



[Conference](#) »Program

[2025 15th International Conference on Electrical Engineering \(ICEENG\) Program](#)

Time (Cairo)	10th Of Ramadan Hall	Room 2	Room 3	Room 1	Room 4	Main Hall Entrance	Abdelaziz Seif Hall
Monday, May 12							
09:00 am-	Conference						
11:00 am	Opening						
11:30 am-							ICEENG Opening
12:30 pm-							Keynote Speech 1
01:30 pm							
02:30 pm-							
03:30 pm		Modern Control Strategies for Aerospace Systems	Biomechanics & Prosthesis Research	IEEE MIT Egypt Chapter Workshop (1)	Keynote Speech 2		AI Applications Workshop
03:30 pm-					ICEENG Panel Meeting (1)		
04:30 pm							

Time (Cairo)	10th Of Ramadan Hall	Room 2	Room 3	Room 1	Room 4	Main Hall Entrance	Abdelaziz Seif Hall
Tuesday, May 13							
09:00 am- 11:00 am		<u><i>UAV Optimization and Adaptive Control</i></u>	<u><i>Microgrids and Smart Systems for Developing Nations</i></u>	<u><i>Hardware-Aware AI</i></u>	<u><i>Photonics Eng.</i></u>		<u><i>IEEE MITT Egypt Chapter Workshop (2)</i></u>
11:30 am- 12:30 pm		<u><i>Intelligent Control for Power and Industrial Applications.</i></u>	<u><i>Power Grid Renovation and Renewable Integration</i></u>	<u><i>IoT Security</i></u>	<u><i>Communications and Cyber Security</i></u>	<u><i>Poster Session 1</i></u>	<u><i>Keynote Speech 3</i></u>
12:30 pm- 01:30 pm							<u><i>Keynote Speech 4</i></u>
02:30 pm- 04:30 pm		<u><i>Advanced Modeling and Control for High-Dynamic Vehicles</i></u>	<u><i>Renewable & Hybrid Energy Systems</i></u>	<u><i>Bridging AI, Security, and Code</i></u>	<u><i>Biomedical Signal & Image Processing</i></u>		<u><i>Keynote Speech 5</i></u>

Time (Cairo)	10th Of Ramadan Hall	Room 2	Room 3	Room 1	Room 4	Main Hall Entrance	Abdelaziz Seif Hall
Wednesday, May 14							
09:00 am- 11:00 am		<u>Wireless Communications</u>	<u>Techniques of Electromagnetic Manipulation for Various Applications</u>	<u>AI-Powered Vision</u>	<u>Intelligent Guidance and Planning of Multi-UAV Systems</u>	<u>Poster Session 2</u>	<u>ICEENG Panel Meeting (2)</u>
11:30 am- 01:30 pm		<u>Signal Processing & Radar Applications</u>	<u>Radio Wave Propagation in Guided and Unbounded Media</u>	<u>New AI Trends</u>	<u>Emerging Trends in Power Electronics for energy distribution and automotive techniques</u>		<u>We Workshop (1)</u>
02:30 pm- 04:30 pm		<u>Remote Sensing</u>	<u>IEEE AP Egypt Chapter Workshop</u>	<u>AI-Powered Electrical Engineering</u>	<u>Modern Protection Techniques</u>		<u>We Workshop (2)</u>

Time (Cairo)	10th Of Ramadan Hall	Room 2	Room 3	Room 1	Room 4	Main Hall Entrance	Abdelaziz Seif Hall
Thursday, May 15							
09:00 am- 11:00 am		<i>Nano and Microelectronics Special Session</i>	<i>Navigation Engineering</i>	<i>AI Ethics in Healthcare</i>	<i>MTC Workshop</i>	<i>Poster Session 3</i>	<i>ICEENG 2026 Panel Meeting</i>
11:30 am- 12:30 pm							<i>Keynote Speech 6</i>

Monday, May 12

Monday, May 12 9:00 - 11:00

Conference Opening ↗

Room: 10th Of Ramadan Hall

Monday, May 12 11:30 - 12:30

ICEENG Opening 🧑🏫 ↗

Prof. Mahmoud Abdalla, "ICEENG Organizing Committee Chair Talk"

Room: Abdelaziz Seif Hall

Monday, May 12 12:30 - 1:30

Keynote Speech 1 🧑🏫 ↗

"Recent Advancements in Antenna-Based Systems and Channel Modeling"

Keynote Title: "Recent Advancements in Antenna-Based Systems and Channel Modeling"

