



## 2024 IEEE 4<sup>th</sup> International Maghreb Meeting of the conference on Sciences and Techniques of Automatic Control and Computer Engineering



# Conference Program



May 19 - 21, 2024 – Tripoli – LIBYA  
University of Tripoli

## Conference Location



<https://maps.app.goo.gl/2CwDXLvR4zhQt2a4A>



**WELCOME**

**Program Booklet**

**2024 IEEE**

**MI-STA2024**

**19-21 MAY - 2024**  
**University of Tripoli,**  
**Tripoli – Libya**

# Program of 4<sup>th</sup> IEEE MI-SAT 2024

	9:00 - 10:00	10:00-11:00	11:00-11:30	11:30-13:30			13:30-15:00	15:00-17:00		
Day	<i>Room 1</i>	<i>Room 1</i>	Coffee Break	Oral Session 1	<i>Room 1</i>	<b>Artificial and Computational Intelligence</b>	Lunch	Oral Session 2	<i>Room 1</i>	<b>Information Systems</b>
SUNDAY 19/5/2024	OPENING CEREMONY	Keynote #1 + Keynote # 2		<i>Room 2</i>	<b>Advanced Control System</b>	<i>Room 2</i>		<b>Networking and Communications</b>		
				<i>Room 3</i>	<b>Computer Networks and Cloud Computing</b>	<i>Room 3</i>		<b>Renewable Energy Conversion</b>		
				<i>Room 4</i>	<b>Tele-communication Engineering</b>	<i>Room 4</i>		<b>Signal and Image Processing</b>		
			MONDAY 20/5/2024	Keynote 3	Discussion Panel	Coffee Break	Oral Session 1	<i>Room 1</i>	<b>Security and Information Assurance</b>	Lunch
<i>Room 2</i>	<b>Power Distribution System</b>	<i>Room 2</i>					<b>Automatic Control Systems</b>			
<i>Room 3</i>	<b>Microwaves and antennas</b>	<i>Room 3</i>					<b>Database and Data Mining +Human Computer Interaction</b>			
<i>Room 4</i>	<b>Machine Learning</b>	<i>Room 4</i>					<b>Wireless/ Mobile Communication</b>			
TEUSDAY 21/5/2024	Oral Session 1	<i>Room 1</i>	<b>Artificial and Computational Intelligence</b>	Coffee Break	Keynote 4	CLOSING CEREMONY	<i>Room 2</i>	<b>Tele-Communication Engineering + Software Engineering</b>	<i>Room 3</i>	<b>Information Systems + Machine Learning</b>
<i>Room 4</i>	<b>Control in Power Electronics + Control of Robotic Systems</b>									

# **Keynote Speakers**



**Speaker1: Habib M. Kammoun**, IEEE Africa and Middle East Zone Representative, University of Sfax, Tunisia

**Talk Title: *Benefits of Publishing with IEEE***

The talk presents how to publish a technical paper with IEEE and the benefits of publishing research works, such as visibility, reputation, professional development, etc. IEEE Xplore continues to be the most cited publisher worldwide. The talk offers advice on everything from how the IEEE publishing process works to basic writing tips and submitting a manuscript.

**Biography:** Habib M. Kammoun received the Ph.D. degree in computer science from the National Engineering School of Sfax (ENIS), University of Sfax, Tunisia. He is head of the Computer Science Department, Faculty of Sciences, University of Sfax. He is a member of the Research Groups in Intelligent Machines (REGIM) Laboratory, University of Sfax and a member of the Machine Intelligence Research Labs (MIR Labs), USA. His research interests include soft computing, computational intelligence, intelligent transportation systems, and smart cities. He is a program committee member within several IEEE conferences and transactions.

Habib is the current IEEE Africa and Middle East zone representative and IEEE MGA board member. He was the secretary of the IEEE Africa Council and the chair of the IEEE R8 conference committee, and volunteered in several IEEE committees. He organized some well known IEEE international conferences and received IEEE awards.



**Speaker2: Prof. Ahmed Hassan Yousef** is the Vice President for academic affairs at Egypt University of Informatics.

**Talk Title:** *The Arabic Natural Language Processing applications*

Arabic Natural Language Processing applications are highly needed in different domains. Over two decades, many tasks will be investigated including sentiment analysis, Arabic and Arabizi named entity recognition, sarcasm detection, dialect detection, analyzing social media, fake news detection, professional social networking data extraction, specialized syntactic search engines, topic modelling, duplicate record detection and cross language record mapping. With the invasion of generative artificial intelligence and large language models and the fast evolution in these technologies, benchmarks and evaluation methods are highly needed to assess the current situation and define the future research directions. This is not limited to natural text but can be extended to multimodal sentiment analysis, software code smells detection and converting code between multiple programming languages for portability across multiple platforms like Android and IOS

### ***Biography***

Prof. Ahmed Hassan Yousef is the Vice President for academic affairs at Egypt University of Informatics. He is a Computer Engineering Professor in Ain Shams University. As an IEEE volunteer, he served as the chair of the Egyptian section. His research interests include software systems engineering, informatics, high performance computing, and natural language processing



**Speaker3: Prof Abdel Aitouche**, University of Lille, CRISTAL, France

**Talk Title: *Robust Fuzzy Fault Tolerant Control of Wind Energy Systems subject to sensor and actuator faults***

The dynamic behavior of wind turbines varies widely along their operating range. Robust controllers, which are specifically designed to cope with nonlinear dynamics through the use of linearization techniques and other methods have been widely applied to the design of wind turbine control systems. Nonlinearities and system uncertainties are the most important difficulties in designing controllers that ensure stability and acceptable closed-loop performance. A robust fuzzy scheduler fault tolerant control is proposed to tackle multivariable nonlinear systems subject to sensor faults, actuator faults and parameter uncertainties. Takagi–Sugeno fuzzy model is employed to represent the nonlinear wind energy systems, and then a model-based fuzzy scheduler controller design use the concept of general-distributed compensation. Takagi–Sugeno fuzzy systems are classified into three families based on the input matrices and a fault tolerant control synthesis procedure is given for each family. In each family, sufficient conditions are derived for robust stabilization, in the sense of Lyapunov method and Taylor series stability, for the Takagi–Sugeno fuzzy system with parametric uncertainties, sensor faults, and actuator faults. The sufficient conditions are formulated in the format of linear matrix inequalities. The effectiveness of the proposed controller design methodology is finally demonstrated through a wind energy system with doubly fed induction generators to illustrate the effectiveness of the proposed method.

