çizgisinin içinde yer alır. Ancak kafa dışındakilerin çoğu, manyetik alanın düz siyah çizgisinin içinde yer alır. Şekil 5'te SAE J2954'e göre verici ve alıcı sisteminin hizalanmış ve hizalanmamış durumları için maruz kalma değerlendirmesinin test kurulumu sunulmuştur. Burada verici ve alıcı arasındaki boşluk sabit kalmıştır. Elektrik ve manyetik alanlar, verici ve alıcı sistemin hizalandığı ve hizalanmadığı durumlar için ölçülür. Verici ve alıcı sistemler hizalanmadığında elektrik ve manyetik alanların daha fazla indüklendiğini doğrulayabiliriz.



Şekil 4. Kablosuz güç aktarım sistemi (ZY düzlemi) ile monte edilen aracın etrafındaki alan dağılımı [8]

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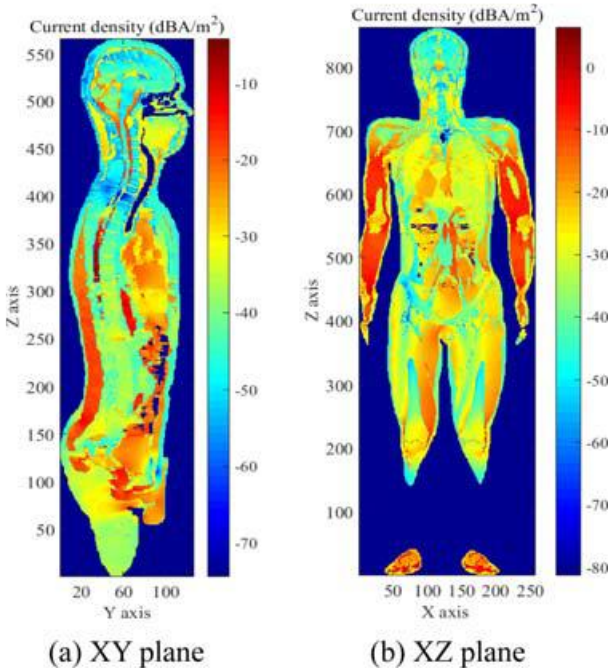
Şekil 5. SAE J2954'e göre maruz kalma değerlendirmesinin test kurulumu [10]

İnsan vücudunun 20 kW kablosuz güç aktarım sistemi ile donatılmış aracın çevresinde açıkta kaldığı varsayılarak insan vücudunda indüklenen miktarlar hesaplanır. Şekil 6, her bir kesit için insan vücudundaki akım yoğunluğu dağılımını göstermektedir.



Şekil 6. İnsan vücudundaki akım yoğunluğu dağılımları [10]

4. SONUÇLAR

Bu çalışmada, kablosuz güç aktarım sistemi ile donatılmış aracın yakınındaki insan vücudunun maruziyet değerlendirmesi analiz edilmiştir. Deneysel ölçüm yoluyla, verici ve alıcı sistemler hizalanmadığında elektrik ve manyetik alanların daha fazla üretildiği görülmüştür. Verici ve alıcı sistemin hizalanmadığı ve maksimum boşluğa sahip olduğu en kötü senaryoda, kas ve yağ için hesaplanan değerler ICNIRP yönergelerinin temel kısıtlamalarını aşarken, CNS organları için tahmin edilen değerler ICNIRP ile uyumlu olmuştur. Gelecekte, daha yüksek güçlü

kablosuz güç aktarım sistemine sahip elektrikli araç için insanın maruziyetine ilişkin çalışmalar gerekli olacaktır.

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PLM SİSTEMLERİ İLE ÜRÜN KALİTESİNİN ARTIRILMASI VE PERFORMASIN OPTİMİZE EDİLMESİ

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ÖZET

İmalat endüstrisinin en büyük problemlerinden biri verimlilik ve sürdürebilirliktir. Geleneksel tasarım ve üretim süreçlerinin kullanılması nedeniyle bir çok firma düşük parça kalitesi ve ürün performans sorunları ile karşı karşıya kalmaktadır.Ancak PLM sistemlerini kullanarak tasarım ve üretim süreçlerini yönetme şekli yeniden düzenlenebilmektedir.Geleneksel tasarım ve üretim süreç yönetimi nedeniyle yaşanan sorunları ortadan kaldırıp,daha verimli, kolaylaştırılmış bir yaklaşıma sahip olunabilmektedir. PLM sistemleri havacılık ve otomotiv sektörlerinde yaygın olarak kullanılırken, geri kalan imalat sanayinin de aynı faydaları yakalayıp bu sorunların üstesinden gelmesini sağlanabilmektedir. Genel makina imalat sektörünün de daha üretken, daha verimli bir yapıya kavuşması için gerekli adımlar atılmalıdır.

Anahtar Kelimeler : İmalat Sanayi , yönetim, PLM (Ürün Yaşam Döngüsü Yönetimi)

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AN INNOVATING APPROACH TO SOLVING THE JOSEPH-EGRI EQUATION

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ABSTRACT

The purpose of this manuscript is to look at solutions to the Joseph Egri (TRLW) equation, which has been presented as an alternative to the KdV equation. The extended modified Exp-$\left(\Omega(\eta)\right)$ function method are applied to the equation in order to find new precise solutions. Then, the various visual graphics of the aforementioned equation are displayed while taking into account the essential parameter values in order to better depict the nonlinear wave formations.

Anahtar Kelimeler: Joseph Egri equation, Extended Modified Exp-$\left(\Omega(\eta)\right)$ function method, Exact Solutions.

THE COLLOCATION METHOD FOR SIMPLIFIED MODIFED CAMASSA HOLM EQUATION

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ABSTRACT

This paper proposes a numerical method for solving a simplified modified Camassa Holm problem that emerges in shallow water and was determined to be totally integrable with a Lax pair to serve as an approach to the incompressible Euler equation. For this purpose, the collocation technique, which is a computationally efficient approach for getting numerical solutions to partial differential equations, is employed. The acquired findings are compared with exact ones to determine the method's efficacy and precision. The solutions are illustrated with visual representations.

Anahtar Kelimeler: Camassa Holm Equation, Collocation, Trigonometric Splines.

SONLU FARKLAR METODU KULLANILARAK DOĞRUSAL OLMAYAN BIR BOYUTLU YÜZEY TEPKI ANALIZI PROGRAM GELIŞTIRILMESI

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ÖZET

Yüzey tepki analizi dört bölümden oluşur. İlk bölüm, kaynak ve yol özelliklerini dikkate alan yer hareketidir. İkinci bölüm, saha profilinde karşılaşılan zeminin topografik özellikleri, zemin tabakalaşması, doğrusal olmayan inelastik özelliği dikkate alınarak jeomorfolojik ve geoteknik koşullara dayalı saha karakterizasyonudur. Üçüncüsü zemin modeli ve sonuncusu ise saha tepki analizi yöntemidir. Yerel zemin koşullarının yer hareketi üzerindeki etkisi yapı dinamiği ve deprem mühendisliğinin ilk günlerinden beri gözlemlenmektedir. Literatürde 1800'lü yıllardan itibaren yerel jeolojinin yer hareketleri üzerindeki etkilerini gösteren gözlemler mevcuttur. Zemin büyütmesi, sismologlar tarafından sismik dalga yayılımına ilişkin daha büyük problemin bir parçası olarak incelenmiştir. Sismologlar zemini doğrusal malzeme olarak ele almışlar ve saha koşullarının değerlendirilmesinde zeminin doğrusal olmama durumunu nadiren dikkate almışlardır. Saha tepki analizlerinde kullanılmak üzere doğrusal olmayan histeretik malzeme tepkisi birkaç farklı yolla birleştirilmiştir. Dinamik yüzey tepki analizinde kullanılan genel olarak doğrusal olmayan üç sınıfa ayrılabilir (Mekanik model, plastik model ve ampirik model). Bu çalışmada ampirik modeli kullanılmıştır. Bu tip model, tekrarlı yüklemeye maruz kalan zeminin doğrusal olmayan davranışını tanımlayan basit bir ampirik fonksiyon kullanır. Gerilme-gerinim uzayındaki yükleme ve boşaltma yollarını tanımlayan bu ampirik kurallardan ilki Masing Kuralları'dır. Bu çalışmada akma yüzeyi olarak hiperbolik gerilim-gerinim omurgası kullanılmıştır. Seçilen örnek zemin katmanı kaya zemine oturan 20 metrelik alüvyal zemin katmanı olarak seçilmiştir. Problemin sayısal çözümü iki bölümden oluşmaktadır. Öncelikle hareket denklemi sonlu farklar yöntemi kullanılarak uzayda ayrıklaştırılmıştır. Bu adımın sonunda ortaya çıkan denklemler, zaman içinde ikinci dereceden adi diferansiyel denklemler sistemine indirgendikten sonra bu denklem sistemi doğrudan entegrasyon kullanılarak çözülmüştür. Sonuçlar aynı problemi çözen başka çözüm ile karşılaştırılmış ve sonucun yakın çıktığı gözlemlenmiştir.