Invited Speaker: Prof. Mohamed Nabil Srifi

Affiliation: Ibn Tofail University, Morocco

Room: Abdelaziz Seif Hall

Chair: Mahmoud Abdelrahman Abdalla (Military Technical College, Cairo, Egypt)

Monday, May 12 2:30 - 4:30

Modern Control Strategies for Aerospace Systems 🧑🏫 ↗

Room 2

Chairs: Mohamed Fathy Abo sree (Arab Academy For Science and Technology Engineering Faculty & AASTMT Company, Egypt), Ehab Safwat (MTC, Egypt)

[Optimized Attitude Control of a CubeSat Using Reaction Wheels and a Genetic Algorithm-Tuned LQR Controller](#) 📄

Ahmed Shawki (Military Technical College & Satellite Control Center, Egypt); Hossam Hendy (Military Technical College, Egypt); Mahmoud Mohamed Ashry (Arab Academy for Scisnce, Technology, and Maritime Transport, Egypt)

[CubeSat Attitude Control Using Dynamic Boundary Layer Adaptive Integral Sliding Mode Controller \(DBL-ISMCI\)](#) 📄

Ahmed Ashraf Bedewy (Military Technical College, Egypt); Mohammed Abozied Hassan Abozied (MTC, Egypt); Hossam Hendy (Military Technical College, Egypt)

[Developing a Numerical Model of Power Distribution and Management Subsystem for Low Earth Orbit Satellite](#) 📄

Ahmed Mohamed Taher Awad Elmayah (Military Technical College, Egypt & Space Technology Center (STC), Egypt); Mohamed Ibrahim and Amr Sarhan (Military Technical College, Egypt); Noha H. El-Amry (Arab Academy for Science, Technology and Maritime Transport, Egypt & AASTMT, Egypt)

Control Algorithms in Buildings Using Automated PLC Code Generation

Amin Al Ka'bi (Australian University - Kuwait, Kuwait)

Monday, May 12 2:30 - 4:30

Biomechanics & Prosthesis Research 🧑🏫 ↗

Room 3

Chairs: Manal Abdel Wahed (Egypt), Ahmed F. Elnokrashy (Nile University, Egypt)

[Epileptic Seizure Detection with TFI-Based EEG Signal Analysis and Machine Learning Methods](#) 📄

Samar Tuama (Thi-Qar University, Iraq); Wessam Al-Salman (University of Southern Queensland, Australia); Yan Li (School of Mathematics, Physics and Computing, Australia)

[Synergy-Based Machine Learning for Simultaneous Proportional Control of Prosthetic Hands: Dataset Design and Validation](#) 📄

Hamdy O Farag and Mohammed Ibrahim Awad (Ain Shams University, Egypt); Mohamed Gaber (Birmingham City University, United Kingdom (Great Britain)); Nancy E ElHady (Ain Shams University, Egypt)

[Incorporating Random Forests and Explainable AI for Upper Motor Function Assessment with the Wolf Motor Function Test](#) 📄

Mohamed Ahmed Abdelaziz and Mohammed Ibrahim Awad (Ain Shams University, Egypt); Shady Ahmed Maged (AinShams University, Egypt); Mohamed Gaber (Birmingham City University, United Kingdom (Great Britain))

[Evaluating Energy Consumption of Rigidly Controlled Exoskeleton-Assisted Gait in Healthy and Spinal Cord Injury Participants: Pilot study](#)

Mohamed Hamdy Abdelhafiz, Mohammed Ibrahim Awad, Ahmed M Hesham, Huda Hesham, Catherine Nader, Omar Ahmed Saboony, Ghada O. Wassif, Naglaa Gadallah and Shereen I. Fawaz (Ain Shams University, Egypt)

[A Single-Channel SSVEP-BCI System for Power Wheelchair Control](#)

Ahmed M.Gharib and Mohamed A. Abbass (Military Technical College, Egypt)

[Event Related Potential \(P300\) Detection using Convolutional Neural Network](#)

Radwa Reda Hossieny (Computer and Information Science Ain Shams University, Egypt); Howida AbdelFattah Shedeed (Ain Shams University - Faculty of Computers, Egypt); Manal Tantawi (Faculty of Computer and Information Science Ain Shams University, Egypt)

Monday, May 12 2:30 - 4:30

IEEE MTT Egypt Chapter Workshop (1)

Workshop Title: "MW and mm Wave Technologies for Smart Applications"

Invited Talks: " LOCAL SOLUTIONS, GLOBAL IMPACT: LEVERAGING THE IEEE HTB / SIGHT'S GLOBAL NETWORK FOR SOCIETAL CHALLENGE".