### ***Biography***

Abdel Aitouche was born in Algiers and he received his diploma of Engineer in Supelec (France) in 1980 in Electrotechnique. He joined SONELEC in 1980 and after A company of RadioNavigation since 2 years. He joined the Institute Algerian of Petroleum (IAP) in 1983 at 1987. He got his PHD Thesis in University of Nancy I in 1990 in the field of Automation. Abdel Aitouche was lecturer in Hautes Etudes d'Ingénieurs de Lille, France (Graduate School of Engineering) since 1991 and Professor since 2009. He is Searcher at Center of research in Informatics, Signal and Automation, Lille (CRISAL) since 1997 (associated with the CNRS, French National Center For Scientific Research). Since 2020, he belongs to the team Softe (System OF SysTem Engineering) of CRISAL. He is Emeritus Searcher at the Laboratory CRISAL since October 2022, University of Lille. He is member of MCA (Mediterranean Control Society) and member of INCOSE (International Council on Systems Engineering). Aitouche's research interests' concern fault tolerant systems (FTS), nonlinear control and fault tolerant control (FTC) and model based fault detection and diagnosis (FDD). Their application domains are mainly intelligent, embedded systems, process engineering, combustion engine, fuel cells and renewable energy (Wind, PV). He has published more than 300 papers





**Speaker4: Prof Abdulmajid Hussain** , a Professor of Software engineering at Sebha University,

**Talk Title:** *Green software engineering*

Green software engineering is one aspect of efforts to combat the global climate problem. It aims to improve everything related to the production and use of various engineering technologies and systems in a way that reduces the causes of pollution resulting from excessive exploitation of unfriendly engineering systems. This talk aims to highlight the methods and means used to improve software engineering in a way that contributes to reducing the harm associated with the production and exploitation of various engineering systems.

### ***Biography***

Abdulmajid Hussain is a Professor of Software engineering at Sebha University, where he has been teaching since 2008. He completed his PhD at University Malaya, and his MSc at Leeds University. He worked as an assistant professor at KICT, IIUM, from 2005 to 2007 then he rejoined Sebha University till now. Professor Abdulmajid is very passionate about teaching and is committed to providing his students with the knowledge and skills they need to succeed in the IT industry. In terms of the research, his research interests lie in the area of software engineering, ranging from *requirements engineering* to *interaction design*. At the national level, he has collaborated actively in many national committees for quality improvement of IT education. He has served on the National Executive Committee for redesigning the Information Technology Curriculum of National Secondary Schools, and he co-authored IT textbooks for the 2<sup>nd</sup> and 3<sup>ed</sup> year students of secondary schools. He also published two books on Software Engineering and Software Modelling using UML.

## *Discussion panel:*

### **Assessing the Role of Research Centers in Libyan higher education institutions**

- **Current Landscape:** Summary of the research centers in Libyan universities. Their goals, governing frameworks, and areas of specialization.
- **Effect and Significance:** Evaluate the influence of research institutes on Libya's scholarly and scientific community. Talk about the innovations, societal effect, and knowledge generation that these centers have produced.
- **Cooperation and Networking:** Determine the degree of cooperation and networking that exists both with outside partners and among research centers at Libyan institutions. Talk about the advantages and difficulties of multidisciplinary cooperation as well as the possibility of enhancing alliances with business, governmental organizations, and foreign institutions.
- **Funding and Sustainability:** Look at the financing schemes and environmental practices that Libyan university research centers use. Talk about the difficulties in obtaining funds.
- **Opportunities and Challenges:** List the main obstacles that Libyan university research institutes must overcome, including a lack of funding, inadequate infrastructure, and red tape. Talk about how to overcome these obstacles and take advantage of growth and development possibilities. Examine how research centers might help Libya's socioeconomic development and national priorities be addressed.
- **Future Vision:** Thoughts on how research centers at Libyan universities should develop going forward. Talk about new developments, possible expansion regions, and the influence of research centers on the direction of research and higher education in Libya

