2026 IEEE 5th International Maghreb Meeting of the conference on Sciences and Techniques of Automatic Control and Computer Engineering

Conference Program

05-07 April 2026

Sebha University, Sebha - Libya

www.mista-con.org

Conference Location

https://maps.app.goo.gl/7uVGxEJMQP4MTYK3A

Program Booklet

2026 IEEE

MI-STA2026

05-07 April 2026
Sebha University
Sebha - Libya

Program of 5th IEEE MI-SAT 2026

Day	9:00 - 10:00	10:00-11:00	11:00-11:30	11:30-13:30			13:30-15:00	15:00-17:00		
	Room 1	*Room 1*								
SUNDAY 5/4/2026	OPENING CEREMONY	Keynote 1	Coffee Break	Oral Session 1	*Room 1*	Artificial Intelligence & Machine Learning	Lunch	Oral Session 2	*Room 1*	Algorithms and Computational Science
					Room 2	Database and Data Mining			*Room 2*	Control in Power Electronics
					Room 3	Power Distribution System and Power Plant			*Room 3*	Internet Computing and Health Informatics / Artificial Intelligence & Machine Learning
					Room 4	Advanced Intelligent Control			*Room 4*	Fiber-optic Communication and Wireless Power Transmission
					Room 5	Wireless/ Mobile Communication			*Room 5*	Signal and Image Processing
MONDAY 6/4/2026	Keynote 2	Keynote 3	Coffee Break	Oral Session 3	*Room 1*	Security & Networks	Lunch	Oral Session 4	*Room 1*	Microwaves and antennas
					Room 2	Applied Computing			*Room 2*	Security & Networks
					Room 3	Power plant operation and control			*Room 3*	Artificial Intelligence & Machine Learning
					Room 4	Microwaves and antennas/ Networking and communications			*Room 4*	Power plant operation and control
					Room 5	Artificial Intelligence & Machine Learning			*Room 5*	Signal and Image Processing - Software Engineering- Wireless/ Mobile Communication
TEUSDAY 7/4/2026	Oral Session 5	*Room 1*	Artificial Intelligence & Machine Learning	Coffee	*Room 1*	*Room 1*				
		Room 2	Nonlinear Control System	Break	Keynote 4	Discussion Panel	CLOSING CEREMONY			
		Room 3	Power plant operation and control							
		Room 4	Algorithms and Computational Science							
		Room 5	System Identification and Validation - Network and Communication							


Keynotes Speakers

Speaker1: Prof. Youcef SOUFI, Full Professor in Electrical Engineering University Echahid Larbi Tebessi, Tebessa, Algeria

Talk Title: ***AI and the New Industrial Revolution for Green energy transition and Electrical Engineering Applications***

Artificial Intelligence (AI) is playing an increasingly important role in modern electrical engineering and the global transition toward sustainable energy systems. AI technologies enable smarter integration and management of renewable energy sources, improve power system stability and efficiency, and support the development of advanced infrastructures such as smart grids and electric vehicles. As power systems become more decentralized and complex, AI-based solutions provide powerful tools for monitoring, prediction, optimization, and automated control.
Recent advances in digital technologies, including the Industrial Internet of Things, wireless communications, and intelligent data analytics, have accelerated the adoption of AI in the energy sector. These technologies contribute to reducing operational costs, enhancing system reliability, and improving environmental sustainability.
This talk presents an overview of the current state-of-the-art applications of artificial intelligence in electrical engineering and renewable energy systems, highlighting key opportunities, practical applications, and research challenges shaping the future of intelligent and sustainable power systems

Biography

Youcef SOUFI received a B.Sc. degree and PhD degrees from the University of Annaba, Algeria, in 1991 and 2012 respectively and a Magister degree in 1997 in Electrical Engineering from Tebessa University, Algeria. Currently, he is a Professor in the Department of Electrical Engineering, Faculty of Sciences and Technology, Echahid Larbi Tebessi University, Tebessa, Algeria. He has published and co-authored more than 200 technical papers in scientific journals and conference proceedings since 2000. He is editorial board the member of many journals. He has participated in several research projects and has led several research projects. He is the supervisor of many PhD Students in Algeria. He is a plenary and an invited keynote speaker, steering committee, scientific committee and session chair in several national and international conferences and an expert in several national and international scientific activities and project evaluations. His research interests include: Application of the artificial intelligence in electrical engineering, electrical machines control, diagnostics, wind and solar energy, power electronics and drives applied to renewable and sustainable energy, Renewable Energies devices, Smart Grid, reliability and diagnostics in power electronics converters and electrical machines

Speaker 2: Prof. Mohamed Bennasar is a Lecturer in Artificial Intelligence at The Open University, UK

Talk Title: ***Beyond Accuracy: Designing AI Systems for Real-World Decisions***

Artificial intelligence has achieved remarkable success in pattern recognition, often surpassing human performance in tasks such as image classification, signal analysis, and large-scale data modelling. However, translating these advances into real-world decision-making systems remains challenging. In high-stakes domains such as healthcare, assistive technologies, and forensic identification, the central issue is no longer simply achieving high predictive accuracy, but designing AI systems that humans can understand, trust, and confidently use when making complex decisions. This keynote explores the development of human-centred artificial intelligence systems that move beyond prediction toward trustworthy decision support. Drawing on interdisciplinary research, the talk demonstrates how machine learning can be integrated with clinical expertise, insights from human cognition, and user-centred design principles. The emphasis is not only on algorithmic performance but also on how AI systems interact with human decision-makers in real operational settings. The first part of the keynote examines AI for early disease detection, presenting research on coronary artery disease and dementia screening. By integrating heterogeneous clinical indicators, risk scores, and behavioural signals, machine learning models can support earlier diagnosis. Importantly, these models remain interpretable through information-theoretic feature selection and explainable modelling approaches. The talk then presents multimodal AI systems for assistive communication developed for children with complex communication needs such as cerebral palsy. These systems combine gesture recognition and audio cues to translate physical movements into meaningful messages, augmenting rather than replacing human interaction. Finally, the keynote addresses fairness and bias in facial recognition systems used in forensic contexts. Integrating insights from psychology and machine learning enables the development of more reliable and fair identification systems. Together, these case studies highlight the need for AI that prioritises trust, transparency, and responsible deployment in real-world environments.

Biography

Mohamed Bennasar is a Lecturer in Artificial Intelligence at The Open University, UK, within the School of Computing and Communications. He has more than a decade of experience in research and development in artificial intelligence, working across interdisciplinary areas including healthcare technologies, wearable sensing, assistive systems, and digital forensics. His work focuses on developing artificial intelligence solutions that support real-world decision making and address practical societal challenges. He has contributed to several research projects applying AI to healthcare, including work on early disease detection and digital health screening tools. He has also conducted research on analysing human movement and activity using wearable technologies, with applications in health monitoring and assistive technologies. In addition, he has worked on intelligent systems designed to support children with complex communication needs and has contributed to research aimed at improving fairness and reliability in facial recognition technologies. Alongside his research, Dr Bennasar has contributed to the development of new degree programmes and teaching modules in artificial intelligence, helping to design and deliver AI education to a broad and diverse student community. He has published widely in international journals and conferences in artificial intelligence and machine learning and actively collaborates with researchers from different disciplines. He also contributes to the international research community through academic service, including serving as a guest editor for international journals, session chair at international conferences, and member of the steering committee of international AI conferences.