"GLOBAL BEST PRACTICES IN DEVELOPING RESILIENT AND SUSTAINABLE SMART CITIES".

"RADARS, DIGITAL TWINS, AND THE FUTURE: THE UNSEEN HEROES OF TOMORROW'S TECHNOLOGY".

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Invited Speakers:

Prof. Mohammad Essaaidi, 2025 IEEE SIGHT Committee Chair, General Director of Moroccan School of Science & Engineering (EMSI), Rabat, Morocco.

Prof. George Shaker, Director of the Wireless Sensors and Devices Laboratory, University of Waterloo, Canada.

Room 1

Chairs: Tamer Abuefadel (Nile University, Egypt), Ayman Eltagher (Military Technical Collage, Egypt), Abdel-Razik Sebak (Concordia University, Canada)

LOCAL SOLUTIONS, GLOBAL IMPACT: LEVERAGING THE IEEE HTB / SIGHT'S GLOBAL NETWORK FOR SOCIETAL CHALLENGE

Mohamed Essaaidi (ENSIAS, Mohammed V University, Morocco)

Global Best Practices in Developing Resilient and Sustainable Smart Cities

Mohamed Essaaidi (ENSIAS, Mohammed V University, Morocco)

Radars, Digital Twins, and the Future: The Unseen Heroes of Tomorrow's Technology

George Shaker (University of Waterloo & Spark Tech Labs, Canada)

Monday, May 12 2:30 - 3:30

Keynote Speech 2

Keynote Title: "Sensor Fusion for Autonomy and Mapping"

Invited Speaker: Dr. Mohamed Mostafa

Affiliation: Applanix, Canada

Room 4

Chair: Ahmed M. Kamel (Military Technical College, Egypt)

Monday, May 12 2:30 - 4:30

AI Applications WorkShop

Room: Abdelaziz Seif Hall

Monday, May 12 3:30 - 4:30

ICEENG Panel Meeting (1)

TPC Members

Room 4

Tuesday, May 13

Tuesday, May 13 9:00 - 11:00

UAV Optimization and Adaptive Control

Room 2

Chairs: Mahmoud Mohamed Ashry (Arab Academy for Science, Technology, and Maritime Transport, Egypt), Mohamed Ibrahim (Military Technical College, Egypt)

[Comparative Analysis of Optimal Controllers Performance for Unmanned Aerial Vehicles](#)

[Abdulraheem M Ahmdia](#) (Military Technical College, Egypt & 2B, Sudan); Mohamed Ibrahim and Amr Sarhan (Military Technical College, Egypt); Ahmed Elsaid Abdalla Ahmed (Automatic Control Group MTC, Egypt & Military Technical College, Egypt)

[Enhancement of Flying Vehicle Tracking Performance Based on Modified Incremental Backstepping](#)

[Samy Samir](#) (Military Technical College, Egypt); Ehab Safwat (MTC, Egypt); Hossam Tork (Military Technical College, Egypt); Ahmed Elsaid Abdalla Ahmed (Automatic Control Group MTC, Egypt & Military Technical College, Egypt)

[Design and Implementation of an Actuation System for a Single plane of Control Rolling Air Frame](#)

[Ahmed E. Al-Tarras](#) (Technical Researches Center, Egypt); Islam A Hassan, Sr (Egypt); Maged M Abou elyazed (Technical Researches Center, Egypt)

[Successive Generalized Dynamic Inversion Control of Helicopter Dynamics](#)

Ameen M Albayhani and [Abdulrahman H. Bajodah](#) (King Abdulaziz University, Saudi Arabia)

[Optimized Route for Fixed Wing Surveillance UAV using Secretary Bird Optimization](#)

[Ahmed Sawan](#), Mohamed Ibrahim, Amr Sarhan and Ahmed Taimour Hafez (Military Technical College, Egypt)

Tuesday, May 13 9:00 - 11:00

Microgrids and Smart Systems for Developing Nations

Room 3

Chairs: Sherif Helmy (Nuclear Power Plants Authority (NPPA), Egypt), Hatem Seoudy (Shorouk Academy, Egypt)

Invited Talks

*Invited Talk Title: "The Role of Cross-Border Energy Exchanges in Peacemaking - Opportunities and Challenges"

Speaker: Prof. Mohamed Zakaria Kamh, Ain Shams University, Egypt

[Leveraging an Innovative Puma Algorithm for the Optimisation of Energy Management in a Microgrid. Incorporating RES and Energy Storage Devices](#)