# Plan of Sessions



**&**



# First Day

**Sunday, May 19, 2024**



# Plenary Session 1

## ROOM 1

### Plenary Session 1

**Time (10:00 -10:30)**

**Chairmen's:** Maher Kharrat, Nuredin Ahmed and Kenz Bozed

**Speaker 1 :** Prof. Habib M. Kammoun

**Title:** *Benefits of Publishing with IEEE*

### Plenary Session 2

**Time (10:30 -11:00)**

**Chairmen's:** Maher Kharrat, Nuredin Ahmed and Kenz Bozed

**Speaker 2:** Prof. Ahmed Hassan Yousef

**Title:** *The Arabic Natural Language Processing applications*

# SESSION

# 1



**Time (11:30-13:30)**



**ROOM 1: Artificial and Computational Intelligence**

**ROOM 2: Advanced Control System**

**ROOM 3: Computer Networks and Cloud Computing**

**ROOM 4: Tele-Communication Engineering**

# ROOM 1

<b>Session: Artificial and Computational Intelligence</b>			
<b>Chairs: Youssef Gdura , Nada Alhamd , Suad El-Geder</b>			
<b>Time</b>	<b>Paper ID</b>	<b>Paper Title</b>	<b>Authors</b>
11:30-11:45	5	Named Entity Recognition for Identifying Entities Related to Illegal Migration in Libya: An Analysis of Twitter Textual Data	Mansour Essgaer
11:45-12:00	32	Addressing the Libyan Arabic Dialect Identification: A Comparative Study of Ensemble Classification Methods	Mansour Essgaer
12:00-12:15	56	Investigating the Impact of Control Parameters on the Performance of the harmony search algorithm by Parametric Analysis	Jalal Misbah, Amer M Daeri, Abdulbaset Saad
12:15-12:30	60	Solar Radiation Prediction In Libya Using Neural Networks	Morad Ali, Khaled Almezghwi,
12:30-12:45	68	Detecting Cognitive Decline in Alzheimer's Disease using Brain Signals: An EEG Based Classification Approach	Asmaa Mohammed
12:45:13:00	118	Using A Penetration Testing Tool in Cyber SecurityEnhancing in an Expanded Communications Network	Mariam Aboajela Msaad Nada Ben zitoun Aseel Elayeb
13:00-13:15	69	Utilizing Eeg Signals For Epilepsy Seizure Detection	Alfughi, Hana Ghait*; Maamar, Ali; Mohammed, Asmaa

## ROOM 2

<b>Session: Advanced Control System</b>			
<b>Chairs: Mahmoud Elfandi , Mohamed Eldardar , Ahmed Abougarair</b>			
<b>Time</b>	<b>Paper ID</b>	<b>Paper Title</b>	<b>Authors</b>
11:30-11:45	91	Enhanced On–Off Control for Wind Energy Conversion System Electromagnetic Torque Ripple Minimization based on Whale Optimization Algorithm	Amel BOUCHEMHA, OUSSAMA BRAHMI, Kahla, Sami; Ghenai, Chaouki
11:45-12:00	277	Robustness Analysis of a Class of MPC Tuning Strategy	A. Abdulrahman. Emhemed
12:00-12:15	146	Effect of VGPN on Missile GNC System Performance	Abdulghafoor Ahmed Kshinba , Fateh Aleg , Mohamed Abuali, Othman Maklouf
12:15-12:30	280	Singularity Configurations Investigation of FANUC LR MATE 200ID arm Manipulator	Azedien Kinsheel, Ahmed Kharidege,
12:30-12:45	165	Sliding-Mode Controller for Collective Transport using Decentralized Multi-Robot Systems	Hadel abed, Mohamed Edardar
12:45-13:00	271	An Upgraded Back-stepping DC-Link Voltage Controller for On-Grid Photovoltaic Systems	fethi messaoudi; Belgacem, Mbarki; Farhani, Fethi; abderrahmen, zaafouri
13:00:13:15	294	Modelling and Control of Sphere and Cylinder System	Ahmed Alshareef, Tawfeeq N. Ahmed



## ROOM 3

<b>Session: Computer Networks and Cloud Computing</b>			
<b>Chairs: Mahmud Mansour , Abdelsalam Maatuk, Sarra Elrabiei</b>			
<b>Time</b>	<b>Paper ID</b>	<b>Paper Title</b>	<b>Authors</b>
11:30-11:45	238	Wireless Sensor Network Hop Count Theory Modeling and Deep Learning Prediction	Salem Sati, Afif Abugharsa,
11:45-12:00	49	Machine Learning Based Real-time Self-driving Car for Sudanese Autonomous Vehicular Markets	Ahmed, Mayada; Saeed, Rashid A.; Mohammed, Omer; Elamin, Ahmed; Abdelaziz, Omer; Mohammed, Ahmed; Elbasheir, Mohammed S.*
12:00-12:15	46	Chain Links on Wheels: A Security Scheme for IoV Connectivity through Blockchain Integration	A*; Thabit , Fursan
12:15-12:30	185	Diagnosis of Iron Deficiency in Lemon Plants Using Combined FMM/Histogram/GLCM Features and SVM Classifier on Leaf Images	elayeb, zainab elayeb*; Elrowayati, Ali A.; Ben Sasi, Prof. Ahmed Yousef
12:30-12:45	42	Comparison of Network's Performance by Applying Integrated Services and Differentiated Services Quality of Service Models	Nisreen Bin Ltayef ; Radwan, Khlood; Alshaebi, Malak
12:45-13:00	228	Estimate Control Interval for Optimal Link State Routing to Achieve High Performance	Rebah sarreb
13:00:13:15	267	Building an Affordable Portable Storage Area Network (SAN) with Raspberry Pi: Design, Implementation, and Performance Evaluation	Attar Bashi, Zainab*; Ahmad Nasser, Muhammad Solihin ; Mohd Aman, Azana Hafizah; Abuzaraida, Mustafa