Speaker3: Prof. **Alyani Ismail**, a Director of the PUTRA International Centre at University Putra Malaysia (UPM)

Talk Title: ***Electromagnetic Sensing for Sustainable Rare Earth Discovery toward Smart Mining***

As the world accelerates toward green energy, digital infrastructure, and high-performance technologies, Rare Earth Elements have become strategic materials of global importance. However, the way these resources are located and extracted must evolve to meet rising environmental expectations. This keynote presents electromagnetic sensing as an emerging pathway for non-invasive, intelligent, and sustainable REE detection. Using yttrium, neodymium, and lanthanum as case examples, the talk demonstrates how their unique electromagnetic responses can be captured and interpreted through integrated materials characterization and microwave measurement techniques. Experimental results reveal persistent signature frequencies, including a dominant response around 13.6 GHz, together with stable dielectric behaviour across varied soil layering conditions. These findings show that REEs can remain electromagnetically detectable even in complex subsurface environments, offering strong potential for future smart mining applications. More broadly, this keynote argues that the convergence of sensing science, wireless and microwave engineering, and sustainable mining innovation can transform how critical minerals are discovered and managed. The future of mineral exploration may no longer depend only on digging deeper, but on sensing smarter

Biography

Prof. Dr. Alyani Ismail holds a Bachelor of Engineering in Electronic and Information Systems Engineering from the University of Huddersfield, UK. She later obtained both her MSc in Computer, Communication and Human-Centred Systems and her PhD in Electronics Engineering from the University of Birmingham, UK.

Her expertise spans communication engineering, advanced materials, microwave physics, sensors, the Internet of Things (IoT), and applied Artificial Intelligence (AI). She currently serves as the Director of PUTRA International Centre (i-PUTRA) and is an active researcher at the Wireless and Photonics Networks Research Centre of Excellence (WiPNeT), Universiti Putra Malaysia (UPM).

In recognition of her impactful research contributions, she was named Top Research Scientist Malaysia 2022, a prestigious national award. Prof. Alyani has also distinguished herself through numerous local and international innovation competitions, earning multiple accolades for her cutting-edge projects.

Speaker3: Prof. **Sharif Abuadbba**, Team Lead - CSIRO's Data61, Australia

Talk Title: ***The Rise of Agentic AI: New Risk Classes and How to Contain Them***

Recent advances in Artificial Intelligence have led to the emergence of Agentic AI, a new generation of intelligent systems capable of autonomous decision-making, planning, and executing complex tasks with limited human intervention. Unlike traditional AI systems that operate as passive tools, agentic systems can pursue goals, interact with external environments, utilize digital tools, and adapt their behavior based on feedback. While these capabilities offer significant opportunities for transforming industries such as healthcare, cybersecurity, engineering, and scientific research, they also introduce a new class of technical and societal risks.

This talk explores the emerging risk landscape associated with Agentic AI, including autonomous action risks, goal misalignment, emergent behaviors, large-scale automation failures, and vulnerabilities related to tool access and system security. Particular attention is given to how increased autonomy and multi-agent interactions may amplify unintended consequences in complex digital ecosystems.

The presentation further discusses practical strategies for risk containment, including human-in-the-loop governance, constrained action frameworks, sandboxed tool environments, continuous monitoring mechanisms, and robust AI safety architectures. By examining these mitigation strategies, the talk aims to provide researchers, engineers, and policymakers with a clearer understanding of how to balance innovation with responsible deployment.

Ultimately, this work highlights the importance of developing trustworthy and controllable agentic systems that align with human values while enabling the next generation of intelligent autonomous technologies.

Biography

Dr. Sharif Abuadbba is a Team Leader in the Distributed Systems Security, Cybersecurity and Quantum Systems Group at CSIRO's Data61, Australia. His expertise lies at the intersection of AI and cybersecurity, with a dual focus: using AI for cyber defence to protect against cyber threats and ensuring the safety and integrity of AI to prevent its misuse. He has over 50 publications, many of which are prestigious venues such as IEEE S&P, NDSS, Usenix Security and CCS. He has also secured substantial funding for Data61 Cyber Security CRC projects, including Smart Shield, which won the iAwards NSW Australia 2022 and TAPE, which is a finalist in iAwards 2024 Dr Abuadbba has a PhD in computer security from RMIT University, Australia. Dr Abuadbba has previously worked with California-based technology company AgilePQ Inc as a senior R&D engineer and contributed to a number of US IP patents in cybersecurity. His recent accomplishments include prestigious honours such as the CSIRO Julius Career Award and the Data61 High-Performance Award..

Discussion Panel Session

Title: Artificial Intelligence and Redefining Educational Outcomes at Sebha University

Artificial Intelligence (AI) is rapidly transforming the landscape of higher education worldwide. From intelligent tutoring systems and automated assessment to data-driven decision-making and adaptive learning environments, AI technologies are reshaping how knowledge is delivered, acquired, and evaluated. These developments are prompting universities to reconsider traditional educational models and redefine the competencies required for future graduates.

This panel session examines the strategic role of AI in redefining educational outcomes at Sebha University, with particular attention to both undergraduate and postgraduate education. The discussion will focus on how universities can effectively integrate AI-driven tools and methodologies into curricula, teaching practices, and research activities to enhance learning quality, promote innovation, and strengthen institutional competitiveness.

Panelists will also address key challenges associated with the adoption of AI in higher education, including infrastructure readiness, faculty development, curriculum transformation, academic integrity, data governance, and ethical considerations. Special emphasis will be placed on the opportunities that AI offers for advancing graduate studies, supporting interdisciplinary research, and preparing students with advanced analytical, digital, and problem-solving skills required in the emerging knowledge economy.

By bringing together academic leaders and experts from different institutions, the panel aims to provide practical insights, share institutional experiences, and outline strategic directions for leveraging AI to modernize higher education and improve educational outcomes at Sebha University and similar institutions across the region

Moderators:

1. Dr. Abdulgader Alsharif,
2. Dr. Mabroukah Amarif

Plan of Sessions

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First Day

Sunday, April 5, 2026

Plenary Session 1

ROOM 1

Plenary Session 1 **Time (10:00 -11:00)** https://meet.google.com/qsf-cswq-qzq
Chairmen's: Mohammed Alowa, Amer Zerek **Speaker 1**: **Prof. Youcef Soufi,** **Title**: ***AI and the New Industrial Revolution for Green energy transition and Electrical Engineering Applications***

Coffee Break (11:00-11:30)

SESSION 1

Time (11:30-13:30)

ROOM 1: Artificial Intelligence & Machine Learning
ROOM 2: Database and Data Mining
ROOM 3: Power Distribution System and Power Plant
ROOM 4: Advanced Intelligent Control
ROOM 5: Wireless/ Mobile Communication