Anahtar Kelimeler : Yüzey Tepki, Hiperbolik model, Sonlu farklar

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EFFECTS OF DIFFERENT FERTILIZER REGIMES ON SOIL AND PLANT NITROGEN CONTENT

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ABSTRACT
Nitrogen is an essential nutrient for plant growth, and fertilizers are commonly used to increase nitrogen availability in soil. In this study, we investigated the effects of different fertilizer regimes on soil and plant nitrogen content and δ15N values over a period of 12 weeks. Four treatments, consisting of different rates of nitrogen fertilizer, were applied to a maize crop, and soil and plant samples were collected at four different sampling times. The results showed clear trends of decreasing soil and plant nitrogen content and δ15N values with decreasing fertilizer rate. The differences between the treatments were consistent across all sampling times for soil nitrogen and δ15N, but less consistent for plant nitrogen and δ15N. These findings have important implications for optimizing fertilizer regimes for crop productivity and environmental sustainability.

Keywords: crop productivity, environmental sustainability, fertilizer regimes, nitrogen content**.**

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ELEMENTAL ANALYSIS AND HEALTH EXAMINATION OF EDIBLE MUSCLE TISSUE OF Capoeta Pestai FISH

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ABSTRACT

This study presents the results of the element analysis of the Sıraz fish (Capoeta pestai) found in Siirt Çetin Dam Lake. Element analysis of fish samples was conducted using the ICP-MS device to determine the presence and concentrations of various elements.

According to the findings of the study, a range of elements, particularly significant in aquatic ecosystems, has been observed in the Sıraz fish inhabiting this lake. Some of the notable elements include:

Sodium (Na) was detected at a concentration of 4650447.215 ppb in the bodies of these fish. Potassium (K) was measured at a level of 13480463.459 ppb. Calcium (Ca) was notably found with a concentration of 5146727.773 ppb. Iron (Fe) was quantified at 174053.935 ppb. Copper (Cu) levels were observed at 8435.153 ppb, and zinc (Zn) concentration was recorded at 6285.369 ppb.

Furthermore, several other elements were also detected, providing essential insights into the habitat and ecosystem of these fish.

These analysis results offer valuable information about the water quality and ecosystem of Siirt Çetin Dam Lake. Additionally, they aid in understanding the environmental exposure of the Sıraz fish and their role within the food chain. It is believed that these findings could serve as a fundamental reference point for the conservation and sustainable management of the lake. This study may contribute to encouraging further research aimed at comprehending and safeguarding the lake's ecosystem.

Anahtar Kelimeler : ICP-MS, *Capoeta pestai*, elemental analysis

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GÜREŞ SPORLARI İLE İLGİLİ YAPILAN ÇALIŞMALARA İLİŞKİN BİBLİYOMETRİK BİR ANALİZ

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ÖZET

Çalışmanın amacı, güreş sporları ve müsabakaları alanında 1990-2023 yılları arasında yayımlanan 806 çalışma ve 319 referans kaynağı bibliyometrik açıdan inceleyerek, disiplinde son 34 yıldaki eğilim ve trendleri ortaya koymaktır. Bu kapsamda, Web of Science Core Collection veri tabanında "güreş sporu" konu başlığında tarama gerçekleştirilmiş ve çalışmalara ait bibliyometrik verilere ulaşılmıştır. Çalışmalar; yıllara göre yayın sayıları, yayın türleri, ülke işbirliktelikleri ve kavram-konu yönelimleri bağlamında incelenmiştir. Ortak yazar ağları ile kavram-konu yönelimlerinin belirlenmesinde sosyal ağ analizi kullanılmıştır. Analiz sonuçlarına göre, yayın sayıları 2011-2022 yılları arası en yüksek seviyede olmuştur. En fazla yayın sayısı 63 yayın ile 2022 yılında gerçekleşmiştir. Güreş sporu ve müsabakaları hakkında en fazla yayını olan yazarlar ve eser sayıları sırasıyla Comstock RD (27), Kerry ZY (17), Collinc CL (12) ve Kordi R (12)'dir. Konu ile ilgili olarak yayınlarda en fazla kullanılan anahtar kelimeler humans, male ve wrestling olmuştur. Bu kelimeler sırasıyla 640, 475 ve 354 defa kullanılmıştır. Çalışmaların en fazla yayınlandığı dergiler sırasıyla 42 makale ile Journal of Strength and Conditionıng Research, 36 makale ile The American Journal of Sports Medicine ve 33'er makale ile Journal of Athletic Training ve Medicine and Science in Sports and Exercise dergileridir. ABD ülke işbirlikteliklerinde kilit rol oynamıştır ve en fazla işbirliği 4'er yayın ile ABD-İran ve İspanya-Brezilya arasında olmuştur.

Anahtar Kelimeler: Güreş, bibliyometri, spor.

TÜRKİYE'DE HAMSİ BALIĞI ÜRETİM MİKTARININ YAPAY SİNİR AĞLARI VE BASİT HAREKETLİ ORTALAMA YÖNTEMLERİ İLE MODELLENMESİ

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ÖZET

Bu çalışmanın amacı Türkiye'de yıllara göre hamsi balığı üretim miktarının modelinin kurulması ve öngörü yapılmasında yapay sinir ağları (YSA) ve basit hareketli ortalama (BHO) yöntemleri kullanılarak üretim modellemesini saptamaktır.

Çalışma, 2000-2022 dönemine ait verilerinden oluşmuştur. YSA ve BHO geliştirilmesinde girdi parametresi olarak yıllar değişkeni, çıkış parametresi olarak üretim miktarı kullanılmıştır. YSA yönteminde aktivasyon fonksiyonu olarak Hiperbolik Tanjant Fonksiyonu kullanılmıştır.

Geliştirilen modelin etkinliği Hata Kareler Ortalaması (HKO) ve Ortalama Mutlak Hata (MAE) gibi uyum iyiliği istatistikleri ile belirlenmiştir. MSE değeri YSE ve BHO yöntemlerinde sırasıyla 799 020.596 ve 4 808 945 429.614; MAE değeri ise YSE ve BHO yöntemlerinde sırasıyla 452.352 ve 58 618.005 olarak bulunmuştur. YSA ve BHO karşılaştırıldığında, en küçük HKO ve MAE değerlerini veren YSA yöntemi daha iyi sonuçlar vermiştir.

YSA'na göre yapılan öngörü sonucunda hamsi balığı üretiminin 2023-2027 döneminde inişli çıkışlı seyir içinde olacağını göstermiştir. 2023 yılında hamsi balığı üretim miktarı biraz artışa geçerek 128062 ton olacağı, 2024 yılında biraz düşüşe geçerek 120963 ton olacağı ve 2025 yılında düşüşün devam edeceği beklenmektedir. Ancak 2026'da hamsi üretiminin yükselişe geçerek 147177 ton olacağı, 2027 yılında ise tekrar düşeşe geçerek 107202 ton olacağı beklenmektedir. YSA yönteminin üretim modellemesinde kullanımının uygun sonuçlar verdiği önerilebilir.