## ROOM 4

<b>Session: Tele-Communication Engineering</b>			
<b>Chairs: Tamam ben Musa, Khairyah Alhadar , Tawfig Tawill</b>			
<b>Time</b>	<b>Paper ID</b>	<b>Paper Title</b>	<b>Authors</b>
11:30-11:45	82	A Systematic Review of Routing Optimization in the Internet of Vehicle	zeinab Ahmed, Hashim, Aisha Hassan Hassan A.; Saeed, Rashid A.; Elbasheir, Mohammed S.*
11:45-12:00	96	Improved Stable Energy Balancing Based Clustering Routing Protocol for IoUT using Meta-heuristic Technique	Sayed Ali , Elmustafa*; Saeed, Rashid A.; Khidir Eltahir , Ibrahim; O. Khalifa, Othman ; Hassan, Mohamed
12:00-12:15	97	Energy-Aware Task Completion Delay Optimization of Space-Aerial Enabled MEC System	Barakat, Mohammed K; Ali Elnaim, Areeg ; Saeed, Rashid A.; M. Saeed, Mamoon ; Edam, Salaheldin ; Babeker, Amin ; Sayed Ali , Elmustafa*
12:15-12:30	123	Adaptive Wavelet Techniques for Pattern Analysis	Sana Abdaljlil, Munira Abdallatif,
12:30-12:45	126	Shielding Effectiveness of Mesh Wire at Low Frequencies in Near Magnetic Field	Elshami, Ibtihal Fawzi T*; Gaddafi, Anwer ; Elgayar, Ali ; Elsity, Waffa ; Elmangosh, Naila ; Yousuf, Fathiyah ; Elgaud, Mohamed
12:45-13:00	270	Enhancing Deep Semantic Communication Systems (Deep-SC) using the Pre-trained Models; BERT and BART	Tammam A. Benmus, Omar Wahed Embarek
13:00-13:15	274	Machine Learning-Based Energy Optimization Routing Protocol For Wireless Sensor Networks	Amhmed Bhih,

# SESSION

## 2



**Time (15:00-17:00)**



**ROOM 1: Information Systems**

**ROOM 2: Networking and Communications**

**ROOM 3: Renewable Energy Conversion**

**ROOM 4: Signal and Image Processing**

# ROOM 1

<b>Session: Information Systems</b>			
<b>Chairs: Azedin Sllame , Khaled Almezghwi , Nuri Ben Baraka</b>			
<b>Time</b>	<b>Paper ID</b>	<b>Paper Title</b>	<b>Authors</b>
15:15-15:30	89	Choosing The Right Automated Software Testing Tool	A Ali Aburas,
15:30-15:45	135	Adoption of Blockchain Technology in the Packaged Beverage Supply Chain	Inayatulloh Inayatulloh
15:45-16:00	136	Blockchain and IoT Technology Adoption Model for Improved Elderly Health Monitoring	Inayatulloh Inayatulloh
16:00-16:15	148	The Impact of Social Media on Bipolar Disorder Patients	Asraa Alamrouni, Abdelsalam M Maatuk, , Marwa Fadllah Gebril
16:15-16:30	197	The attitude towards using technology learning at a Technical Higher Institute in Libya within the framework of the Technology Acceptance Model	Ebtesam Taktek, *
16:30:16:45	223	Assessing the Readiness of Implementing Strategic Information Systems in Libyan HEIs and Universities	Salem, Somia Salem*; Maatuk, Abdelsalam M

## ROOM 2

Session: Networking and Communications			
Chairs: Amer Daeri , Abdulati Abdullah and Sami Bizzan			
Time	Paper ID	Paper Title	Authors
15:00-15:15	39	Intelligent Mobile User Resource Allocation in 6G for Multi-Access Edge Computing	Saeed, Mamoon; Saeed, Rashid A.; Mokhtar, Rania; Gaid, AbdulGuddoos; ahmed, zeinab; Elbasheir, Mohammed S.*
15:15-15:30	55	Improving the security and reliability of SDN controller REST APIs using JSON Web Token (JWT) with OpenID and auth2.0	Muragaa, Wisam H A*; elhejazi, mahmoud
15:30-15:45	75	Parallel Decoder of Polar Codes	Andi, Alia Ahmed*; Alsabiri, Alfaytouri; Hadid, Khaled; Alhajji, Najway; Saleh, Nadia; El Nefati, Musab
15:45-16:00	119	Optimize ISAR Imaging Techniques for Diverse Moving Targets	Aref, Ibrahim A.*; Emhemmed, Adel Saad ; Elgadi, Yahya
16:00-16:15	175	6LoWPAN - Technical Features and Challenges in IoT: A Review	Abood, Albahloul ; Hasan, Walid Khalifa*; Khaled, Haitham
16:15-16:30	183	Evaluation of BER,Reliability and throughput during the vertical coexistence of 4G LTE and 5G NR	Ray, Jayanta Kumar*
16:30:16:45	209	An Enhanced Method To Secure The High Embedding Capacity Steganography Based On LSB Indicator	ALBKOSH, FTHI M*; S. S. Mohamed, Alsadegh ; Abdalsam Albakoush, Aml ; Ahmed Albkush, Abdullah

## ROOM 3

<b>Session: Renewable Energy Conversion</b>			
<b>Chairs: Omar Alrabti, Abdunnaser Shamekh, Mohamed Jalboub.</b>			
<b>Time</b>	<b>Paper ID</b>	<b>Paper Title</b>	<b>Authors</b>
15:00-15:15	268	Empowering Remote Regions: Modeling and Simulation of a 1.54 MW Off-Grid Fuel Cell System for Sustainable Energy Independence	Ben Hamad, Khlid; Alazoumi Alkrim, Outman ; Luta, Doudou Nanitamo*
15:15-15:30	54	Experimental Investigation on The Performance of Solar Cooker (Medium Size) Under Derna City Climate Conditions	Abdel hadi, Mahmood ; Alshowgi, Mohammed ; almuntasir, Ahmed ; Hamad Yonies , Ghaida ; Eshhata Alshokr, Hadeel ; Finosh, Sulafa ; Aldali, Yasser*
15:30-15:45	72	Rooftop Solar PV System in Libya	Hareb, Majd*; Hareb, Fathi Omar
15:45-16:00	155	Optimal Sizing of Hybrid Renewable System for Residential Appliances	Jomah, Omer Saleh; Almabsout, Emad ; Ahmed, Abdussalam Ali; Khaleel, Mohamed Mohamed; Nassar, Yasser F; Alsharif, Abdulgader H*
16:00-16:15	157	Simulating Photovoltaic Emulator Systems for Renewable Energy Analysis	Jomah, Omer Saleh; Mohamed, Dr. Nachaat; Ahmed, Abdussalam Ali; Alsharif, Abdulgader H*; Khaleel, Mohamed Mohamed; Nassar, Yasser F
16:15-16:30	218	Potential installation of the Rooftop PV system in Brega Petroleum Marketing Company and its economic benefits	Alhashmi , Adel Alhashmi*
16:30:16:45	239	Design of 20MW Grid-Connected Photovoltaic Power Plant in Tawergha	Shamekh, Abdunnaser Sassi*