ROOM 1

Session: Artificial Intelligence & Machine Learning			
Chairs: Mohamed Fadeel, Mabruka Imaref			***https://meet.google.com/qsf-cswq-qzq***
Time	**Paper ID**	**Paper Title**	**Authors**
11:30-11:45	195	XAI Digital Twin Predictive Maintenance in the Automotive Industry: Challenges and Opportunities	Hisham AbouGrad , Veeranjaneyulu Batthula Fiza Riaz
11:45-12:00	209	Rapid Diagnosis of Foot-and-Mouth Disease in Livestock Using Supervised Machine Learning Algorithms	Ebtsam Mahmmod , Almabruk Sultan
12:00-12:15	210	Advanced Machine Learning for Dyslexia Detection Using Eye Movement: A Systematic Review	Zahow Khamees , Naima Abdel Aziz Abdel Hadi , Almabruk Sultan , Kenz Amhmed Bozed
12:15-12:30	225	A Hybrid Deep-Tabular Framework for Concrete Crack Detection Using UCI Mix Design and CCIC Image Embeddings	Ahmed Alwirshiffani Ramadan Ahmed , Najm Ayad ,Aeshah Alzayani
12:30-12:45	264	Performance Evaluation of DQN Variants in Algorithmic Trading	Youcef Soufi , Seddik Khemaissia , Ali Almaktoof
12:45-13:00	278	Mean Monthly Rainfall Prediction at Ajdabiya Station Using Artificial Neural Networks	Aeshah Alzayani, Abubakr Mohammed
13:00-13:15	154	Optimizing Brain Tumor Segmentation: Hybrid Architectures and Loss Functions	Amal oshah , Ahmed Rgibi Hesham Amin ,

ROOM 2

Session: Database and Data Mining			
Chairs: Hamouda Chantar , Salem Alsaid			***https://meet.google.com/tdf-zqms-oow***
Time	**Paper ID**	**Paper Title**	**Authors**
11:30-11:45	114	National Cybersecurity Risk Posture in North African Countries: A comparative Study with Libya	IMAN MOHAMED, Mohamed Altaher Ben Naseir
11:45-12:00	62	Minority-Class Internet of Things Anomaly Detection via Deep Learning Models	Llahm Ben Dalla, Ömer Karal , Mansour Essgaer, Yousef Swissi, Mohamed El-Sseid
12:00-12:15	139	Using Classification Algorithms to Predict and Evaluate the Performance of Kidney Disease	Zakaria Zubi Bassam Alshehomiue
12:15-12:30	153	Explainable Ensemble Learning for Student Dropout Prediction in Conflict-Affected Educational Systems	Amna Abas, Mansour Essgaer Llahm Ben Dalla
12:30-12:45	311	Per Capita CO2 Emissions Forecasts for Libya's Zero Routine Flaring Target by 2030	Retaj Wershfani , Asma Bushaala , Rayan Bribesh ,Mohamed Baqar
12:45-13:00	348	Optimized CNN Architectures for Arabic Sign Language Recognition: A Comparative Study on the LibyanArSL Dataset	Weageh Founas
13:00-13:15	84	A Radon Transform-Based Framework for Target Detection in Low-Visibility Hazy Atmospheres	Asem Khmag , Raja Mostafa Ali Salem , Retaj Abd Almajd Alahresh ,

ROOM 3

Session: Power Distribution System and Power Plant			
Chairs: Omar Rehel, Abdulgader Alsharif		*https://meet.google.com/kwb-ketu-gyy*	
Time	**Paper ID**	**Paper Title**	**Authors**
11:30-11:45	29	Artificial Intelligence Utilization for PQ Concerns in Power Grid: Cybersecurity, Optimization and Policy Implications	Mohamed Khaleel , Ziyodulla Yusupov , Wahab Ali Shah
11:45-12:00	31	AI Applications for Power Quality Challenges in Distribution Systems: Technical Barriers and Emerging Trends	Mohamed Khaleel , Ziyodulla Yusupov , Ali Hesri , Pirimov Odil , Rashidov Jahongir ,Ibrahim Imbayah ,
12:00-12:15	39	Dual Active Bridge Converter Design for Solid-State Transformer–Based Power System Applications	Khaled Ghambirlou , Adel Abosnina , Gerry Moschopoulos ,
12:15-12:30	286	Application of Whale Optimization Algorithm to Optimal Economic Dispatch Problems	Abdulwahid khalleefah , Omar Mrehel , Abdurazaq Elbaz
12:30-12:45	54	Synergistic Impact of Iron Oxide contamination and Moisture Ingress on Dielectric Breakdown Characteristics of Vegetable and Mineral Transformer Oils: Experimental Investigation and Statistical Modeling	Abdulrahman Omar
12:45-13:00	36	Environmental Determinants Influencing Solar PV System Performance: Ambient Air Temperature, Atmospheric, and Extreme Natural Events	Salih Abraheem ,Mohamed Khaleel , Ziyodulla Yusupov , Omar Ali Zargelin , Yasser F. Nassar , Hala J. El-Khozondar
13:00-13:15	270	Effect of GT Exhaust Temperature on HRSG Effectiveness: A Case Study of Misurata Power Plant	Ali Hegaig

ROOM 4

Session: Advanced Intelligent Control			
Chairs: Salem K Brini , Otman B.Alhodiry		***https://meet.google.com/rts-xbyp-kvn***	
Time	**Paper ID**	**Paper Title**	**Authors**
11:30-11:45	30	Recurrent Neural Network Framework for Dynamic Load Prediction in Wind Turbines	Mohamed M. Alhneaish, Mostafa A. Essuri, Mohamed G.Rahuma, Hosam.A. Alnaily
11:45-12:00	176	Implementing MPC and ADRC for robust Multivariable Control of PWR Nuclear Power Plants	Ahmed F. Zregan; Ahmed abougarair Masoud Ramadhan; Suad Judour
12:00-12:15	214	Design of Adaptive Neuro-Fuzzy Inference System Power System Stabilizer For a Multi-machine System	Abdullah Ahlees Tawfiq Elmenfy
12:15-12:30	246	A Physics-Guided Hybrid LSTM Model for Predicting Poultry House Temperature Dynamics under Libyan Climatic Conditions	Tahani Almabruk; Mohammed Bouheesah
12:30-12:45	250	Overview and Experimental Implementation of DC-DC Buck Converter with Voltage and Current Control Loops Using MOGA	Asma Alfergani; Salma Elkawafi; Hassan Alfaitouriy; Anas Algargouri; Mohamed Bashir Al-Mabrouk ; Farhat M. Shaltami; Joumanah Saret ; Ashraf Khalil
12:45-13:00	363	Adaptive Back-stepping Control for trajectory tracking of a quadrotor UAVs	Nuradeen K. Fethalla; Tareq N. Elgargani; Khalid Salem Aleja; Abdulkarim A. Hudoud
13:00-13:15	372	Optimal LQG Controller Design for Self-Balancing Two Wheeled Vehicle Stabilization	Shada E. Elwefati

ROOM 5

Session: Wireless/ Mobile Communication			
Chairs: Ahmad Almhdie-imjabbar, Amer Zerek *https://meet.google.com/bek-yoes-eed*			
Time	**Paper ID**	**Paper Title**	**Authors**
11:30-11:45	140	Optimizing Fairness and Energy Efficiency in Small Cell CR-NOMA Downlink for Sustainable Resource Allocation	Nahla Nur Elmadina , Rashid Saeed , Elmustafa Sayed Ali , Elsadig Saeida , Mohammed S. Elbasheir
11:45-12:00	168	VAE-Based Joint Coding–Modulation and PCA in Digital Semantic Communication	Ahmed Farhat, Osama Abusaid
12:00-12:15	171	Particle Swarm-Optimized Hybrid Beamforming for Spectral Efficiency in mmWave MIMO Systems	Mohamed Elalem, iliasa Ilias Ismail
12:15-12:30	197	Learning-Based Joint mmWave Beam Alignment under Standardized 3GPP TR 38.901 UMi Channels	Hend Jannat , Mahmoud Almuntasier , Jalal Srar
12:30-12:45	238	Performance Analysis of IRS-Assisted Uplink Massive MIMO under Correlated Channels	Jamal AMADID , Asma Khabba , Zakaria El Ouadi , Hager Hadi Bishi , Abdelouhab zeroual
12:45-13:00	344	Bio-Inspired Hybrid Antenna Synthesis for Optimizing 5G Network Slicing in Tripoli's mmWave HetNet	Sara fkini, Amer Zerek
13:00-13:15	364	The Environmental Impact of Proof-of-Work Blockchains: An Empirical Comparison of Bitcoin and Green Alternatives	Lotfi Ezzeddini , Tarek Frikha , Jalel Ktari