Anahtar Kelimeler: Yapay sinir ağları, hareketli ortalama, hamsi, üretim.

İNŞAAT SEKTÖRÜNDE İŞ KAZALARINA YOL AÇAN RİSKLERİN RESTORASYON İŞLERİ ÖZELİNDE İNCELENMESİ

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ÖZET

Vücut bütünlüğünü ruhen ya da bedenen engelli hâle getiren veya ölüme sebebiyet veren tanımı ile iş kazaları hemen her sektörde karşımıza çıktığı gibi ülkemizin lokomotif sektörü olan inşaat faaliyet alanında da ciddi sayılara ulaştığı bilinmektedir. İnşaat sektöründe yer alan risklerin bir çoğu restorasyon işlerinde de karşımıza çıkmaktadır. Ancak nesilden nesile aktarılan tarihi mekanların restorasyon faaliyetlerinde, mekanların yapılarını bozmadan iş kazası tedbirlerinin alınması, alınan tedbirleri uygulanması noktasında bazı zorlukları ortaya çıkarmıştır. Yine bazı mekanlarda restorasyon faaliyetleri devam ederken turizm faaliyetlerine ara verilmemesi iş kazaları için ilave riskler oluşturduğunu da göstermiştir. Özellikle belli dönemlere ait eserlerde kullanılan yapı malzemelerinin asbest gibi restorasyon işine ait temel riskler arasında olduğu tespit edilmiştir. Bu çalışmada restorasyon faaliyetlerinde karşılaşılacak iş kazası riskler ile her türlü inşaat faaliyetlerinde karşılaşılacak riskleri karşılaştırmalı ele alınarak iki iş arasındaki temel farklar saptanmaya çalışılmıştır. Bacasız sanayi olarak tanımlanan turizm sektörünün restorasyon çalışmaları kapsamında sekteye uğramadan devam ettirilmesi ve restorasyon çalışmalarındaki risklerin azaltılarak kültürel yapıların nesillere aktarılması için mevcut iş güvenliğine tedbirlerine ek olarak ilave tedbir alınması ve sahada uygulanması önem arz etmektedir.

Anahtar Kelimeler : İnşaat, Restorasyon, Risk, İş kazası

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ÇAPRAZ LAMİNE AHŞAP Levhaların (CLT) ara katmanına UYGULANAN PERFORASYON İŞLEMİNİN levhaların SES YUTMA KATSAYISI DEĞERLERİNE ETKİSİNİN İNCELENMESİ

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ÖZET

Yapılan çalışmada katman kalınlıkları 17 mm ve 3 katman halinde oluşturulan 51 mm kalınlığındaki göknar (*Abies sp. L*) ve meşe (*Quercus L.*) odunlarından elde edilen çapraz lamine ahşap levhaların (CLT) ara katmanlarına uygulanan %10 ve %20 oranlarındaki perforasyon işleminin ses yutma katsayılarına etkileri araştırılmıştır. Yapılan deneylerin sonucuna göre 3 katmanlı göknar odunlarından üretilen çapraz lamine ahşap levhaların ses yutma katsayılarının 3 katmanlı meşe odunlarından üretilen çapraz lamine ahşap levhalara göre daha yüksek olduğu, perforasyon oranlarının ses yutma katsayılarına etkilerinde ise anlamlı bir farkın olmadığı belirlenmiştir. Frekans seviyelerine göre ise çapraz lamine ahşap levhaların ses yutma katsayılarında anlamlı bir farkın olduğu tespit edilmiştir. Çalışma sonucuna göre yapısal ahşap uygulamalarda kullanılan çapraz lamine ahşap levhaların (CLT) ses yutma katsayılarının geliştirilmesi için bu çalışmadaki perforasyon oranlarından daha yüksek oranlarda perforasyon işlemlerinin uygulanması gerektiği ve farklı ağaç türleri ile oluşturulacak çapraz lamine ahşap levhaların da ses yutum katsayılarının belirleme çalışmalarının yapılarak literatüre ve sektöre kazandırılması önem arz etmektedir.

Anahtar Kelimeler: Ahşap Esaslı Paneller, Çapraz Lamine Ahşap, Ses Yutum Katsayısı

ISPARTA-YALVAÇ'IN TARİHİ MİRASI: GELENEKSEL YALVAÇ EVLERİNDE TAVAN KAPLAMALARI

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ÖZET

Geleneksel Türk evi; Türk insanının orta Asya'dan taşıyıp getirdiği kültürel nitelikleri üzerinde taşıyan bir konut türüdür. Türk evleri zamanla büyük değişimler geçirmiş ve Osmanlı devletinin kurulmasıyla başlayan geleneksel Türk evlerindeki gelişmeler 20. Yy ortalarına kadar devam etmiştir. Günümüzde artık geleneksel Türk evleri inşa edilmektedir. Eskiden kalan geleneksel Türk evler ise artık zamana yenik düşerek yok olmaya başlamışlardır. Bu çalışmada Türkiye'deki 22 (Cittaslow) sakin şehirler den biri olan Isparta-yalvaç ilçesinde bulunan geleneksel yalvaç evlerinin oda tavanlarının biçim, yapım şekli ve kullanılan malzemeler açısından incelenerek zamana yenik düşmeden önce literatüre kazandırılmaları amaçlanmıştır. İncelemeye konu olan yalvaç evlerinde geleneksel Türk evi özelliği taşıyanlar ve içerisine girilip araştırabilenler seçilmiştir. İnceleme yaparken fotoğraf çekimi, geleneksel yalvaç evlinde üst katta bulunan odaların oda tavan çizimleri yapılmış ve gözlem yapma yöntemleriyle yalvaç evlerinin oda tavanları incelenmiştir. İncelen ilen geleneksel yalvaç evlerinde oda tavanlarının, yalın tavan kaplaması ve çıtalı tavan kaplaması konstrüksiyonunda yapıldıkları tespit edilmiştir. Araştırmaya konu olan Yalvaç evlerinden iki tanesinin tavan kaplamalarında yıldız şeklinde ve sekizgen şeklinde geometrik formlara sahip olduğu tespit edilmiştir. Oda tavanlarında kullanılan ahşap malzememe türleri çam, kavak ve söğüt ağacı olduğu tespit edilmiştir. Oda tavan şekillerinin çizimleri yapılarak literatüre kazandırılmıştır. Geleneksel yalvaç evlerinde, içerisinde yaşanılmayan evlerde deformasyonun yoğun bir şekilde olduğu görülmüştür.

Anahtar Kelimeler : Türk evi, Yalvaç, Oda, Tavan kaplaması

Bu çalışma birinci sırada yer alan yazar(ın) GELENEKSEL ISPARTA-YALVAÇ TÜRK EVLERİNİN İNCE YAPI ELEMANLARININ ANALİZİ tezinden üretilmiştir.

CONFERENCE BOOK ISBN NO. 978-625-6830-44-8

BEHAVIORAL ANALYSIS OF TEAM MEMBERS IN VIRTUAL ORGANIZATION BASED ON TRUST DIMENSION AND LEARNING

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Abstract:

Trust management and Reputation models are becoming integral part of Internet based applications such as CSCW, E-commerce and Grid Computing. Also the trust dimension is a significant social structure and key to social relations within a collaborative community. Collaborative Decision Making (CDM) is a difficult task in the context of distributed environment (information across different geographical locations) and multidisciplinary decisions are involved such as Virtual Organization (VO). To aid team decision making in VO, Decision Support System and social network analysis approaches are integrated. In such situations social learning helps an organization in terms of relationship, team formation, partner selection etc. In this paper we focus on trust learning. Trust learning is an important activity in terms of information exchange, negotiation, collaboration and trust assessment for cooperation among virtual team members. In this paper we have proposed a reinforcement learning which enhances the trust decision making capability of interacting agents during collaboration in problem solving activity. Trust computational model with learning that we present is adapted for best alternate selection of new project in the organization. We verify our model in a multi-agent simulation where the agents in the community learn to identify trustworthy members, inconsistent behavior and conflicting behavior of agents.