## ROOM 4

<b>Session Signal and Image Processing</b>			
<b>Chairs: Osama Alkishriwo , Osama Abusaid , Bashir Khamoudi</b>			
<b>Time</b>	<b>Paper ID</b>	<b>Paper Title</b>	<b>Authors</b>
15:00-15:15	44	Improving Block Matching and 3 Dimensions (BM3D) Filtering for Image Noise Removal Using Discrete Wavelet Transformation (DWT)	Kshem, Warda*; Khmag, Asem
15:15-15:30	45	Design and Simulation of a 3D Model Lower Limb Exoskeleton for Rehabilitation	Ahmed, Mayada; Saeed, Rashid A.; Ali, Abdallah; Awas, Wadah; Hamid, Monzir; Alhafiz, Mohammed; Elbasheir, Mohammed S.*
15:30-15:45	65	An Effect of Huffman Encoding with Hybrid Edge Detection in LSB Image Steganography	Elghayer, Arij Mukhtar*; Abushaala, Ahmed Mohamed
15:45-16:00	247	Real-Time Vehicle Speed Estimation	Ganoun, Ali A.*; ALWINDI, Mohamed; TOMBOKTI, Taha
16:00-16:15	205	SR TI-LFA vs rLFA: A Comparative Study on Network Resilience	Ben Saud, Najia*; Mansour, Mahmud M
16:15-16:30	212	Toward Security Enhancement for Deep Learning-Based Channel Estimation Model Under Adversarial Attacks in Next-G Wireless Networks	Alaqtaa, Maab Ramadhan*; Abusaid, Osama
16:30-16:45	8	Radio Frequency Energy Harvesting with Power Splitting Scheme in Wireless Sensor Network	Alazhary, Fatima Ali*

# Second Day

Monday, May 20, 2024





## ROOM 1

### Plenary Session 1

**Time (9:00 -10:00)**

**Chairmen's:** Ibrihem Jeleta , NasarAldain Shashoa, Mohamed Chaabane and Ahmed Abougarair

**Speaker 1 : Prof Abdel Aitouche**

**Title:** *Robust Fuzzy Fault Tolerant Control of Wind Energy Systems subject to sensor and actuator faults*

### Discussion Panel

**Time (10:00 -11:00)**

**Chairmen's:** Ali Ganoun , Mabruk Abugderah

**Title:** **Assessing the Role of Research Centers in Libyan higher education institutions**

# SESSION

# 1



**Time (11:30-13:30)**



**ROOM 1: Security and Information Assurance**

**ROOM 2: Power Distribution System**

**ROOM 3: Microwaves and antennas**

**ROOM 4: Machine Learning**

# ROOM 1

<b>Session Security and Information Assurance</b>			
<b>Chairs: Habib M. Kammoun , Omar Sallabi , Ikraiam Fawzi</b>			
<b>Time</b>	<b>Paper ID</b>	<b>Paper Title</b>	<b>Authors</b>
11:30-11:45	74	Cyber Risk Management of Third-Party Relationships: The need for An Assessment Guidelines To Regulate Private Sectors in Libya	Mohamed, Iman Ahmeid*
11:45-12:00	80	Digital Image Encryption Based on Elliptic Curve Cryptography	Hasan, Mahmoud Hasan*
12:00-12:15	131	Decentralized Hotel Reservations: Blockchain Integration for Incentivized Data Sharing and Smart Contracts	ktari, jalel*; FRIKHA, Tarek; Rekik, Majdi; Gassara, Oussema; Boujelben, Marwen; Ben amor, Nader
12:15-12:30	182	A holistic approach for Cyber Security Vulnerability Assessment Based on Open Source tools: Nikto, Acunitx, ZAP, Nessus and Enhanced with AI-Powered tool “ImmuniWeb AI”	Sllame, Azeddien M.*; Tomia , Tayma; Rahuma , Ruqia
12:30-12:45	208	A Comparative Study of MPLS Layer 2 and Layer 3 VPNs	Mansour, Mahmud M*
12:45-13:00	132	Implementation of a semi-empirical model for controlling radiation sterilization processes	SAWAN, SALAH*; Lazurik, Valentina; Zolotukhin, Oleksandr ; Lazurik, Valentin

## ROOM 2

<b>Session: Power Distribution System</b>			
<b>Chairs: Abdalbast Ehbali, Daw Sassi , Nouri Khalifa</b>			
<b>Time</b>	<b>Paper ID</b>	<b>Paper Title</b>	<b>Authors</b>
11:30-11:45	198	Practical Evaluation of Overcurrent Protective Relay Performance in Power Distribution System	Mohamed Daw; Omar G. Mrehel
11:45-12:00	290	Optimizing Unit commitment problem with the dynamic programming method (DP) using MATLAB software	Mohamed K Jalboub
12:00-12:15	98	Design and Implement a PC-Based SCADA Education System, Part I: Power System Frequency Control and Governor Response	Almanfi, Abdullah Ayad*
12:15-12:30	254	Measurement-based Data Center Complete Load Model Construction & Power Quality Assessment at Distribution Level	Nada Hfouda, Hazem Zubi
12:30-12:45	147	An Investigation into the Impact of Symmetrical Voltage Sag on the Performance of Three Phase Induction Motors-Based Simulation	Murad Altaira, Agela, Gaber; Issa, Anis
12:45-13:00	152	Assessing Random Power Flow for Vehicle-to-Grid Operation based on Monte Carlo Simulation	Jomah, Omer Saleh; Alsharif, Abdulgader H*; Ahmed, Abdussalam Ali; Nassar, Yasser F; Mohamed, Dr. Nachaat; Imbayah, Ibrahim
13:00-13:15	100	Comprehensive Review and Applications of Power Electronic Transformer for Optimal Power Integration	Adimchinobi D Asiegbu, Almaktoof, Ali AMA