Lunch (13:30 – 15:00)

SESSION

2

Time (15:00-17:00)

ROOM 1: **Algorithms and Computational Science**
ROOM 2: **Control in Power Electronics**
ROOM 3: **Internet Computing and Health Informatics / Artificial Intelligence & Machine Learning**
ROOM 4: **Fiber-optic Communication and Wireless Power Transmission**
ROOM 5: **Signal and Image Processing**

ROOM 1

Session: Algorithms and Computational Science			
Chairs: Ibrahim mokhtar , ElJilani Hmouda		*https://meet.google.com/qsf-cswq-qzq*	
Time	**Paper ID**	**Paper Title**	**Authors**
15:00-15:15	18	A Low-Resource Challenge: Comparative Analysis of Hate Speech Detection in Libyan Social Media	Asma salem; Yahyia BenYahmed ; Mansour Essgaer ; Eman Elzekrawy
15:15-15:30	34	Identifying Clinical Priorities in Post-Traumatic Stress Disorder: A Phenotype-Based Network Analysis Approach	Fathiyah Aejaal, Asma salem, Mansour Essgaer; Mohamed Matoug; Roqyia Abdelhamed
15:30-15:45	152	Feature Selection for Arabic Sentiment Analysis using Genetic Algorithm and Support Vector Machine	Mabrouka Mohammed Hamouda Chantar
15:45-16:00	215	Facial Recognition Accuracy and Verification time Comparison Between ArcFace and Facenet Models on DeepFace Framework	Essra Abdulbaset; Juma Ibrahim; Ayad Keshlaf
16:00-16:15	236	Security Bug Report Classification: A Comparative Study of Convolutional Neural Networks and Large Language Models	samia Abdalhamid; Riad Dawood; Rabe Abdalkareem
16:15-16:30	11	Preserving Cultural Heritage: A Deep Learning Approach for Classifying and Recommending Libyan Traditional Clothing	asma salem , mansour Essgaer , Ruqayah Mohamed Albahi
16:30-16:45	38	Libyan Restaurants: A New Annotated Corpus for Sentiment Analysis of the Libyan Arabic Dialect	Rabia Lamami Manar Arif, Weiam Saheri , Mansour Essgaer Asma Agaal ,Aisha Abuhajar

ROOM 2

Session: Control in Power Electronics			
Chairs: Mohamed Nouri , Salah Mohamed Moussa			***https://meet.google.com/tdf-zqms-oow***
Time	**Paper ID**	**Paper Title**	**Authors**
15:00-15:15	131	Unsupervised Anomaly Detection for Energy Theft Identification in Smart Grids using Using Isolation Forest and Autoencoder Models	Maram J. Elzubair ,Rawya E. Elbashir ,Rayan M. Musa , Tasneem A. Alkhalifa ,Mamoon M. Saeed , Mohammed S. Elbasheir , Rania Mokhtar
15:15-15:30	256	Optimal PI Controller Tuning for PMSM Speed Control Using PSO with an Asymmetric Cost Function	Tareq Alkaar, Ali Almaktoof , Salah Mousa Abdulhamed Essed, Mohammed M. Makarussu
15:30-15:45	99	AI-Enabled Power Grid Optimization: A Case Study of Libya Informed by the UK Model	Abdalslam Mohmed , Hamad omar , Abdulrauf Abdulrahman
15:45-16:00	42	The Role of Energy Storage Technology in EVs: Classification, Evaluation, Optimization, Current Trends and Future Perspective	Abdullah Abodwair , Muhammet T. Guneser , Mohamed Khaleel , Abdurazaq Elbaz
16:00-16:15	314	Performance of Grid-on Hybrid System Integrated with Electric Vehicle-to-Grid Using Search Algorithms Optimization	Mohamed Nuri Hussin , Mohamed A Hossin , Sadam A Alnaghnoughi , Abdulgader Alsharif
16:15-16:30	137	SiC-MOSFET Technology for Medium Voltage Wind Inverter	Abdallah Hussein , Alberto Castellazzi

ROOM 3

Session: Internet Computing and Health Informatics / Artificial Intelligence & Machine Learning			
Chairs: Almahdi alshareef , Ahmed Abougarair		*https://meet.google.com/kwb-ketu-gyy*	
Time	**Paper ID**	**Paper Title**	**Authors**
15:00-15:15	10	Breast Tumor Classification Using a Hybrid System Combining a CNN with Genetic Algorithm and K-means for Mammography Images	Reima Almajdoub, Eslam Sheta , Muhammad Siddiqui
15:15-15:30	208	Predictive Maintenance for Industry 4.0: Bearing Fault Detection from Real Vibration Data Using Lightweight Supervised and AutoML-Based Models	Taha Muftah Abuali , Abdussalam Ali Ahmed , Yasser Fathi Nassar , Mohamed Mohamed Khaleel , Hala El-Khozondar ,Abdulgader Alsharif
15:30-15:45	106	Performance Evaluation of OpenStack in Virtual Network Environments	Lojain Saadawi , Salem Sati , Mahmud Mansour
15:45-16:00	185	Academic Feedback Module: An Integrated System for Quality Assurance and Student Evaluation at Libyan International University	Ehab Elfallah, Nahla Burweiss
16:00-16:15	16	The Impact of Internal Factors on Deep Neural Network Learning in Simple Data Tasks	Abduladem Aljamel
16:15-16:30	20	Uncovering Linguistic Patterns in Libyan Dialect Abusive Language: An Association Rule Mining Approach Using FP-Growth	Mansour Essgaer , Asma Agaal
16:30-16:45	167	Exploring Machine Learning and Deep Learning Models for Circuit Performance and Parameter Prediction	Ghofran Meftah , Kenz Bozed , Aya Elsahati

ROOM 4

Session: Fiber-optic Communication and Wireless Power Transmission			
Chairs: Ahmad Almhdie-imjabbar, Nafaa M Shebani https://meet.google.com/rts-xbyp-kvn			
Time	**Paper ID**	**Paper Title**	**Authors**
15:00-15:15	8	Modulation Scheme Recognition Based on CNN Deep Learning Techniques	Mohamed Elalem Saleh Abdalnour
15:15-15:30	370	Multicell MU-MIMO for B5G and 6G Systems: Efficiency Metrics Analysis in Composite Propagation Environment	Abdulbaset Hamed
15:30-15:45	128	Analysis and Evaluation of Four-Wave Mixing Effects in Ultra-Dense WDM Optical Fiber Networks	Sabrin Abdulrraziq Farhat Shaltami
15:45-16:00	242	Performance Analysis of BER and Q-Factor in WDM Optical Fiber and Free Space Optical Communication Systems Using OptiSystem	Mohamed Alkelsh
16:00-16:15	265	Topology-Aware Deep Reinforcement Learning for Joint Resource Allocation in Ultra-Dense 6G Networks	Youcef Soufi , Nada Djedouani , Seddik Khemaissia , Ali Almaktoof
16:15-16:30	282	Performance of LS and MMSE Channel Estimation for NOMA-OFDM Detection	Mohamed babana, Mohamed Nuri Hussin
16:30-16:45	310	Path Loss Prediction for 4G/LTE Mobile Networks in the City of Tripoli at 1800 MHz	Saad hamed , bader aldliow , Moustafa Abdalla