[Ahmed G Khairalla](#) (Faculty of Engineering, Alexandria University, Egypt); Hesham B. Elrefaie (Alexandria University, Egypt); Hossam Kotb (Alexandria University, Egypt); Kareem Aboras (Alexandria University, Egypt)

[Optimal Sizing of Hybrid Microgrids Using Weighted Average Algorithm and HOMER](#)

[Mahmoud Wahid](#) (Military Technical College, Egypt); Mohamed Abd El Aziz Hasan Abd El Rahman (Ain Shams University, Egypt); Sherif Helmy (Nuclear Power Plants Authority (NPPA), Egypt)

[Enhancing Voltage Harmonics Mitigation in Microgrids using DBO for FOPID-Based Control and Filter Tuning](#)

[Mohamed Maher](#) (Alexandria University, Egypt); Hesham B. Elrefaie and Alaa Hmam El Hamrawy (Alexandria University, Egypt)

[A Comparative Analysis of Federated and Distributed Theft Detection System in Smart Grids](#)

[Hassan Moustafa](#) (Al-Nahda University & Egyptian Electricity Holding Company (EEHC), Egypt); Haitham Mahmoud (Birmingham City University (BCU), United Kingdom (Great Britain))

Tuesday, May 13 9:00 - 11:00

Hardware-Aware AI

Room 1

Chairs: Mohamed Mahmoud Aly Fouad (October 6th University, Egypt), Tarek S. Ghoniemy (Military Technical College, Egypt)

[Genetic Algorithm-based Digital Twin Model for Scheduling Multi-request Satellite Imaging](#)

[Atef Mohamed](#) (Space Technology Center, Egypt & STC, Egypt); Mahmoud Abdelaziz (Military Technical College, Egypt); Mohamed El Sedfy (Space Technology Center, Egypt); Tamer Rakia (Military Technical College, Egypt)

[The Complex Interplay of Artificial Intelligence and Internet of Things: Enhancing Functionality Amidst Challenges](#)

Sahar Ismail (Benha University - Faculty of Engineering-Shoubra, Egypt); [Shimaa Zeid](#) (Ministry of Communication and Information Technology, Egypt)

[AI-Based Solution of Quantum Systems with Unknown Underlying Parameters](#)

Istiak Mahmud and [Ahmed Abdelhadi](#) (University of North Dakota, USA)

[CITY Pixels: An Integrated Hardware-Software Framework for Real-Time Interactive Urban Modelling](#)

Ahmed Nady and Ayman Assem (Ain Shams University, Egypt); [Muhammed Elalfy](#) (Ain Shams University (ASU), Egypt); Mohamed Ezzeldin and Mohamed Darwish (Ain Shams University, Egypt)

[Analysis of Sampling Strategies for Multi-Task Learning in Transformer Models](#)

[Anirudh Lakhotia](#), Akash Kamalesh, Nischal Helagally Shantharaju, Prerana Sanjay Kulkarni and Gowri Srinivasa (PES University & Center for Pattern Recognition, India)

[Survival of the Smallest: Genetic Algorithms for LLM Compression](#) [Anagha Siddheshwar](#), Anirudh G Joshi, Agnel Elizabeth, Arnab Karmakar and Badri Prasad (PES University, India)

Tuesday, May 13 9:00 - 11:00

Photonics Eng.

Room 4

Chairs: Taher Bazan (Egyptian Academy for Engineering and Advanced Technology, Egypt), Hussein Eissa Abdelsalam Kotb (Ain Shams University, Egypt)

Invited Talks

*Invited Talk Title: "Overview on LIFI: a Future Perspective of Wireless Communications"

Speaker: Prof. Jala Mahmoud El-Azab, Cairo University, Egypt

*Invited Talk Title: "Optical Fiber Static and Dynamic Sensing"

Speaker: Prof. Ahmed Hisham Morshed, Ain Shams University, Egypt

[Fluorescence-based Optical Characterization of Protective Materials Using Spectral Analysis](#) [Amr Saber](#) (MTC, Egypt); Alaaeldin Mahmoud (Military Technical College, Egypt); Yaser Elsharkawy (MTC, Egypt)[Assessing the destructive potential of pulsed green light lasers on composite materials in UAV structures: a feasibility study](#) [Amr Saber](#) (MTC, Egypt); Alaaeldin Mahmoud (Military Technical College, Egypt); Yaser Elsharkawy (MTC, Egypt)