## ROOM 3

<b>Session: Microwaves and antennas</b>			
<b>Chairs: Abdulatif Khrwat , Bashir Khamoudi , Alia Andi</b>			
<b>Time</b>	<b>Paper ID</b>	<b>Paper Title</b>	<b>Authors</b>
11:30-11:45	26	A compact band notched ultra-wide band patch antenna with U- shaped resonators	Akila, Hanein ; EL-Halabi, Heba*
11:45-12:00	53	Flexible Wideband Microwave Absorbers with Frequency Selective Surface Based on Mechanically Treated Foiled Polymer Film	Boiprav, Olga*; Abdaljlil, Sana A; Bogush, Vadim
12:00-12:15	78	Charcoal-Containing Microwave Fiber Absorbers	Belousova, Elena*; Ayad, Hisham ; Abdelgani , A Mostafa Hussian
12:15-12:30	272	Mutual Coupling Suppression Techniques Used for compact 5G MIMO antennas	Abdullah, Abdulati Ibrahim*
12:30-12:45	291	Modelling and Simulation of Radar Cross Section Based on Parameters Affecting Surface Shape	Alazraq, Ali, Karashen; Heba*,
12:45-13:00	215	Enhancing Agricultural Practices through IoT: A Dual-Modality Approach for Network Resilience and User Engagement	Bello, Adamou A*; Almaktoof, Ali AMA
13:00:13:15	71	The Influence of Abrupt Symmetrical Voltage Sag on the Characteristics of Doubly Fed Induction Generator-Based Wind Turbine	Agela, Gaber*; Altaira, Murad

# ROOM 4

<b>Session: Machine Learning</b>			
<b>Chairs: Amna Elhawil , Abdoulmenim Bilah , Omar Abossada</b>			
<b>Time</b>	<b>Paper ID</b>	<b>Paper Title</b>	<b>Authors</b>
11:30-11:45	64	Customer churn prediction using machine learning: Case study of a libyan internet service provider company	Shefaa A. Alteer Alhaam Alariyibi
11:45-12:00	115	Human activity recognition using AUTOML approach	Elboushi , Nadine*; Nagem, Tarek A M; Alamami, Esra Aa
12:00-12:15	164	Long Short-Term Memory Employed for Classifying P300-based BCI	Aljlaly , Ahlam; Elshami, Ibtihal Fawzi T*; Almjbari, Ahmed
12:15-12:30	170	Cyber Threat Detection using Machine Learning	Gaddah, Firas W*; El-Geder, Sudad F
12:30-12:45	174	Domain Adaptation Generative Model for Segmenting 3D MRI Pediatric Brain	Shaari, Hala M*; Kevric, Jasmin -; Ahmed, Nuredin AS
12:45-13:00	178	Improving Facial Expression Recognition in HCI: Traditional Techniques and Comparative Analysis	Alshwehdi, Rayhan Soliman*; Eltarhouni, Wafa
13:00:13:15	235	Virtual Smart Mirror as a Personal Trainer using Machine Learning	Ali, Afra*

# SESSION

## 2



**Time (15:00-17:00)**



**ROOM 1:** Artificial and Computational Intelligence

**ROOM 2:** Automatic Control Systems

**ROOM 3:** Database and Data Mining +Human Computer Interaction

**ROOM 4:** Wireless/ Mobile Communication

# ROOM 1

<b>Session: Artificial and Computational Intelligence</b>			
<b>Chairs: Mohamed Eljhani , Hala Elhabrush , Nada Alhamdi</b>			
<b>Time</b>	<b>Paper ID</b>	<b>Paper Title</b>	<b>Authors</b>
15:00-15:15	201	Airline Scheduling Model Using Genetic Algorithm	Elberkawi , Hiba R. *; Kablan, Aya; Eldharif, Eslam Ali
15:15-15:30	217	EEG Motor Imagery Classification using Graphical Neural Networks with Attention Mechanism	Zegallai, Heba Medhat*; emsilkh, Donya
15:30-15:45	229	Classification of Cervical Cancer using Convolutional Neural Networks	Alasbily, Sara Amer*; elmoshity, salwa idres; Younus, Salema Saad; Bozed, Kenz M
15:45-16:00	236	A CNN based Crosswalk Guidance for the visually impaired that combines a Fuzzy Logic Controller and Genetic Algorithm.	Almajdoub, reim Abdalkader*
16:00-16:15	257	Efficient Real-time Information Extraction from Book Cover Images Using YOLOv8 and SpaCy: A Novel Approach to Text Detection and Recognition	Alghemi, Nawal Saad*; alkhadafe, Hasan Mr; Nasir, ibrahim M
16:15-16:30	275	University Students' Attendance by Utilizing Face Recognition Approach Based on Deep Learning Technique	Alqadhi, Anas*; Khmag, Asem
16:30-16:45	22	Electron Mobility Calculations and Scattering Effects in GaN Compound Semiconductor	Ikraiam, Fawzi A*