ROOM 5

Session: Signal and Image Processing			
Chairs: Ali Okasia, Rahma Altaher		***https://meet.google.com/bek-yoes-eed***	
Time	**Paper ID**	**Paper Title**	**Authors**
15:00-15:15	219	Leveraging Hybrid Learning Model for Violent Recognition in Surveillance Videos	Hajer Altaweil Kenz Bozed
15:15-15:30	240	Performance Evaluation of HEVC Lossy and Lossless Compression in Mechanical Surface Imaging	Tarek Eseholi , Bushra oun , Shada Al , Aish Khalfall
15:30-15:45	280	Deep Learning Approach for Pneumonia Detection in Chest X-Rays with Visual Explanation Technique	abdelkader alrabai
15:45-16:00	287	Global Context Modeling in Medical Image Synthesis: A Bottleneck-Attention 3D CycleGAN Approach on the SynthRAD2023 Dataset	Rouida Ahmed ,Mansour Essgaer , Rabia Al Mamlook (Zawia University)
16:00-16:15	294	Comparative Analysis of Transformer-Based Architectures and Hybrid Deep Models for Colorectal Cancer Classification from Histopathological Images	Hawa Abu Snina ,Najah Ali Ja'adan , Mustafa Abuzaraida
16:15-16:30	327	Implementing of BFD with Different Routing Protocols in DMVPN Networks	Mahmud Mansour
16:30-16:45	329	Ethical Hacking Approaches: Revealing Hidden Networks via Double Pivoting Techniques	Mahmud Mansour

Second Day

Monday, April 6, 2026

ROOM 1

Plenary Session 2 **Time (9:00 -10:00)** *https://meet.google.com/qsf-cswq-qzq*
Chairmen's: Maher Kharrat , Ahmed Alhodairi **Speaker 2: Prof. Mohamed Bennasar** **Title: Beyond Accuracy: Designing AI Systems for Real-World Decisions**

Plenary Session 3 **Time (10:00 -11:00)**
Chairmen's: Kenz Bozed , Ali Ganoun **Speaker 3 : Prof. Alyani Ismail** **Title: Electromagnetic Sensing for Sustainable Rare Earth Discovery toward Smart Mining**

Coffee Break (11:00-11:30)

SESSION

1

Time (11:30-13:30)

ROOM 1: Security & Networks
ROOM 2: Applied Computing
ROOM 3: Power plant operation and control
ROOM 4: Microwaves and antennas/ Networking and Communications
ROOM 5: Artificial Intelligence & Machine Learning

ROOM 1

Session: Security & Networks			
Chairs: ElJilani Hmouda, Maher algali			***https://meet.google.com/qsf-cswq-qzq***
Time	**Paper ID**	**Paper Title**	**Authors**
11:30-11:45	55	Insider Threat Detection and Prevention through Behavioral Profiling and Targeted Training	Fatimah Aldeeb ,Salah Elorfy , Almabruk Sultan
11:45-12:00	95	A Format-Preserving Encryption Method for Securing Geospatial Vector Map Data	Ahmed Abubahia , Adel Rahuma , Hisham AbouGrad , Salem Alsaid , Mohamed Alrayes
12:00-12:15	207	Comprehensive DDoS Detection Framework for Cloud Service Providers	Abobaker Elgasaier , Salem Sati , Mahmud Mansour
12:15-12:30	222	Design and Implementation of a Secure Hybrid Host-Based Intrusion Detection System (HIDS) Using Signature-Based and Machine Learning Techniques	Alhashimi Alhdada , Guzlan Miskee
12:30-12:45	243	Explainable Prediction of Phishing Susceptibility in Higher Education Using Learning Analytics and Cost-Sensitive Random Forests	abdusamea Omer , basem amer , Alhasan Almahroug , Zuher Fheleboom
12:45-13:00	345	Improved System for Generating Electronic Digital Signatures Based on Virtual Infrastructure	Vyacheslav Gerasimov , Olga Boiprav , Islambek Saymanov , Sana Abdaljlil
13:00-13:15	335	Performance Evaluation of Different VoIP Codecs Under UDP Flooding Attack in SDN	Abdusalam yahya , Kamal Tawer

ROOM 2

Session: Applied Computing			
Chairs: amer sahl, Kenz Bozed			***https://meet.google.com/tdf-zgms-oow***
Time	**Paper ID**	**Paper Title**	**Authors**
11:30-11:45	129	Al-Based Multi-Sensor Drone System for Detection of Unexploded Ordnance and Portable Weapons	Mohammed Abdalla , Thuwaybah Mohammad , Yassin Eisa , Mohammed Omer , Ahmed Salaheldin , Rashid Saeed , Mamoon Saeed , Mohammed S. Elbasheir , Rania Mokhatr
11:45-12:00	158	Detecting Audio Deepfakes in the Libyan Dialect: A Stacked Ensemble Approach Using MFCCs and Mel-Spectrogram CNNs	Mona Bouaisha Mohammed Elsheh
12:00-12:15	169	DRL-Driven Integrated Demand Response Model: A Dynamic Pricing Strategy for Energy Systems	Gaddafi Almannouny , Mohamed Elfiatoure , Salem Alsaid ,Hisham AbouGrad
12:15-12:30	291	Comparative Evaluation of End-to-End Automated Testing Tools for Web Applications: Cypress vs. Playwright	Mabroukah Maeyouf; Hisham Imhmed; Fatma Awidat; Mansour Ahwidy; Khamiss Ahmed
12:30-12:45	293	Assessing the Impact of the LearnOOP Tool on Enhancing the Understanding of Object-Oriented Programming-An Experimental Study Across Three Semesters	Sakeenah Ahmed ; Aisha Alfitouri ; mohammed albarkoli; Khamiss Ahmed; Mahmmoud Alawan
12:45-13:00	374	Association Rule Mining and Performance Evaluation of Libyana Mobile Network: Evidence from Six Months of Operational Data	Almahdi Alshareef; Salem Alsaid; Mohammed Ahzaz; Ziyad drhop; Ali Alshrif
13:00-13:15	5	Beyond Accuracy: A SHAP and LIME-based Explain Ability Framework for Pharmacy Profit Prediction	Asma salem