Tuesday, May 13 9:00 - 1:30

Poster Session 1

Room: Main Hall Entrance

Chairs: Ahmed A. Abouelfadl (Military Technical College, Egypt), Ahmed M. Elelimy Abounemra (Military Technical College, Egypt), Hany Mostafa Mohamed (MTC, Egypt), Ahmed Nader (Cairo University, Egypt)

[Cascaded Sliding Mode Control for SCARA Manipulator with Actuator Dynamics](#) [Mohamed A Ibrahim](#) (German University in Cairo, Egypt); Omar M. Shehata (Multi-Robot Systems (MRS) Research Group, German University in Cairo, Egypt); Hesham Hamed Ibrahim (German University in Cairo, Egypt)[An Efficient Wideband Doherty Power Amplifier Designed based on Harmonic Controlled Matching Network for S-Band Telemetry Applications](#)[Omar M. E. Eltager](#) and Ahmed M. Elelimy Abounemra (Military Technical College, Egypt)[Advancing Arabic Inner Speech Recognition with Machine Learning and Deep Learning](#) Aya E Ahmad (Systems and Biomedical Engineering, Cairo University, Egypt); Habiba Diaa Hafrag (Egypt-Japan University of Science and Technology, Egypt); [Ziad Ahmed Meligy](#) (Systems and Biomedical Engineering, Cairo University, Egypt); Heba Ali Abdelbary (Center for Informatics Science (CIS) Nile University, Egypt); Sahar Selim Selim (Nile University, Egypt)[A Comparative Study of AI-Driven Methods for Breast Cancer Detection Using Infrared Thermography](#) [Ashar Seif Al-Nasr](#) (Cairo University, Egypt); Yasser Sabry (Ain Shams University, Egypt); Mohamed Aref (Egyptian Armed Forces, Egypt)[Goose Optimization for Dimensioning Fractional-Order Proportional-Integral Sequential Tilt Control in efficient and reliable Charging System of EV](#)[Omnia Albadry](#) (Sohag University, Egypt & Technology and Education, Egypt); Alaa A. Mahmoud (Sohag University, Egypt); Ahmed Hafez (Assiut University, Egypt)[Impact of Energy Saving Loads on Nuclear Facility Electrical Network](#) [Amir A. Wadoud](#) and Alaa A. Saleh (Egyptian Atomic Energy Authority, Egypt); Mohamed Y.M. Mohsen (Military Technical College, Egypt); Atef El-Taher (Al-Azhar University, Egypt); Mohamed A.E. Abdel-Rahman (Military Technical College, Egypt)[Modelling AC Induction Motor Control Circuit Using Bond Graph Techniques](#) Amir R. Ali (The German University in Cairo (GUC), Egypt & PI of the Applied-Science & Robotics Laboratory for Applied-Mechatronics ARATronics Laboratory, Egypt); Aya ElNahas (The German University in Cairo, Egypt); Ahmed Magdy and [Mohamed Zina](#) (German University in Cairo, Egypt)[Optical MTM-based Energy Harvesting](#)Abdelmegid Allam, [Eyad Sameh](#) and Yassin Nezar (German University in Cairo, Egypt); Mohamed Atef Abbas (Arab Academy for Science, Technology and Maritime Transport, Egypt)[Direction of Arrival Estimation Approach Based on Gauss-Newton Method](#)Ebraheem Alenezi (Assiut University, Egypt); [Osama Elnahas Helaly](#) (EJUST, Egypt); Can Pei (Shenzhen Polytechnic University, China); Mostafa Youssef (Assiut University, Egypt)

Tuesday, May 13 9:00 - 11:00

IEEE MTT Egypt Chapter Workshop (2)

Workshop Title: "MW and mm Wave Technologies for Smart Applications"

Invited Talks: "GREEN COMMUNICATIONS IN EGYPT".

"Engineered Surfaces for mm Wave Antennas and Radar Scattering Control".

Invited Speakers:

Senior Engineer: Adel Elsherif, Head of Data Center at e&, Cairo, Egypt..

Prof. Abdelrazik Sebak, P.Eng., IEEE Fellow, EIC Fellow, Tier I Concordia University Research Chair, Canada.