## ROOM 2

<b>Session: Automatic Control Systems</b>			
<b>Chairs: Moftah Albakoush , Naser Shtawa, Ali Elmolhi</b>			
<b>Time</b>	<b>Paper ID</b>	<b>Paper Title</b>	<b>Authors</b>
15:00-15:15	124	Control of CSTR Using Active Disturbance Rejection Control and Model Predictive Control	Ahmed Farhat Zrigan
15:15-15:30	167	Optimal Control for Underactuated mechanical system	Ahmed Mohamed Esharef
15:30-15:45	87	Controlling Surface Roughness in Additive Manufacturing: Unveiling the Dominance of Neural Networks Over Linear Regression	Abdulshahed, Ali M*
15:45-16:00	33	Performance of dynamic Power Assignments for Downlink NOMA System	babana, mohamed*; Emhamed, Mohamed nuri Hussin; Alsharef, ALwaleed
16:15-16:30	43	Adaptive Model Predictive Control for Achieving Lane Tracking	Ibrahim Attawil , Ahmed Abougarair
16:30-16:45	91	Enhanced On–Off Control for Wind Energy Conversion System Electromagnetic Torque Ripple Minimization based on Whale Optimization Algorithm	Amel BOUCHEMHA , OUSSAMA BRAHMI , Sami Kahla
14:45:17:00	36	Dynamics and Optimal Control of Quadcopter	H. Abdsalam

# ROOM 3

<b>Session: Database and Data Mining +Human Computer Interaction</b>			
<b>Chairs: Tawfig Abdelaziz , Khlid Ben Hamad, Mariam Aboajela Msaad</b>			
<b>Time</b>	<b>Paper ID</b>	<b>Paper Title</b>	<b>Authors</b>
15:00-15:15	81	Automatic Generation of Epsilon (Eps) value for DBSCAN Using Genetic Algorithms	Gebril, Issa H*; El-Mouadib, Faraj; Mansori, Hafsa
15:15-15:30	230	An Automatic Approach for Transforming Relational Databases into OWL Ontologies	Gebril, Marwa Fadllah*; Maatuk, Abdelsalam M; Alamrouni, Asraa
15:30-15:45	111	Development of a decentralized application for managing food supply chain based on blockchain	ktari, jalel*; Frikha, tarek; Hsairi, Melek; Lakhal, Ibrahim; Naifar, Fatma; Bouaziz, Assil; Ben amor, Nader
15:45-16:00	141	An Enhanced Software Maintenance Approach Based on World-Class Manufacturing Standard	Hanan Rajab
16:00-16:15	202	The Impact of Trust, Perceived Credibility, and Perceived Self-Efficacy on The Acceptance of Mobile Banking in Libya	Khaled Abuhlfaia, Abuhlfaia, Khaled; Mohamed, Marwa
16:15-16:30	219	Securing Democracy: Implementing a Blockchain-Based E-Voting System in Libya	Sarra M Elrabiei,
16:30:16:45	66	The Correlation Between Architecture Smells, Package Stability and Reusability: A Case Study	Ehab Elfallah,

# ROOM 4

Session Wireless/ Mobile Communication			
Chairs: Ramdan Khalifa , Mustafa Salim Agha , Adel Emhemmed			
Time	Paper ID	Paper Title	Authors
15:00-15:15	288	Multiband PIFA Antenna Design with Optimized Defected Ground Plane Using Genetic Algorithm	Layla Wakrim,
15:15-15:30	292	AI-Based QoS Optimization in Post-Disaster Ad Hoc Networks: Top-K Path Enumeration with Multicriteria Decision Analysis	Layla Wakrim
15:30-15:45	145	Efficiency Investigation of Wireless Power Transfer System for Biomedical Implants	Shennib, Mohamed A*; Elsaadi, Mussa
15:45-16:00	52	Capacity Enhancement Based on mMIMO for Cognitive Radio NOMA in Future 6G Networks	Eisa, Mohamed Hassan; Singh2, Manwinder ; Bilal, Khalid Hamed; Saeed, Rashid A.; Elmutasim, Dr. Imadeldin Elsayed ; Elbasheir, Mohammed S.*
16:00-16:15	94	On Demand User Association And Load Distribution with Guaranteed Rate in Multi UAVs Assisted Cellular Networks	Omran , Allafi *; Beltayib, Abduladeem; Abdelmoaty, Ahmed
16:15-16:30	102	Analysis of Different Architectures for RSSI Based Indoor Localization using Trilateration Technique	souissi, rihab*; ktata , ilef ; sahnoun, salwa; FAKHFAKH, Ahmed; Derbel, Prof. Dr. Faouzi
16:30-16:45	283	Power Control Optimization for Enhanced LTE Network Resilience Against illegal RF Repeaters	Ali A Ganoun, Alghazzawi , Muad M

# Third Day

Tuesday, May 21, 2024



# SESSION

# 1



**Time (9:00-11:00)**



**ROOM 1:** Artificial and Computational Intelligence

**ROOM 2:** Tele-Communication Engineering + Software Engineering

**ROOM 3:** Information Systems + Machine Learning

**ROOM 4:** Control in Power Electronics + Control of Robotic Systems

# ROOM 1

<b>Session: Artificial and Computational Intelligence</b>			
<b>Chairs: Nuredin Ahmed , Yusra Maatug , Sarra Elrabiei</b>			
<b>Time</b>	<b>Paper ID</b>	<b>Paper Title</b>	<b>Authors</b>
9:00-9:15	70	Depression Detection Based On Eeg Signals Using Machine Learning Algorithms	Musbah, Fatima M*; Mohammed, Asmaa; Aghnaya, Hajer Belqasim
9:15-9:30	151	Diagnosing Diabetes Using Binary Whale Optimization Algorithm-Based Feature Selection	Ali, Marium Kh.*; lawgali, Ahmed
9:30-9:45	169	An Improved Genetic Algorithm Tool for Exam Timetabling Solutions	Eldharif, Eslam Ali*; Sallabi, Omar M.; Eltharif, Asma
9:45-10:00	184	Crosswalk Guidance System for the Blind and visually impaired Based on CNN with Hybrid Technique integrating Fuzzy Logic Controller and Genetic Algorithm.	Almajdoub, reim Abdalkader*
10:00-10:15	187	Chest X-ray Image Synthesis Using Deep Convolutional GANs	Alhamdi, Nada A.*; Sunni, Mohammed
10:15-10:30	191	Enhancing Speech Emotion Recognition using ConvLSTM Model: A Cross-Dataset Analysis	Ben-Sauod, Reem; Alshwehdi, Rayhan Soliman*; Eltarhouni, Wafa
10:30-10:45	262	An Automated Detection Model of Prepaid Mobile Phone Cards Using YOLOv5	aljearni, zahai*; alkhadafe, Hasan Mr; Nasir, ibrahim M
10:45-11:00	196	Exploring Knowledge Landscapes: Clustering and Topic Modeling of Sebha University Scientific Publications	Essgaer, Mansour*