ROOM 3

Session: Power plant operation and control			
Chairs: Abdulgader Alsharif , Rehil omar Abdulhadi *https://meet.google.com/kwb-ketu-gyy*			
Time	**Paper ID**	**Paper Title**	**Authors**
11:30-11:45	87	The Optimal Solution of Economic Load Dispatch Problem Using Improved Gradient-Based Optimization Algorithm	Saleh Altbawi, Mohsen Bakouri , Abdulsalam Abraheem Almahdi , Mohamed Hussin Abdullah Altaher, Anis Suliman Ali Bakouri, Mohammed Abdulhadi Almahdi Alsaddeeg
11:45-12:00	101	Enhancing Coordination and Power Transfer in Interconnected Regional Energy Systems: Optimal Combination of Load Demand and Optimal Unit Commitment in the total load demand	Abdulhakim Treki
12:00-12:15	193	Modeling and Robust Control of SEIG-Based Wind Energy Systems Using Linear RST and Nonlinear Sliding Mode VOC Techniques	Abdussalam Ali Ahmed, Zabouri Abdelhamid, Abdallah Belabbes, Mohammed Ben Ahmed, Della Krachai Mohamed, Riyadh Bouddou, Adel Oubelaid
12:15-12:30	204	Dynamic Programming–Based Optimal Unit Commitment for Thermal Power Systems: A Cost-Efficient Scheduling Framework	Taha Muftah Abuali, Farid Benhamida, Ismail Ziane, Adel Oubelaid , Bouddou Riyadh , Abdussalam Ali Ahmed
12:30-12:45	255	An Enhanced Intelligent Server Monitoring System for Predictive Fault Detection and Triage Prioritization	Maria A. M. Abdelsalam , Marwa Y. Mohamed , Alrahma F. G. Alnour , Ahmed A. M. Ibrahim , Mamoon M. Saeed , Mohammed S. Elbasheir , Rania Mokhtar
12:45-13:00	260	Quantifying the Impact of Electrical Load Noise on Gas Turbine Dynamic Behavior Using Multidomain Modelica Modeling	Montaser Mohamed, Abdelbaset Ihbal, Ahmed Asiwi
13:00-13:15	341	Sizing And Placement of Reactive Power Compensation Devices for Voltage Stability Enhancement in the Southern Region of the Libyan power Grid	Omar . G. Mrehel

ROOM 4

Session: Microwaves and antennas / Networking and Communications			
Chairs: hamd abdlahig , Bobaker k alasufer		*https://meet.google.com/rts-xbyp-kvn*	
Time	**Paper ID**	**Paper Title**	**Authors**
11:30-11:45	13	AI Augmented Big Data Framework for Edge Driven Threat Intelligence in Software Defined Networks	Het Mehta
11:45-12:00	14	A Reinforcement-Guided Graph Attention Framework for Autonomous Self-Healing in Software-Defined Networks	Het Mehta
12:00-12:15	148	Design and Performance Enhancement of a Sub-Terahertz Patch Antenna Using SRR Metamaterials for 6G	Khalid Elwrfalli Ibtihal ElShami
12:15-12:30	149	Wide-Angle Beam Scanning from a Leaky-Wave Antenna Using Second-Mode Ridge Gap Waveguides	Abduladeem Beltayeb, Allafi Omran , Mohsen Ibrahim Mohamed
12:30-12:45	262	Multi-Stage SAR Framework for Detection, Tracking, and Identity Classification of Humans, Movement and Similar Things	Salwa Ahmed Marai Abousetta
12:45-13:00	263	Kalman-Enhanced DEMON Processing for Multi-Hydrophone Passive SONAR Detection in Offshore Environments	Marai Abousetta, Saaida Al Nour
13:00-13:15	275	Development and Analysis of High-Q Slotted Patch Antennas for 28 GHz Applications	Abrar Alswei Adel Saad

ROOM 5

Session: Artificial Intelligence & Machine Learning			
Chairs: Omar Shiba, Hasan alkhadafe			***https://meet.google.com/bek-yoes-eed***
Time	**Paper ID**	**Paper Title**	**Authors**
11:30-11:45	71	AI System for Bias Detection in Datasets: A Comprehensive Framework for Fairness Assessment	Kalaiyarasan S , Chitradevi B , Sheik Rasheed R , Abubakkar M
11:45-12:00	92	Tenancy-Aware AI Automation for B2B SaaS Admin Workflows	Sidharth Gopakumar
12:00-12:15	93	Lightweight Neural Encryption for Real-Time Audio Communication: An Edge-Optimized Approach	Nada Gheriyani Elbahlul Elfgee
12:15-12:30	97	Evaluating the Impact of Deep Learning Techniques for Arabic Handwritten Digits, Characters and Word Recognition	Ezuldeen Saeid Ahmad Lawgali
12:30-12:45	102	Advancing Cancer Surveillance in Libya: Insights from the Largest National Dataset Using Geospatial and Cluster Analysis	Roqayia salem ,Mansour Essgaer ; Abubaker Shibani Rabia Al Mamlook; Mohamed Matou Ayoub AlhaajAli Khola Iswikan Asma Agaal
12:45-13:00	142	Optimization Latency in IoT Edge computing using Generative Digital Twins	Ahmed M. Alhassan; Musaddag K. O. Taha; Maha A. K. Al-Shafee; Hussam S. Mohmmad; Rashid Saeed; Mamoon M. Saeed , Mohammed S. Elbasheir , Rania Mokhtar
13:00-13:15	52	Optimizing Kidney CT Image Classification: A Stacking Ensemble Approach with Preprocessing and Fine-Tuned Deep Models	fatima ALjafaari, Amna Mohamed Elhawil

Lunch (13:30 – 15:00)

SESSION

2

Time (15:00-17:00)

ROOM 1: **Microwaves and antennas**
ROOM 2: **Security & Networks**
ROOM 3: **Artificial Intelligence & Machine Learning**
ROOM 4: **Power plant operation and control**
ROOM 5: **Signal and Image Processing - Software Engineering- Wireless/ Mobile Communication**

ROOM 1

Session: Microwaves and antennas			
Chairs: Hussein e Osman, Mohmmed jabril			***https://meet.google.com/qsf-cswq-qzq***
Time	**Paper ID**	**Paper Title**	**Authors**
15:00-15:15	299	An Accurate and Efficient Method of Lines Formulation for Electromagnetic Wave Propagation in Time-Varying Media	Mustafa Giledi Marai Abousetta
15:15-15:30	305	Design of a Compact Dual-Port Diamond-Shaped MIMO Antenna with Enhanced Isolation Characteristics for Wideband 5G Wireless Systems Using DGS and EBG Techniques	Abdulbari Almaghribi , Moustafa Abdalla , Albatool Elmezwghi
15:30-15:45	323	Design of an Integrated Reconfigurable HMSIW Band-Pass Filter Using Metamaterial Technology	Aimen Faraj Abdelhamid, Adel Emhemmed
15:45-16:00	351	EMI Shielding Metamaterial-Based Absorber for Electric Vehicle Applications	Lolo I Ftis Marai M Abousetta
16:00-16:15	352	A Differentially Fed Dual-Polarized Microstrip Antenna With Wideband and Low Profile for Mm-wave Application	Magid Alzidani, Abduladeem Beltayib , Islam Afifi
16:15-16:30	371	Joint Adaptive Waveform Selection and Trajectory Optimization for Enhanced Target Tracking in Mobile Multistatic Radar Systems	Ramdan A. M. Khalifa
16:30-16:45	234	Design, Implementation, and Performance Evaluation of a Long-Range Quadcopter	Hassan Aldeeb Najib Asbiqa, Tariq Mleitan

ROOM 2

Session: Security & Networks			
Chairs: Selam Alsiad, Khaled zeidan			***https://meet.google.com/tdf-zqms-oow***
Time	**Paper ID**	**Paper Title**	**Authors**
15:00-15:15	165	leveraging graph neural network models for intrusion detection in secure networks	Nuri Alshammam , Nuredin Ahmed , Malak Alshammam
15:15-15:30	266	Neural Warm-Starting for Physics-Enforced Electromagnetic Inversion	Youcef Soufi , Nada Nada Djedouani , Seddik Khemaissia , Ali Almaktoof
15:30-15:45	17	A robust Video Stabilization Approach for Direct Estimation of Camera Motion Using Deep Learning	Asem Khmag Olfa Alkadaa
15:45-16:00	187	Hybrid Deep Learning Feature Extraction and Ensemble Machine Learning for Fracture Detection	Masoud Hussen , Abdalkreem Masaod , Awatif Abdulmawlay , Mohamed Abdalla
16:00-16:15	188	EEG Analysis with Power Spectral Density, Spectral Entropy, and Alpha/Beta Ratio for Brain State Classification	Salma Ali Rodina Belkasem Taher
16:15-16:30	261	Proactive Response and Incident Simulation Model (PRISM) Aligned with MITRE ATT&CK for Cybersecuirty incidents	Azeddien Sllame Areej altirban
16:30-16:45	317	Semantic Aware Static Analysis For Ransomware Detection: Preliminary Results From A Lightweight Embedding And Graph Augmented Framework	Salah Naas Azeddien Sllame