Room: Abdelaziz Seif Hall

Chairs: Esmat Abdallah (Former President of the Electronics Research Institute, Egypt), Ayman Eltager (Military Technical Collage, Egypt)

GREEN COMMUNICATIONS IN EGYPT

Adel Elsherif (Etisalat Egypt, e&, Egypt)

Engineered Surfaces for mm Wave Antennas and Radar Scattering Control

Abdel-Razik Sebak (Concordia University, Canada)

Tuesday, May 13 11:30 - 1:30

Intelligent Control for Power and Industrial Applications

Room 2

Chairs: Noha H. El-Amry (Arab Academy for Science, Technology and Maritime Transport, Egypt & AASTMT, Egypt), Mohamed Ibrahim (Military Technical College, Egypt)

[Real-Time Digital Twin-Driven Optimization of Industrial Machinery](#)

Amir R. Ali (The German University in Cairo (GUC), Egypt & PI of the Applied-Science & Robotics Laboratory for Applied-Mechatronics ARATronics Laboratory, Egypt); [Hossam Kamal](#) (German University in Cairo (GUC), Egypt)

[Modeling, Validation and Control of Pan Tilt Table](#)

[Islam A Hassan, Sr](#) (Egypt); K M Ahmed and Ahmed E. Al-Tarras (Technical Researches Center, Egypt)

[Performance Analysis of Various Compensation Topologies in Wireless Power Transfer for Electric Vehicles](#)

[Roaa Hagggy](#) and Peter Makeen (The British University in Egypt (BUE), Egypt)

[Robustness of UAV Flight Control System Via Modified Incremental Nonlinear Dynamic Inversion](#)

[Ahmed Mohsen Sabra](#) and Ahmed Taimour Hafez (Military Technical College, Egypt); Hany Mostafa Mohamed (MTC, Egypt)

Bridgeless Isolated AC to DC SEPIC Converter: Review of the Effects of Duty Cycle Variation and Resistive Load

Muhammad Abdillah Abdillah and Dian Wahyudi Andriyanto (Telkom University, Indonesia)

Tuesday, May 13 11:30 - 1:30

Power Grid Renovation and Renewable Integration

Room 3

Chairs: Wael Abdelfattah (Higher Institute of Engineering, El-Shorouk Academy, Egypt), Mohamed Zakaria Kamh (Ain Shams University, Egypt)

Invited Talks

*Invited Talk Title: "Innovative Renewable Energy Green Gas for Grids (g3) as an Alternative to SF6"

Speaker: Prof. Mohamed Samy, Bani Suif University, Egypt

[Comparative Analysis of Enhanced Phase-Locked Loop \(PLL\) Approaches for Renewable Energy Resources Integration](#)

[Mostafa Abdo](#) and Mohammed Yehia Amer (Military Technical College, Egypt); Sherif Helmy (Nuclear Power Plants Authority (NPPA), Egypt)

[Study of STATCOM Impact on Voltage Stability in a Grid Connected to Wind Power Generator under Abnormal Conditions](#)

[Ghada Mahmoud Ibrahim](#) (HIF, Egypt)

[Optimized Dynamic Economic Dispatch incorporating Dynamic Generation Capacity Using Teaching-Learning-Based Optimizer](#)

[Mahmoud Ibrahim Mosaad](#), Ali-M. Yousef and Ahmed Hafez (Assiut University, Egypt)

[Leveraging Battery Energy Storage System to Enhance Voltage Stability: A Case Study of Hail South Network](#)

[Mohammad Sulaiman Alrashid](#) (King Saud University, Saudi Arabia); Majed A. Alotaibi (King Saud University, Saudi Arabia & Saudi Electricity Company Research Chair, Saudi Arabia)

Tuesday, May 13 11:30 - 1:30

IoT Security

Room 1

Chairs: Nahla Belal (Arab Academy for Science, Technology, and Maritime Transport & College of Computing and Information Technology, Egypt), Khaled Metwally (Military Technical College, Egypt)

[Securing Information in an adaptive Signature Watermark](#)

Gamal Fahmy (Galala University, Egypt); Abdelrahman Desoky (Clafflin University, Egypt); Hany Ammar (West Virginia University & Cairo University, USA); Sameh Hassanien Basha (Cairo University, Egypt & Galala University, Egypt)

[Hybrid Feature Selection for Efficient Machine Learning-Based Intrusion Detection in IoT Networks](#)

Mohammed Nagah (Newgiza University (NGU), Egypt); Tamer Mekkawy, Ashraf Mahran and Ahmed Elliethy (Military Technical College, Egypt)

[Hybrid Deep Learning-Based Autoencoder-DNN Model for Intelligent Intrusion Detection System in IoT Networks](#)

Hesham Kamal Khalil and Maggie Mashaly (German University in Cairo, Egypt)

[Adaptive Distributed Ledger Framework for Protecting IoT Networks](#)

Mohamed Abo-Soliman (Ain Shams University, Egypt & Nile University, Egypt); Eman Shaaban and Karim Emara (Ain Shams University, Egypt)