Keywords: Collaborative Decision making, Trust, Multi Agent System (MAS), Bayesian Network, Reinforcement Learning.

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IMPROVED AUTOMATED CLASSIFICATION OF ALCOHOLICS AND NON-ALCOHOLICS

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Abstract:

In this paper, several improvements are proposed to previous work of automated classification of alcoholics and nonalcoholics. In the previous paper, multiplayer-perceptron neural network classifying energy of gamma band Visual Evoked Potential (VEP) signals gave the best classification performance using 800 VEP signals from 10 alcoholics and 10 non-alcoholics. Here, the dataset is extended to include 3560 VEP signals from 102 subjects: 62 alcoholics and 40 non-alcoholics. Three modifications are introduced to improve the classification performance: i) increasing the gamma band spectral range by increasing the pass-band width of the used filter ii) the use of Multiple Signal Classification algorithm to obtain the power of the dominant frequency in gamma band VEP signals as features and iii) the use of the simple but effective knearest neighbour classifier. To validate that these two modifications do give improved performance, a 10-fold cross validation classification (CVC) scheme is used. Repeat experiments of the previously used methodology for the extended dataset are performed here and improvement from 94.49% to 98.71% in maximum averaged CVC accuracy is obtained using the modifications. This latest results show that VEP based classification of alcoholics is worth exploring further for system development.

Keywords: Alcoholic, Multilayer-perceptron, Nearest neighbour, Gamma band, MUSIC, Visual evoked potential.

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RHETORICAL COMMUNICATION IN THE COGSCI DISCOURSE COMMUNITY: THE COGNITIVE NEUROSCIENCES (2004) IN THE CONTEXT OF SCIENTIFIC DISSEMINATION

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Abstract:

In recent years linguistic research has turned increasing attention to covert/overt strategies to modulate authorial stance and positioning in scientific texts, and to the recipients' response. This study discussed some theoretical implications of the use of rhetoric in scientific communication and analysed qualitative data from the authoritative The Cognitive Neurosciences III (2004) volume. Its genre-identity, status and readability were considered, in the social interactive context of contemporary disciplinary discourses – in their polyphony of traditional and new, emerging genres. Evidence was given of the ways its famous authors negotiate and shape knowledge and research results – explicitly appraising team work and promoting faith in the fast-paced progress of Cognitive Neuroscience, also through experiential metaphors – by presenting a set of examples, ordered according to their dominant rhetorical quality.

Keywords: Appraisal, disciplinary discourses, experientialmetaphors, genre, identity, knowledge, readability, rhetoric, strategies, theoretical implications.

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MORAL REASONING AND BEHAVIOUR IN ADULTHOOD

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Abstract:

This study aimed at assessing whether and to what extent moral judgment and behaviour were: 1. situation-dependent; 2. selectively dependent on cognitive and affective components; 3. influenced by gender and age; 4. reciprocally congruent. In order to achieve these aims, four different types of moral dilemmas were construed and five types of thinking were presented for each of them – representing five possible ways to evaluate the situation. The judgment criteria included selfishness, altruism, sense of justice, and the conflict between selfishness and the two moral issues. The participants were 250 unpaid volunteers (50% male; 50% female) belonging to two age-groups: young people and adults. The study entailed a 2 (gender) x 2 (age-group) x 5 (type of thinking) x 4 (situation) mixed design: the first two variables were betweensubjects, the others were within-subjects. Results have shown that: 1. moral judgment and behaviour are at least partially affected by the type of situations and by interpersonal variables such as gender and age; 2. moral reasoning depends in a similar manner on cognitive and affective factors; 3. there is not a gender polarity between the ethic of justice and the ethic of cure/ altruism; 4. moral reasoning and behavior are perceived as reciprocally congruent even though their congruence decreases with a more objective assessment. Such results were discussed in the light of contrasting theories on morality.

Keywords: Contextual-pragmatic approach to morality, ethic ofcare, ethic of justice, Kohlbergian approach, moral behaviour, moralreasoning.

CONFERENCE BOOK ISBN NO. 978-625-6830-44-8

A COGNITIVE MODEL FOR FREQUENCY SIGNAL CLASSIFICATION

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Abstract:

This article presents the development of a neural network cognitive model for the classification and detection of different frequency signals. The basic structure of the implemented neural network was inspired on the perception process that humans generally make in order to visually distinguish between high and low frequency signals. It is based on the dynamic neural network concept, with delays. A special two-layer feedforward neural net structure was successfully implemented, trained and validated, to achieve minimum target error. Training confirmed that this neural net structure descents and converges to a human perception classification solution, even when far away from the target.

Keywords: Neural Networks, Signal Classification, Adaptative Filters, Cognitive Neuroscience

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PROBABILITY AND INSTRUCTION EFFECTS IN SYLLOGISTIC CONDITIONAL REASONING

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Abstract:

The main aim of this study was to examine whether people understand indicative conditionals on the basis of syntactic factors or on the basis of subjective conditional probability. The second aim was to investigate whether the conditional probability of q given p depends on the antecedent and consequent sizes or derives from inductive processes leading to establish a link of plausible cooccurrence between events semantically or experientially associated. These competing hypotheses have been tested through a 3 x 2 x 2 x 2 mixed design involving the manipulation of four variables: type of instructions (“Consider the following statement to be true", “Read the following statement" and condition with no conditional statement); antecedent size (high/low); consequent size (high/low); statement probability (high/low). The first variable was between-subjects, the others were within-subjects. The inferences investigated were Modus Ponens and Modus Tollens. Ninety undergraduates of the Second University of Naples, without any prior knowledge of logic or conditional reasoning, participated in this study. Results suggest that people understand conditionals in a syntactic way rather than in a probabilistic way, even though the perception of the conditional probability of q given p is at least partially involved in the conditionals- comprehension. They also showed that, in presence of a conditional syllogism, inferences are not affected by the antecedent or consequent sizes. From a theoretical point of view these findings suggest that it would be inappropriate to abandon the idea that conditionals are naturally understood in a syntactic way for the idea that they are understood in a probabilistic way.

Keywords: Conditionals, conditional probability, conditional syllogism, inferential task.

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AN INVESTIGATION INTO KANJI CHARACTER DISCRIMINATION PROCESS FROM EEG SIGNALS

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Abstract:

The frontal area in the brain is known to be involved in behavioral judgement. Because a Kanji character can be discriminated visually and linguistically from other characters, in Kanji character discrimination, we hypothesized that frontal event-related potential (ERP) waveforms reflect two discrimination processes in separate time periods: one based on visual analysis and the other based on lexcical access. To examine this hypothesis, we recorded ERPs while performing a Kanji lexical decision task. In this task, either a known Kanji character, an unknown Kanji character or a symbol was presented and the subject had to report if the presented character was a known Kanji character for the subject or not. The same response was required for unknown Kanji trials and symbol trials. As a preprocessing of signals, we examined the performance of a method using independent component analysis for artifact rejection and found it was effective. Therefore we used it. In the ERP results, there were two time periods in which the frontal ERP wavefoms were significantly different betweeen the unknown Kanji trials and the symbol trials: around 170ms and around 300ms after stimulus onset. This result supported our hypothesis. In addition, the result suggests that Kanji character lexical access may be fully completed by around 260ms after stimulus onset.

Keywords: Character discrimination, Event-related Potential, IndependentComponent Analysis, Kanji, Lexical access.