## ROOM 2

<b>Session Tele-Communication Engineering + Software Engineering</b>			
<b>Chairs: Nafaa Shebani, Sana Ahmed Abdaljlil, Kaled Algadamsi</b>			
<b>Time</b>	<b>Paper ID</b>	<b>Paper Title</b>	<b>Authors</b>
9:00-9:15	282	Simulation of Critical Mission (Public service Paradigms Applicable to Offshore Rig Platform for Oil and Gas Revenue )	M. Ammar, Abdussalam *; Y. Ellafi, Amira
9:15-9:30	286	Minimizing the viruses' propagation in interconnected complex networks	WAKRIM, layla*; SIHAM,
9:30-9:45	248	Beyond the MRI: Revolutionizing Brain Tumor Detection with Deep Learning	Youcef Soufi, khemaissia, seddik S
9:45-10:00	116	Deadlock-free verification of the SACI-1 OBC using Circus Time Action and FDR	Adnan El Sherif, Duaa Agina,
10:00-10:15	140	An Optimal Optimization of Software development Cost Estimation Using Genetic Algorithm	Mabroukah A Maeyouf
10:15-10:30	83	Optimizing the performance of signalized intersection using Synchro Simulation Software	Mohamed , Abubakr Almahdi *; Bughrara, Neral ; tarhuni, Fares; Alsaiti, Ashraf

## ROOM 3

<b>Session: Information Systems + Machine Learning</b>			
<b>Chairs: Faraj El-Mouadib, Hala Shaari , Khamis Aljribi</b>			
<b>Time</b>	<b>Paper ID</b>	<b>Paper Title</b>	<b>Authors</b>
9:00-9:15	227	The Quality of e-Banking Services and their Role in Achieving Customer Loyalty: A Case Study	Al-Abdali, Marwa ; Maatuk, Abdelsalam ; Gebril, Marwa Fadllah*; Al-Saadi, Ahlam
9:15-9:30	273	Evaluating the Extent of Application of Software Engineering Concepts in Graduation Projects: A Case Study	ali, taghreed zidan*; Hagal, Mohamed Ali; Elmarzaki, Howayda abedallah; Maatuk, Abdelsalam M
9:30-9:45	51	Comparing Performance of Ultrasonic type and Magnetic Type Flowmeters for Desalination Applications	Elgali, Ahmidah*
9:45-10:00	255	Sarcasm Detection in Libyan Arabic Dialects Using Natural Language Processing Techniques	Ala, Azalden*; Dogman, Aboagela ; Ammer, Fathi
10:00-10:15	264	On Object Detection and Explainability with Sonar Imagery	El-Mihoub, Tarek A.*; El Gadi, Abdulhakim ; Nolle, Lars; Stahl, Frederic
10:15-10:30	295	Breast Cancer Histopathology Images Detection	Tabet, Mohammed A*
10:30-10:45	77	A Framework for improving software development process hybridization of extreme programming, feature - driven development and waterfall	Hagal, Mohamed Ali*; Al-Awami, Abdel-Fattah ; Elakeili, Salwa
10:45-11:00	297	IoT based system for greenhouses remote monitoring and climate control	ghoul, yamna*



## ROOM 4

<b>Session: Control in Power Electronics + Control of Robotic Systems</b>			
<b>Chairs: Mohamed Ekhalat, Labib Daloub, Zeyad Abdulhamed</b>			
<b>Time</b>	<b>Paper ID</b>	<b>Paper Title</b>	<b>Authors</b>
9:00-9:15	31	Control Technique of MPPT Utilizing for Boost Converter Applied to Small Renewable Energy System and a DC Microgrid for Remote Area	Ahmed T Zentani, Ali Almaktoof,; Kahn, M.T.E
9:15-9:30	190	THD Mitigation in Parallel Voltage Source Converters Through Fuzzy Logic Control and SVPWM Technique	Khaled Ghambirlou, Esmail SH*
9:30-9:45	240	Modified Asymmetric 25-level H-bridge Multilevel Inverter	Abdulhamed, Zeyad E*; Ajala, Mohaned
9:45-10:00	246	A New Topology of Multi-Level Inverter	Zeyad E Abdulhamed, Mohamed Elgheriani
10:00-10:15	121	Comparative Evaluation of PID Controller Tuning through Conventional and Genetic Algorithm	I. Alkaber
10:15-10:30	211	Sliding Mode Control based on Backstepping for Quadrotor	Abeer K Almhrm,
10:30-10:45	37	Model Predictive Control for Optimizes Battery Charging Process	Mohammed Ashreadi, Ma'arif, Alfian

## **Plenary Session 1**

**Time (11:30 -12:00)**

**Chairmen's:** Tawfek Atawel, Abdelsalam Maatuk and Amer Daeri

**Speaker 1 :** *Prof Abdulmajid Hussain*

**Title:** *Green Software Engineering*

**Time (12:00 -1:00)**

**CLOSING CEREMONY**