[Optimized Feature Selection for Enhanced Network Attack Detection Using Bat Algorithm](#)

Mosleh Abualhaj (Al-Ahliyya Amman University, Jordan); Ali Abdurrazaq (University of Mosul, Iraq); Omar Mohammad Almomani (Al-Ahliyya Amman University, Jordan); Mohammed Anbar (Universiti Sains Malaysia, Malaysia)

[Assessing Robustness and Resistance to Attacks of an Authentication System Based on OpenID Connect Protocol and Ethereum Blockchain](#)

Assane Ilboudo (Université Joseph KI-ZERBO, Burkina Faso); Didier Bassolé (Université Joseph Ki-Zerbo, Burkina Faso & Laboratoire de Mathématiques et d'Informatique (LAMI), Burkina Faso); P. Justin Kouraogo (Ecole de Technologie Supérieure University of Québec at Montréal, Canada); Gouayon Koala (Université Joseph KI-ZERBO, Burkina Faso); Oumarou Sié (University Ouaga 1 Professeur Joseph Ki-Zerbo, Burkina Faso)

Tuesday, May 13 11:30 - 1:30

Communications and Cyber Security

Room 4

Chairs: Ali Elmoghazy Ali (Military Technical College, Egypt), Fatma A. Newagy (Ain-Shams University, Egypt)

Invited Talks

*Invited Talk Title: "Quantum Key Distribution on 6G Mobile Network Planning"

Speaker: Prof. Hesham M. El-Badawy, Ministry of Communication, Egypt

*Invited Talk Title: "Intelligent Systems: Current and Future Trends"

Speaker: Prof. Ahmed Elsherbeany, Faculty of Engineering, Cairo University -- Chairman of the ICT Research Council, Academy of Scientific Research, Egypt

[Leveraging SDN for Efficient Gateway Selection Approach in HTS Networks](#)

Mahmoud Abdelmohsen Mahmoud and Mohamed Hussein (Military Technical College, Egypt); Essam Abd Elwanees (Communications Engineering Military Technical College, USA); Ashraf Diao (Military Technical College, Egypt)

[Multi-Tier Honeypot for Resilient Network Security](#)

Khaled Nasser Salama, Nader Atef Sdeek, Ahmed Bendary, Amr Abdelaziz and Ashraf Diao Elbayoumy (Military Technical College, Egypt)

Tuesday, May 13 11:30 - 12:30

Keynote Speech 3

Keynote Title: "Nanomedicine and Innovative Smart Nanosystems for Disease Treatment and Diagnosis: From Lab to Society"

Invited Speaker: Prof. Ibrahim M. El-Sherbiny

Affiliation: Zweil City, Egypt

Room: Abdelaziz Seif Hall

Chair: Mohamed Esmail Karar (Menoufia University, Egypt)

Tuesday, May 13 12:30 - 1:30

Keynote Speech 4

Keynote Title: "Novel optical Metasurface for small Medical and Environmental applications"

Invited Speaker: Prof. Mohamed A. Swillam
Affiliation: American University in Cairo, Egypt

Room: Abdelaziz Seif Hall

Chair: Mahmoud Abdelrahman Abdalla (Military Technical College, Cairo, Egypt)

Tuesday, May 13 2:30 - 4:30

Advanced Modeling and Control for High-Dynamic Vehicles

Room 2

Chairs: Yehia Zakria Elhalwagy (Military Technical College, Egypt), Hossam Hendy (Military Technical College, Egypt)

[Mathematical Modeling and Analysis of High-Dynamic Flying Vehicles](#) 

Ahmed M.Khalifa, Mostafa S.Mohamed and Mohammed Abozied Hassan Abozied (MTC, Egypt)

[Generalized Dynamic Inversion-based Eigenstructure Assignment and Application to Rotorcraft Control](#)

Abdulmajeed Mathkar Al-Qarni and Abdulrahman H. Bajodah (King Abdulaziz University, Saudi Arabia)

[Vehicle Side-Slip Angle \(SSA\) Model Based Observer Enhancement Via NN-based SSA Virtual Sensors](#)

Mohamed E. Shaaban (German University in Cairo, Egypt); Omar M. Shehata (Multi-Robot Systems (MRS) Research Group, German University in Cairo, Egypt); Elsayed I. Morgan and Catherine Elias (German University in Cairo, Egypt)

[PLC-Based IoT-Energy Monitoring and Load Control for Grid-Connected Hybrid Systems](#)

Amin Al Ka'bi (Australian University - Kuwait, Kuwait)