CONFERENCE BOOK ISBN NO. 978-625-6830-44-8

REFORM-ORIENTED TEACHING OF INTRODUCTORY STATISTICS IN THE HEALTH, SOCIAL AND BEHAVIORAL SCIENCES – HISTORICAL CONTEXT AND RATIONALE

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Abstract:

There is widespread emphasis on reform in the teaching of introductory statistics at the college level. Underpinning this reform is a consensus among educators and practitioners that traditional curricular materials and pedagogical strategies have not been effective in promoting statistical literacy, a competency that is becoming increasingly necessary for effective decision-making and evidence-based practice. This paper explains the historical context of, and rationale for reform-oriented teaching of introductory statistics (at the college level) in the health, social and behavioral sciences (evidence-based disciplines). A firm understanding and appreciation of the basis for change in pedagogical approach is important, in order to facilitate commitment to reform, consensus building on appropriate strategies, and adoption and maintenance of best practices. In essence, reform-oriented pedagogy, in this context, is a function of the interaction among content, pedagogy, technology, and assessment. The challenge is to create an appropriate balance among these domains.

Keywords: Reform-oriented, reform, introductory statistics, health, behavioral sciences, evidence-based, psychology, teaching, learning.

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A REVIEW ON APPLICATION OF CHITOSAN AS A NATURAL ANTIMICROBIAL

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Abstract:

In recent years application of natural antimicrobials instead of conventional ones, due to their hazardous effects on health, has got serious attentions. On the basis of the results of different studies, chitosan, a natural bio-degradable and non-toxic biopolysaccharide derived from chitin, has potential to be used as a natural antimicrobial. Chitosan has exhibited high antimicrobial activity against a wide variety of pathogenic and spoilage microorganisms, including fungi, and Gram-positive and Gramnegative bacteria. The antimicrobial action is influenced by intrinsic factors such as the type of chitosan, the degree of chitosan polymerization and extrinsic factors such as the microbial organism, the environmental conditions and presence of the other components. The use of chitosan in food systems should be based on sufficient knowledge of the complex mechanisms of its antimicrobial mode of action. In this article we review a number of studies on the investigation of chitosan antimicrobial properties and application of them in culture and food mediums.

Keywords: Antimicrobial, Chitosan, Preservative

CONFERENCE BOOK ISBN NO. 978-625-6830-44-8

NEUROGENIC POTENTIAL OF CLITORIA TERNATEA AQUEOUS ROOT EXTRACT–A BASIS FOR ENHANCING LEARNING AND MEMORY

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Abstract:

The neurogenic potential of many herbal extracts used in Indian medicine is hitherto unknown. Extracts derived from Clitoria ternatea Linn have been used in Indian Ayurvedic system of medicine as an ingredient of “Medhya rasayana", consumed for improving memory and longevity in humans and also in treatment of various neurological disorders. Our earlier experimental studies with oral intubation of Clitoria ternatea aqueous root extract (CTR) had shown significant enhancement of learning and memory in postnatal and young adult Wistar rats. The present study was designed to elucidate the in vitro effects of 200ng/ml of CTR on proliferation, differentiation and growth of anterior subventricular zone neural stem cells (aSVZ NSC-s) derived from prenatal and postnatal rat pups. Results show significant increase in proliferation and growth of neurospheres and increase in the yield of differentiated neurons of aSVZ neural precursor cells (aSVZNPC-s) at 7 days in vitro when treated with 200ng/ml of CTR as compared to age matched control. Results indicate that CTR has growth promoting neurogenic effect on aSVZ neural stem cells and their survival similar to neurotrophic factors like Survivin, Neuregulin 1, FGF-2, BDNF possibly the basis for enhanced learning and memory.

Keywords: Anterior subventricular zone (aSVZ) neural stemcell, Clitoria ternatea, Learning and memory, Neurogenesis.

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FORMULATION AND EVALUATION OF VAGINAL SUPPOSITORIES CONTAINING LACTOBACILLUS

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Abstract:

The objective of this study was to develop vaginal suppository containing lactobacillus. Four kinds of vaginal suppositories containing Lactobacillus paracasei HL32 were formulated: 1) a conventional suppository with Witepsol H-15 as a base, 2) a conventional suppository with mixed polyethylene glycols (PEGs) as a base, 3) a hollow-type suppository with Witepsol H-15 as a base and 4) a hollow-type suppository with mixed PEGs as a base. The release studies demonstrated that the hollow-type suppository with mixed PEGs as the base gave the highest release of L. paracasei HL32 and was microbiological stable after storage at 2- 8°C over the period of 3 months.

Keywords: Lactobacillus paracasei HL32, vaginal suppository, release study, hollow-type, viability.

DATA MINING CLASSIFICATION METHODS APPLIED IN DRUG DESIGN

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Abstract:

Data mining incorporates a group of statistical methods used to analyze a set of information, or a data set. It operates with models and algorithms, which are powerful tools with the great potential. They can help people to understand the patterns in certain chunk of information so it is obvious that the data mining tools have a wide area of applications. For example in the theoretical chemistry data mining tools can be used to predict moleculeproperties or improve computer-assisted drug design. Classification analysis is one of the major data mining methodologies. The aim of thecontribution is to create a classification model, which would be able to deal with a huge data set with high accuracy. For this purpose logistic regression, Bayesian logistic regression and random forest models were built using R software. TheBayesian logistic regression in Latent GOLD software was created as well. These classification methods belong to supervised learning methods. It was necessary to reduce data matrix dimension before construct models and thus the factor analysis (FA) was used. Those models were applied to predict the biological activity of molecules, potential new drug candidates.

Keywords: data mining, classification, drug design, QSAR

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NTIBACTERIAL ACTIVITY OF ETHANOL EXTRACT FROM SOME THAI MEDICINAL PLANTS AGAINST CAMPYLOBACTER JEJUNI

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Abstract:

In this study, the forty Thai medicinal plants were used to screen the antibacterial activity against Campylobacter jejuni. Crude 95% ethanolic extracts of each plant were prepared. Antibacterial activity was investigated by the disc diffusion assay, and MICs and MBCs were determined by broth microdilution. The results of antibacterial screening showed that five plants have activity against C.jejuni including Adenanthera pavonina L., Moringa oleifera Lam., Annona squamosa L., Hibiscus sabdariffa L. and Eupotorium odortum L. The extraction of A. pavonina L. and A. squamosa L. produced an outstanding against C. jejuni, inhibiting growth at 62.5-125 and 250-500 μg/mL, respectively. The MBCs of two extracts were just 4-fold higher than MICs against C. jejuni, suggesting the extracts are bactericidal against this species. These results indicate that A. pavonina and A. squamosa could potentially be used in modern applications aimed at treatment or prevention of foodborne disease from C. jejuni.

Keywords: Antibacterial activity, Thai medicinal plants, Campylobacter jejuni

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PSO-BASED PLANNING OF DISTRIBUTION SYSTEMS WITH DISTRIBUTED GENERATIONS

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Industrial Engineering Department, Amirkabir University of Technology, Tehran, Iran

Abstract:

This paper presents a multi-objective formulation for optimal siting and sizing of distributed generation (DG) resources in distribution systems in order to minimize the cost of power losses and energy not supplied. The implemented technique is based on particle swarm optimization (PSO) and weight method that employed to obtain the best compromise between these costs. Simulation results on 33-bus distribution test system are presented to demonstrate the effectiveness of the proposed procedure.