ROOM 3

Session: Artificial Intelligence & Machine Learning			
Chairs: Amer Sahl	**Hamouda Chanta**	**https://meet.google.com/kwb-ketu-gyy**	
Time	**Paper ID**	**Paper Title**	**Authors**
15:00-15:15	124	AUTOPHONEX: An Interpretable Framework for Automatic Articulatory Labelling of Arabic Speech Using Self-Supervised Deep Embeddings	Suher ElBasha Amna Elhawil
15:15-15:30	125	Predictive Modeling of Enrollment Suspension Risk: A Case Study of the University of Tripoli Using Explainable AI Techniques	Suher ElBasha , Yusra Maatug , Issmail Ellabib
15:30-15:45	159	A Robust Machine Learning Framework for Accurate Hepatitis Prediction Using Random Forest	Mohammed Najy , Almabruk Sultan , Mohammed Ramadan
15:45-16:00	162	Enhancing Indoor Localization Accuracy: A Comparative Study of Decision Tree and Random Forest Algorithms as Successors to KNN-based Approaches	Mohammed Aboughlia Mohamed Elalem ,
16:00-16:15	183	A Digital Twin-Enhanced Battery Management System with Adaptive Learning for Electric Vehicle Applications	Deepakkumar M Gururagavendran G BlessedSam B
16:15-16:30	190	Cluster Analysis of North Carolina's County-Level Crime Rates	Eljilani Hmouda Sebastian Portuondo
16:30-16:45	318	Comparative Performance of PID with MPC for Optimizing Furnace Control	Roua Alkerdasi , Ahmed Zrigan Ahmed Abougarair

ROOM 4

Session: Power plant operation and control			
Chairs: Mohamed Nouri Salem K Brini Ahmed			***https://meet.google.com/rts-xbyp-kvn***
Time	**Paper ID**	**Paper Title**	**Authors**
15:00-15:15	307	Megawatt-Scale Filter Design for Off-Grid Fuel Cell Systems	Khalid Ben Hamad ,Mohamed Salem , Mohamed A Alsharif
15:15-15:30	28	Towards Electrolyser Deployment and Manufacturing Capacity of China: Technological Innovation, Localization, Investment, and Policy	Mohamed Khaleel, Ziyodulla Yusupov, Wahab Shah
15:30-15:45	83	Accurate proton exchange membrane fuel cell model parameters estimation using the Hippopotamus Optimization algorithm	Alhasan Almalih , Aiman Nouh
15:45-16:00	104	Optimal Power Flow of an Offshore Wind Energy System Integrated to the 12-Bus Power System in Benghazi Distribution Network	Duaa Elshaibani, Ahmed Tahir
16:00-16:15	331	Thermo-Electrochemical Performance Optimization and Parametric Characterization of Solid Oxide Electrolyzer Cells Using MATLAB	Ibrahim Tawil , Zahra Gebrel Salem Khamkhem, Ibrahim Alhaj
16:15-16:30	151	Legacy to Leadership: Techno-Economic Engineering of a Hybrid Renewable Energy System for Critical Hospital Loads at Gharyan Central Hospital, Libya	Abdurazaq Elbaz,Walaa Abouirad
16:30-16:45	194	A Combined Genetic Algorithm–STATCOM Framework for Enhanced Optimal Power Flow and Voltage Stability	Abdussalam Ali Ahmed , Ismail Ziane, Farid Benhamida , Riyadh Bouddou , Adel Oubelaid , Monaem Elmnifi

ROOM 5

Session: Signal and Image Processing - Software Engineering- Wireless/ Mobile Communication			
Chairs: Rasim Amer Ali, Adel Emhemmed		*https://meet.google.com/bek-yoes-eed*	
Time	**Paper ID**	**Paper Title**	**Authors**
15:00-15:15	300	Enhancing Kidney Stone Detection in X-ray Images: A Comparative Performance Analysis of YOLOv8 and YOLOv11 Architectures	Ayman Mohammed Al-Alwany , Walaa Bubakr Al-Farjani , Jamila Omran Elhadiriy , Zahow Khamees
15:15-15:30	360	Automated Deepfake Image Detection via Mutual Information–Based Feature Selection and AutoML	Tarek A M Nagem
15:30-15:45	298	Adaptive Coding and Modulation for Mitigating Plasma-Induced Scintillation in Satellite Communication Links	Mustafa Giledi ,Marai Abousetta
15:45-16:00	80	A Novel Divide-and-Conquer Enhanced A-STAR Algorithm for Efficient and Robust Path Planning	Jabril Ramdan , asma Abouethlah , Siham Khalleefah
16:00-16:15	349	Using Multiple-Feature Selection Methods With Hypared Random Forest and Support Vector Regression Models for Effort Estimation	Abdelsalam Maatuk
16:15-16:30	271	BER Performance Comparison of 16-ary PSK, APSK, and DPSK in 2x3 MIMO Systems over AWGN and Fading Channels	Hajer Dougdoug Amer Zerek
16:30-16:45	289	Exploring the impact of word embedding techniques with Hybrid Deep Learning Models for Accurate Multi-Class Cyberbullying Identification on X (Twitter	Niroz Alwerfally

Third Day

Tuesday, April 7, 2026

SESSION

1

Time (9:00-11:00)

ROOM 1: Artificial Intelligence & Machine Learning
ROOM 2: Nonlinear Control System
ROOM 3: Power plant operation and control
ROOM 4: Algorithms and Computational Science
ROOM 5: System Identification and Validation - Network and Communication

ROOM 1

Session: Artificial Intelligence & Machine Learning			
Chairs: Almahdi alshareef, Maher Kharrat		*https://meet.google.com/qsf-cswq-qzq*	
Time	**Paper ID**	**Paper Title**	**Authors**
9:00-9:15	342	Automatic Metadata Extraction from Arabic Book Covers Using Deep Learning-Based Text Recognition	Nawal Alghemi
9:15-9:30	368	Hybrid Machine Learning Approach to Enhance Cloud Intrusion Detection	Fatma Ismail Alwerfali Youssef Omran Gdura
9:30-9:45	328	The Dominant Role of AI Reliability and Accessibility in Digital Learning Adoption: Extending TAM in Libyan Universities	Khaled Abuhlfaia Marwa Mohamed Asmail Muftah
9:45-10:00	254	AI-Based ECG Signal Classification for Early Detection of Cardiac Abnormalities	Anas Zaid Ayyah Mohammed
10:00-10:15	145	Monte Carlo Dosimetric Validation of High Energy Photon Beams (6, 10, 15, and 18 MV) Using GATE/Geant4 Simulation	Karima Elmasri
10:15-10:30	283	Rehab360: Ai-Driven Emotion-Aware and Predictive Addiction Recovery Framework	Mohanapriya N , Akalya B, Deepak V , Manikandan M
10:30-10:45	375	E-Learning Acceptance in a Libyan Private School: A Case Study in Sebha, Libya	Ali Y Zaydan , Ibrahim Nnaas , Almahdi Alshareef , Mohammed Shantal