Keywords: Distributed generation, distribution networks, particle swarm optimization, reliability, weight method

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THREE-PHASE HIGH FREQUENCY AC CONVERSION CIRCUIT WITH DUAL MODE PWM/PDM CONTROL STRATEGY FOR HIGH POWER IH APPLICATIONS

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Abstract:

This paper presents a novel three-phase utility frequency to high frequency soft switching power conversion circuit with dual mode pulse width modulation and pulse density modulation for high power induction heating applications as melting of steel and non ferrous metals, annealing of metals, surface hardening of steel and cast iron work pieces and hot water producers, steamers and super heated steamers. This high frequency power conversion circuit can operate from three-phase systems to produce high current for high power induction heating applications under the principles of ZVS and it can regulate its ac output power from the rated value to a low power level. A dual mode modulation control scheme based on high frequency PWM in synchronization with the utility frequency positive and negative half cycles for the proposed high frequency conversion circuit and utility frequency pulse density modulation is produced to extend its soft switching operating range for wide ac output power regulation. A dual packs heat exchanger assembly is designed to be used in consumer and industrial fluid pipeline systems and it is proved to be suitable for the hot water, steam and super heated steam producers. Experiment and simulation results are given in this paper to verify the operation principles of the proposed ac conversion circuit and to evaluate its power regulation and conversion efficiency. Also, the paper presents a mutual coupling model of the induction heating load instead of equivalent transformer circuit model.

Keywords: Induction heating, three-phase, conversion circuit, pulse width modulation, pulse density modulation, high frequency, soft switching.

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A NEW MAXIMUM POWER POINT TRACKING FOR PHOTOVOLTAIC SYSTEMS

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Abstract:

In this paper a new maximum power point tracking algorithm for photovoltaic arrays is proposed. The algorithm detects the maximum power point of the PV. The computed maximum power is used as a reference value (set point) of the control system. ON/OFF power controller with hysteresis band is used to control the operation of a Buck chopper such that the PV module always operates at its maximum power computed from the MPPT algorithm. The major difference between the proposed algorithm and other techniques is that the proposed algorithm is used to control directly the power drawn from the PV. The proposed MPPT has several advantages: simplicity, high convergence speed, and independent on PV array characteristics. The algorithm is tested under various operating conditions. The obtained results have proven that the MPP is tracked even under sudden change of irradiation level.

Keywords: Photovoltaic, maximum power point tracking, MPPT.

CONFERENCE BOOK ISBN NO. 978-625-6830-44-8

IMPULSE RESPONSE SHORTENING FOR DISCRETE MULTITONE TRANSCEIVERS USING CONVEX OPTIMIZATION APPROACH

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Abstract:

In this paper we propose a new criterion for solving the problem of channel shortening in multi-carrier systems. In a discrete multitone receiver, a time-domain equalizer (TEQ) reduces intersymbol interference (ISI) by shortening the effective duration of the channel impulse response. Minimum mean square error (MMSE) method for TEQ does not give satisfactory results. In [1] a new criterion for partially equalizing severe ISI channels to reduce the cyclic prefix overhead of the discrete multitone transceiver (DMT), assuming a fixed transmission bandwidth, is introduced. Due to specific constrained (unit morm constraint on the target impulse response (TIR)) in their method, the freedom to choose optimum vector (TIR) is reduced. Better results can be obtained by avoiding the unit norm constraint on the target impulse response (TIR). In this paper we change the cost function proposed in [1] to the cost function of determining the maximum of a determinant subject to linear matrix inequality (LMI) and quadratic constraint and solve the resulting optimization problem. Usefulness of the proposed method is shown with the help of simulations.

Keywords: Equalizer, target impulse response, convex optimization, matrix inequality.

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HYBRID ASSOCIATION CONTROL SCHEME AND LOAD BALANCING IN WIRELESS LANS

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Abstract:

This paper presents a hybrid association control scheme that can maintain load balancing among access points in the wireless LANs and can satisfy the quality of service requirements of the multimedia traffic applications. The proposed model is mathematically described as a linear programming model. Simulation study and analysis were conducted in order to demonstrate the performance of the proposed hybrid load balancing and association control scheme. Simulation results shows that the proposed scheme outperforms the other schemes in term of the percentage of blocking and the quality of the data transfer rate providing to the multimedia and real-time applications.

Keywords: Association control, Load balancing, Wireless LANs

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ESTIMATION OF BROADCAST PROBABILITY IN WIRELESS ADHOC NETWORKS

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Abstract:

Most routing protocols (DSR, AODV etc.) that have been designed for wireless adhoc networks incorporate the broadcasting operation in their route discovery scheme. Probabilistic broadcasting techniques have been developed to optimize the broadcast operation which is otherwise very expensive in terms of the redundancy and the traffic it generates. In this paper we have explored percolation theory to gain a different perspective on probabilistic broadcasting schemes which have been actively researched in the recent years. This theory has helped us estimate the value of broadcast probability in a wireless adhoc network as a function of the size of the network. We also show that, operating at those optimal values of broadcast probability there is at least 25-30% reduction in packet regeneration during successful broadcasting.

Keywords: Crossover length, Percolation, Probabilistic broadcast, Wireless adhoc networks

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THEORETICAL ANALYSIS OF CAPACITIES IN DYNAMIC SPATIAL MULTIPLEXING MIMO SYSTEMS

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Abstract:

In this paper, we investigate the study of techniques for scheduling users for resource allocation in the case of multiple input and multiple output (MIMO) packet transmission systems. In these systems, transmit antennas are assigned to one user or dynamically to different users using spatial multiplexing. The allocation of all transmit antennas to one user cannot take full advantages of multi-user diversity. Therefore, we developed the case when resources are allocated dynamically. At each time slot users have to feed back their channel information on an uplink feedback channel. Channel information considered available in the schedulers is the zero forcing (ZF) post detection signal to interference plus noise ratio. Our analysis study concerns the round robin and the opportunistic schemes. In this paper, we present an overview and a complete capacity analysis of these schemes. The main results in our study are to give an analytical form of system capacity using the ZF receiver at the user terminal. Simulations have been carried out to validate all proposed analytical solutions and to compare the performance of these schemes.

Keywords: MIMO, scheduling, ZF receiver, spatial multiplexing, round robin scheduling, opportunistic.

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FIBER OPTIC SENSORS

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Abstract:

Fiber optic sensor technology offers the possibility of sensing different parameters like strain, temperature, pressure in harsh environment and remote locations. these kinds of sensors modulates some features of the light wave in an optical fiber such an intensity and phase or use optical fiber as a medium for transmitting the measurement information. The advantages of fiber optic sensors in contrast to conventional electrical ones make them popular in different applications and now a day they consider as a key component in improving industrial processes, quality control systems, medical diagnostics, and preventing and controlling general process abnormalities. This paper is an introduction to fiber optic sensor technology and some of the applications that make this branch of optic technology, which is still in its early infancy, an interesting field.

Keywords: Fiber optic sensors, distributed sensors, sensorapplication, crack sensor.

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PROGRAMMING LANGUAGE EXTENSION USING STRUCTURED QUERY LANGUAGE FOR DATABASE ACCESS

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Abstract:

Relational databases constitute a very vital tool for the effective management and administration of both personal and organizational data. Data access ranges from a single user database management software to a more complex distributed server system. This paper intends to appraise the use a programming language extension like structured query language (SQL) to establish links to a relational database (Microsoft Access 2013) using Visual C++ 9 programming language environment. The methodology used involves the creation of tables to form a database using Microsoft Access 2013, which is Object Linking and Embedding (OLE) database compliant. The SQL command is used to query the tables in the database for easy extraction of expected records inside the visual C++ environment. The findings of this paper reveal that records can easily be accessed and manipulated to filter exactly what the user wants, such as retrieval of records with specified criteria, updating of records, and deletion of part or the whole records in a table.

Keywords: Data access, database, database management system, OLE, programming language, records, relational database, software, SQL, table.