ROOM 2

Session: Nonlinear Control System			
Chairs: Youcef Ahmed Soufi, Hussein e Osman			***https://meet.google.com/tdf-zgms-oow***
Time	**Paper ID**	**Paper Title**	**Authors**
9:00-9:15	221	H-infinity Framework with Nonlinear Validation: A Mixed-Sensitivity Approach to Robust Wheel Slip Regulation Using H-infinity Control for Variable Road Conditions	Ahseen Aldeeb
9:15-9:30	227	Experimental Comparison of PI and Model Predictive Control for Level Regulation of a Nonlinear Conical Tank	Otman Tawerghi , Youssef Arebi , Esam Maried, Mohamed Zayed
9:30-9:45	356	Comparative Performance Analysis of PID and FL Control for a Nonlinear Magnetic Levitation System	Nagmedeen eltorky, Ahmed zrigan, ,Khaled Elsouri
9:45-10:00	373	Self-Balancing Two-Wheel Robot Using Optimal and Intelligent Techniques	A. oun
10:00-10:15	284	Robust Attitude Stabilization of a Quadrotor UAV Using a Hybrid Fuzzy-PID Strategy	Taha Elkhazmi, Ahmed Abougarair , Shada Elwefati
10:15-10:30	297	Design and Evaluation of a Hybrid Predictive-Inversion Self-Tuning Regulator for Automotive Speed Control in Comparison With IMC-Based PID	Abdunaser Abdusamad, Farag Mousa

ROOM 3

Session: Power plant operation and control			
Chairs: Mohamed Sharif, Mohmmed jabril		***https://meet.google.com/kwb-ketu-gyy***	
Time	**Paper ID**	**Paper Title**	**Authors**
9:00-9:15	205	Machine Learning-Based Wind Speed and Power Forecasting Using Meteorological Data	Taha Muftah Abuali , Abdussalam Ali Ahmed , Yasser Fathi Nassar , Mohamed Mohamed Khaleel , Hala El-Khozondar , Abdulgader Alsharif
9:15-9:30	226	Automated Defect Detection in Photovoltaic Modules for Enhanced Preventive Maintenance	lotfi ezzeddini , Amira Talha , Tarek Frikha , Jalel Ktari
9:30-9:45	269	Techno-Economic Analysis of Solar-Driven Reverse Osmosis Desalination: PV vs. CSP Comparison	Muetaz Mohammed
9:45-10:00	279	Potential of Decentralized PV Systems on City Rooftops as a Pathway to a Self-Sufficient Ghurafah: A Case Study	Ola Frewan
10:00-10:15	309	Adaptive Robust MPC for Photovoltaic Fast Electric Vehicle Charging Stations	Amira Lakhdara , Tahar Bahi ,Amina Benabda , Amina Azizi
10:15-10:30	367	Optimal Coordination of Directional Overcurrent Relays in IEC Microgrid Using Metaheuristic Algorithms	Mohamed Abdalsalam Alarafi , AbdAlsalam Elhaffar , Ali Asheibi
10:30-10:45	40	Design and Modelling of a Bidirectional Three-Phase Solid-State Transformer for Advanced Power System Applications	Khaled Ghambirlou Adel Abosnina Gerry Moschopoulos

ROOM 4

Session: Algorithms and Computational Science			
Chairs: Omar shieba , ElJilani Hmouda		***https://meet.google.com/rts-xbyp-kvn***	
Time	**Paper ID**	**Paper Title**	**Authors**
9:00-9:15	191	Forecasting Stock Prices Using ARIMA, LSTM, and Walk-Forward Validation	Eljilani Hmouda Camden Vuocolo
9:15-9:30	268	Supply Forecasting for a Pharmaceutical Distribution Company Using AutoML Techniques on Historical Sales Data	Eliana Omoora Tarek Nagem
9:30-9:45	290	Hybrid Learning Framework For Analog IC Parameter Predication	Niroz Alwerfally
9:45-10:00	319	A Late Acceptance Hill Climbing for the Electric Vehicle Routing Problem with Adaptive Penalties	Mansour Essgaer; Rabia Lamami; Aisha Abuhajar; Manar Arif; Weiam Saheri Asma Agaal
10:00-10:15	338	TinyLettuceNet: Custom Convolutional Neural Networks for Edge-Deployable Lettuce Disease Diagnosis in Low-Resource Farms	mohnned al-bibas Musa Faneer
10:15-10:30	350	Integrating Explainable Artificial Intelligence in Fraud Detection for E-Commerce Transactions	Khawla Abdulsattar, Azah Abdulsalam, Zahow Al-Mmbr
10:30-10:45	7	Fine-Tuning a CNN for Object Classification with ROI- Based Kalman Filter Tracking in an Assistive System for the Visually Impaired	Reima Almajdoub , Eslam Sheta , Muhammad Siddiqui

ROOM 5

Session: System Identification and Validation - Network and Communication			
Chairs: Guzlan Miskeen, Nafaa Mohamad Shebani		https://meet.google.com/bek-yoes-eed	
Time	**Paper ID**	**Paper Title**	**Authors**
9:00-9:15	200	E-MONAI: An Enhanced Hybrid Framework for Accurate Lung Nodule Detection in CT Scans	ELHUSAIN SAAD , Mohamed Eljabo , Ahmed Bera , Ali Grab
9:15-9:30	47	Software-Defined Networking with SDN Controller: Implementation, Performance Analysis, and Comparative Study Using Cisco Packet Tracer 8.22 2	Huda Bashir
9:30-9:45	337	Operational Performance Comparison of Signalized Intersection, Multi-lane Roundabout, and Turbo Roundabout Using Traffic Microsimulation	Abubakr Mohammed Aeshah Alzayani
9:45-10:00	113	A Performance Study of Indoor VLC Systems Employing Multi-User MIMO Technology	Zeyad Elkwash ,Suhayl Altayf , Abdullah Alqamoudi , Mohammed Farhat ,
10:00-10:15	120	User Identification TVWS Using Machine Learning	Faroq Awin
10:15-10:30	135	Adaptive Federated Learning based Resource Management in Mobile Edge Computing for Machine Type communication in 5G Network	Asia E. Ahmed , Ruaa S. Mohamed , Esraa Y. Hassan , Yusra Y. Hassan , Omnia A. Ali , Rashid Saeed , Mamoon M. Saeed , Mohammed S. Elbasheir
10:30-10:45	377	Multiple-Input Multiple-Output Systems Two-Stage Recursive Least Squares Identification Algorithm for Autoregressive Systems	Nasar Aldian Ambark Shashoa

Coffee Break (11:00-11:30)

ROOM 1

Plenary Session 4 Time (11:30 -12:15) https://meet.google.com/qsf-cswq-qzq
Chairmen's: Mohamed shaban, Mohamed Fadeel **Speaker 4: Prof. Sharif Abuadbba** **Title: The Rise of Agentic Al: New Risk Classes and How to Contain Them**

Discussion Panel Time (12:15 -13:30)
Artificial Intelligence and Redefining Educational Outcomes at Sebha University ***Moderators:*** 1. Dr. Abdulgader Alsharif, 2. Dr. Mabroukah Amarif

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