CONFERENCE BOOK ISBN NO. 978-625-6830-44-8

AUTOMATED HEART SOUND CLASSIFICATION FROM UNSEGMENTED PHONOCARDIOGRAM SIGNALS USING TIME FREQUENCY FEATURES

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Abstract:

Cardiologists perform cardiac auscultation to detect abnormalities in heart sounds. Since accurate auscultation is a crucial first step in screening patients with heart diseases, there is a need to develop computer-aided detection/diagnosis (CAD) systems to assist cardiologists in interpreting heart sounds and provide second opinions. In this paper different algorithms are implemented for automated heart sound classification using unsegmented phonocardiogram (PCG) signals. Support vector machine (SVM), artificial neural network (ANN) and cartesian genetic programming evolved artificial neural network (CGPANN) without the application of any segmentation algorithm has been explored in this study. The signals are first pre-processed to remove any unwanted frequencies. Both time and frequency domain features are then extracted for training the different models. The different algorithms are tested in multiple scenarios and their strengths and weaknesses are discussed. Results indicate that SVM outperforms the rest with an accuracy of 73.64%.

Keywords: Pattern recognition, machine learning, computer aided diagnosis, heart sound classification, and feature extraction.

ADAPTION MODEL FOR BUILDING AGILE PRONUNCIATION DICTIONARIES USING PHONEMIC DISTANCE MEASUREMENTS

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Abstract:

Where human beings can easily learn and adopt pronunciation variations, machines need training before put into use. Also humans keep minimum vocabulary and their pronunciation variations are stored in front-end of their memory for ready reference, while machines keep the entire pronunciation dictionary for ready reference. Supervised methods are used for preparation of pronunciation dictionaries which take large amounts of manual effort, cost, time and are not suitable for real time use. This paper presents an unsupervised adaptation model for building agile and dynamic pronunciation dictionaries online. These methods mimic human approach in learning the new pronunciations in real time. A new algorithm for measuring sound distances called Dynamic Phone Warping is presented and tested. Performance of the system is measured using an adaptation model and the precision metrics is found to be better than 86 percent.

Keywords: Pronunciation variations, dynamic programming, machine learning, natural language processing.

OPTIMIZED AND SECURED DIGITAL WATERMARKING USING ENTROPY, CHAOTIC GRID MAP AND ITS PERFORMANCE ANALYSIS

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Abstract:

This paper presents an optimized, robust, and secured watermarking technique. The methodology used in this work is the combination of entropy and chaotic grid map. The proposed methodology incorporates Discrete Cosine Transform (DCT) on the host image. To improve the imperceptibility of the method, the host image DCT blocks, where the watermark is to be embedded, are further optimized by considering the entropy of the blocks. Chaotic grid is used as a key to reorder the DCT blocks so that it will further increase security while selecting the watermark embedding locations and its sequence. Without a key, one cannot reveal the exact watermark from the watermarked image. The proposed method is implemented on four different images. It is concluded that the proposed method is giving better results in terms of imperceptibility measured through PSNR and found to be above 50. In order to prove the effectiveness of the method, the performance analysis is done after implementing different attacks on the watermarked images. It is found that the methodology is very strong against JPEG compression attack even with the quality parameter up to 15. The experimental results are confirming that the combination of entropy and chaotic grid map method is strong and secured to different image processing attacks.

Keywords: Digital watermarking, discrete cosine transform, chaotic grid map, entropy.

CONFERENCE BOOK ISBN NO. 978-625-6830-44-8

A DATASET OF PROGRAM EDUCATIONAL OBJECTIVES MAPPED TO ABET OUTCOMES: DATA CLEANSING, EXPLORATORY DATA ANALYSIS AND MODELING

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College of Computer Science and Information Systems, Najran University, Najran, Saudi Arabia and Faculty of Computer Science and Information Systems, Thamar University, Thamar, Yemen

Abstract:

Datasets or collections are becoming important assets by themselves and now they can be accepted as a primary intellectual output of a research. The quality and usage of the datasets depend mainly on the context under which they have been collected, processed, analyzed, validated, and interpreted. This paper aims to present a collection of program educational objectives mapped to student's outcomes collected from self-study reports prepared by 32 engineering programs accredited by ABET. The manual mapping (classification) of this data is a notoriously tedious, time consuming process. In addition, it requires experts in the area, which are mostly not available. It has been shown the operational settings under which the collection has been produced. The collection has been cleansed, preprocessed, some features have been selected and preliminary exploratory data analysis has been performed so as to illustrate the properties and usefulness of the collection. At the end, the collection has been benchmarked using nine of the most widely used supervised multiclass classification techniques (Binary Relevance, Label Powerset, Classifier Chains, Pruned Sets, Random k-label sets, Ensemble of Classifier Chains, Ensemble of Pruned Sets, Multi-Label k-Nearest Neighbors and Back-Propagation Multi-Label Learning). The techniques have been compared to each other using five well-known measurements (Accuracy, Hamming Loss, Micro-F, Macro-F, and Macro-F). The Ensemble of Classifier Chains and Ensemble of Pruned Sets have achieved encouraging performance compared to other experimented multi-label classification methods. The Classifier Chains method has shown the worst performance. To recap, the benchmark has achieved promising results by utilizing preliminary exploratory data analysis performed on the collection, proposing new trends for research and providing a baseline for future studies.

Keywords: Benchmark collection, program educational objectives, student outcomes, ABET, Accreditation, machine learning, supervised multiclass classification, text mining.

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A ROBUST OPTIMIZATION MODEL FOR THE SINGLE-DEPOT CAPACITATED LOCATION- ROUTING PROBLEM

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Abstract:

In this paper, the single-depot capacitated location-routing problem under uncertainty is presented. The problem aims to find the optimal location of a single depot and the routing of vehicles to serve the customers when the parameters may change under different circumstances. This problem has many applications, especially in the area of supply chain management and distribution systems. To get closer to real-world situations, travel time of vehicles, the fixed cost of vehicles usage and customers' demand are considered as a source of uncertainty. A combined approach including robust optimization and stochastic programming was presented to deal with the uncertainty in the problem at hand. For this purpose, a mixed integer programming model is developed and a heuristic algorithm based on Variable Neighborhood Search(VNS) is presented to solve the model. Finally, the computational results are presented and future research directions are discussed.

Keywords: Location-routing problem, robust optimization, Stochastic Programming, variable neighborhood search.

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IMAGE DEHAZING USING DARK CHANNEL PRIOR AND FAST GUIDED FILTER IN DAUBECHIES LIFTING WAVELET TRANSFORM DOMAIN

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Abstract:

In this paper a method for image dehazing is proposed in lifting wavelet transform domain. Lifting Daubechies (D4) wavelet has been used to obtain the approximate image and detail images. As the haze is contained in low frequency part, only the approximate image is used for further processing. This region is processed by dehazing algorithm based on dark channel prior (DCP). The dehazed approximate image is then recombined with the detail images using inverse lifting wavelet transform. Implementation of lifting wavelet transform has the advantage of auxiliary memory saving, fast implementation and simplicity. Also, the proposed method deals with near white scene problem, blue horizon issue and localized light sources in a way to enhance image quality and makes the algorithm robust. Simulation results present improvement in terms of visual quality, parameters such as root mean square (RMS) contrast, structural similarity index (SSIM), entropy and execution time.

Keywords: Dark channel prior, image dehazing, lifting wavelet transform.

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BREAST SKIN-LINE ESTIMATION AND BREAST SEGMENTATION IN MAMMOGRAMS USING FAST-MARCHING METHOD

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Abstract:

Breast skin-line estimation and breast segmentation is an important pre-process in mammogram image processing and computer-aided diagnosis of breast cancer. Limiting the area to be processed into a specific target region in an image would increase the accuracy and efficiency of processing algorithms. In this paper we are presenting a new algorithm for estimating skin-line and breast segmentation using fast marching algorithm. Fast marching is a partial-differential equation based numerical technique to track evolution of interfaces. We have introduced some modifications to the traditional fast marching method, specifically to improve the accuracy of skin-line estimation and breast tissue segmentation. Proposed modifications ensure that the evolving front stops near the desired boundary. We have evaluated the performance of the algorithm by using 100 mammogram images taken from mini-MIAS database. The results obtained from the experimental evaluation indicate that this algorithm explains 98.6% of the ground truth breast region and accuracy of the segmentation is 99.1%. Also this algorithm is capable of partially-extracting nipple when it is available in the profile.

Keywords: Mammogram, fast marching method, mathematical morphology.

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SCATTERER DENSITY IN EDGE AND COHERENCE ENHANCING NONLINEAR ANISOTROPIC DIFFUSION FOR MEDICAL ULTRASOUND SPECKLE REDUCTION

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Abstract:

This paper proposes new enhancement models to the methods of nonlinear anisotropic diffusion to greatly reduce speckle and preserve image features in medical ultrasound images. By incorporating local physical characteristics of the image, in this case scatterer density, in addition to the gradient, into existing tensorbased image diffusion methods, we were able to greatly improve the performance of the existing filtering methods, namely edge enhancing (EE) and coherence enhancing (CE) diffusion. The new enhancement methods were tested using various ultrasound images, including phantom and some clinical images, to determine the amount of speckle reduction, edge, and coherence enhancements. Scatterer density weighted nonlinear anisotropic diffusion (SDWNAD) for ultrasound images consistently outperformed its traditional tensor-based counterparts that use gradient only to weight the diffusivity function. SDWNAD is shown to greatly reduce speckle noise while preserving image features as edges, orientation coherence, and scatterer density. SDWNAD superior performances over nonlinear coherent diffusion (NCD), speckle reducing anisotropic diffusion (SRAD), adaptive weighted median filter (AWMF), wavelet shrinkage (WS), and wavelet shrinkage with contrast enhancement (WSCE), make these methods ideal preprocessing steps for automatic segmentation in ultrasound imaging.

Keywords: Nonlinear anisotropic diffusion, ultrasound imaging, speckle reduction, scatterer density estimation, edge based enhancement, coherence enhancement.

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T-WAVE DETECTION BASED ON AN ADJUSTED WAVELET TRANSFORM MODULUS MAXIMA

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Abstract:

The method described in this paper deals with the problems of T-wave detection in an ECG. Determining the position of a T-wave is complicated due to the low amplitude, the ambiguous and changing form of the complex. A wavelet transform approach handles these complications therefore a method based on this concept was developed. In this way we developed a detection method that is able to detect T-waves with a sensitivity of 93% and a correct-detection ratio of 93% even with a serious amount of baseline drift and noise.

Keywords: ECG, Modulus Maxima Wavelet Transform, Performance, T-wave detection

CONFERENCE BOOK ISBN NO. 978-625-6830-44-8

BRIDGING THE MENTAL GAP BETWEEN CONVOLUTION APPROACH AND COMPARTMENTAL MODELING IN FUNCTIONAL IMAGING: TYPICAL EMBEDDING OF AN OPEN TWO-COMPARTMENT MODEL INTO THE SYSTEMS THEORY APPROACH OF INDICATOR DILUTION THEORY

Gesine Hellwig

Research campus Neuherberg near Munich, this investigation was supported in part by the German Cancer Aid (Deutsche Krebshilfe) under grant number 70–2323 and by the Helmholtz Society Strategy Fund

Abstract:

Functional imaging procedures for the non-invasive assessment of tissue microcirculation are highly requested, but require a mathematical approach describing the trans- and intercapillary passage of tracer particles. Up to now, two theoretical, for the moment different concepts have been established for tracer kinetic modeling of contrast agent transport in tissues: pharmacokinetic compartment models, which are usually written as coupled differential equations, and the indicator dilution theory, which can be generalized in accordance with the theory of lineartime- invariant (LTI) systems by using a convolution approach. Based on mathematical considerations, it can be shown that also in the case of an open two-compartment model well-known from functional imaging, the concentration-time course in tissue is given by a convolution, which allows a separation of the arterial input function from a system function being the impulse response function, summarizing the available information on tissue microcirculation. Due to this reason, it is possible to integrate the open two-compartment model into the system-theoretic concept of indicator dilution theory (IDT) and thus results known from IDT remain valid for the compartment approach. According to the long number of applications of compartmental analysis, even for a more general context similar solutions of the so-called forward problem can already be found in the extensively available appropriate literature of the seventies and early eighties. Nevertheless, to this day, within the field of biomedical imaging – not from the mathematical point of view – there seems to be a trench between both approaches, which the author would like to get over by exemplary analysis of the well-known model.

Keywords: Functional imaging, Tracer kinetic modeling, LTIsystem, Indicator dilution theory / convolution approach, Two-Compartment model.

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ANALYSIS OF MEDICAL DATA USING DATA MINING AND FORMAL CONCEPT ANALYSIS

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Abstract:

This paper focuses on analyzing medical diagnostic data using classification rules in data mining and context reduction in formal concept analysis. It helps in finding redundancies among the various medical examination tests used in diagnosis of a disease. Classification rules have been derived from positive and negative association rules using the Concept lattice structure of the Formal Concept Analysis. Context reduction technique given in Formal Concept Analysis along with classification rules has been used to find redundancies among the various medical examination tests. Also it finds out whether expensive medical tests can be replaced by some cheaper tests.

Keywords: Data Mining, Formal Concept Analysis, Medical Data, Negative Classification Rules.

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CASE BASED REASONING TECHNOLOGY FOR MEDICAL DIAGNOSIS

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Abstract:

Case based reasoning (CBR) methodology presents a foundation for a new technology of building intelligent computeraided diagnoses systems. This Technology directly addresses the problems found in the traditional Artificial Intelligence (AI) techniques, e.g. the problems of knowledge acquisition, remembering, robust and maintenance. This paper discusses the CBR methodology, the research issues and technical aspects of implementing intelligent medical diagnoses systems. Successful applications in cancer and heart diseases developed by Medical Informatics Research Group at Ain Shams University are also discussed.

Keywords: Medical Informatics, Computer-Aided MedicalDiagnoses, AI in Medicine, Case-Based Reasoning.

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DETECTION OF DIABETIC SYMPTOMS IN RETINA IMAGES USING ANALOG ALGORITHMS

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Abstract:

In this paper a class of analog algorithms based on the concept of Cellular Neural Network (CNN) is applied in some processing operations of some important medical images, namely retina images, for detecting various symptoms connected with diabetic retinopathy. Some specific processing tasks like morphological operations, linear filtering and thresholding are proposed, the corresponding template values are given and simulations on real retina images are provided.

Keywords: Diabetic retinopathy, pathology detection, cellular neural networks, analog algorithms.

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ARRIVING AT AN OPTIMUM VALUE OF TOLERANCE FACTOR FOR COMPRESSING MEDICAL IMAGES

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Abstract:

Medical imaging uses the advantage of digital technology in imaging and teleradiology. In teleradiology systems large amount of data is acquired, stored and transmitted. A major technology that may help to solve the problems associated with the massive data storage and data transfer capacity is data compression and decompression. There are many methods of image compression available. They are classified as lossless and lossy compression methods. In lossy compression method the decompressed image contains some distortion. Fractal image compression (FIC) is a lossy compression method. In fractal image compression an image is coded as a set of contractive transformations in a complete metric space. The set of contractive transformations is guaranteed to produce an approximation to the original image. In this paper FIC is achieved by PIFS using quadtree partitioning. PIFS is applied on different images like , Ultrasound, CT Scan, Angiogram, X-ray, Mammograms. In each modality approximately twenty images are considered and the average values of compression ratio and PSNR values are arrived. In this method of fractal encoding, the parameter, tolerance factor Tmax, is varied from 1 to 10, keeping the other standard parameters constant. For all modalities of images the compression ratio and Peak Signal to Noise Ratio (PSNR) are computed and studied. The quality of the decompressed image is arrived by PSNR values. From the results it is observed that the compression ratio increases with the tolerance factor and mammogram has the highest compression ratio. The quality of the image is not degraded upto an optimum value of tolerance factor, Tmax, equal to 8, because of the properties of fractal compression.

Keywords: Fractal image compression, IFS, PIFS, PSNR, Quadtree partitioning.

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