Tuesday, May 13 2:30 - 4:30

Renewable & Hybrid Energy Systems

Room 3

Chairs: Amged S. Elwakeel (Nuclear Power Plants Authority, Egypt), Mohamed Samy (Beni-Suef University Beni-Suef, Egypt)

[Time Series Analysis for Solar Irradiance Forecasting: A Systematic Review](#) 

Asdaqul Khair (Gadjah Mada University, Indonesia); Lesnanto Multa Putranto and Dyonisius Dony Ariananda (Universitas Gadjah Mada, Indonesia)

[Impact of Egyptian Weather Conditions on Solar Photovoltaic Efficiency](#)  

Tarek Ihab Abdelsalam and Ahmed E. Almaz (The British University in Egypt, Egypt)

[Hybrid Energy System Planning: Optimizing Solar and Wind Power for Maximum Efficiency and Cost Reduction](#) 

Seif Mahdi, Abdulrahman Yasser, Omar Hashem, Ahmed Hatem and Jessica Magdy (German University in Cairo, Egypt); Omar M. Shehata (Multi-Robot Systems (MRS) Research Group, German University in Cairo, Egypt)

[Implementing a Predictive Framework for Dust Accumulation on Solar Panels](#) 

Youssef Ellethy and Yasmine Abdalla Zaghloul (German International University, Egypt)

[Day-Ahead Weather and Load Forecast using Machine Learning: Comparative Analysis](#) 

Abdelaziz Elwakil (Arab Academy for Science, Technology, and Maritime Transport, Egypt); Rania Assem Ibrahim (Co-Author, Egypt); Ahmed M Abdelrahim (Arab Academy for Science, Technology, and Maritime Transport, Egypt); Nahla Ezzeldin Zakzouk (Arab Academy for Science and Technology and Maritime Transport, Egypt)

[Performance Analysis of Dual-Axis Solar Tracking System Using Fuzzy Logic and Optimized PID Control Strategies](#)

Mohamed Ibrahim Taha (October University for Modern Sciences and Arts (MSA), Egypt); Mohamed Atef Kamel (Military Technical College, Egypt & Concordia University Montreal, Canada); Ehab Said (Military Technical Collage, Egypt); Wael Elmayah (Military Technical College, Egypt)

Tuesday, May 13 2:30 - 4:30

Bridging AI, Security, and Code

Room 1

Chairs: Ayman A. Abdel-Hamid (Arab Academy for Science, Technology, and Maritime Transport, Egypt), Ahmed Salem (AAST, Egypt)

[Obfuscated File-less malware threats: Recent analysis and detection approaches Based on Memory forensics](#) 

Mohamed Zakaria, Mohamed S. Mohamed and Sherif Hussein (Military Technical College, Egypt); Gouda I. Salama (Military Technical Colleagues, Egypt)

[Artificial Intelligence Supervision for Cyber Theft Protection](#)

Aneesh Pradeep, Hamidreza Ghandvar and Zokhidabonu Alisherova (New Uzbekistan University, Uzbekistan)

[Defining a New Metric for Detecting Bias in Software Systems: Towards Ethical Software Engineering](#) 

Ahmed Abdelraheem (Zewail City of Science, Technology and Innovation, Egypt); [Malak Elbanna](#) (Zewail University of Science and Technology, Egypt); Mohamed Enaggar (Zewail City of Science, Technology and Innovation, Egypt); Dooa Shawky (Zewail City of Science and Technology, Egypt)

[CS-NIDS: Network Intrusion Detection Based on Cross-Silo Federated Learning](#) 

[Maged Abdelaty](#) (City of Scientific Research and Technological Applications (SRTA-City), Egypt)

[The Development of a Shipping Aggregator Platform for Package Delivery Using the Design Thinking and Moscow Approach](#) 

[Fahrizal Adi Wibowo](#) and Nur Aini Rakhmawati (Institut Teknologi Sepuluh Nopember Surabaya, Indonesia)

[Strategies For Successful Futures Trading: Leveraging Crude Oil Price Forecasts](#) 

Achintya Krishna, [Lugal Kothari](#), Joshita Gautam and Archishman VB (PES University, India); Gowri Srinivasa (PES University, India & Center for Pattern Recognition, India)

Tuesday, May 13 2:30 - 4:30

Biomedical Signal & Image Processing

Room 4

Chairs: Manal Abdel Wahed (Egypt), Mohamed Esmail Karar (Menoufia University, Egypt)

[Decentralized Medical Record Model Using Composable NFT: Achieving Data Security, Interoperability, and Privacy through Granular Data Access](#) 

[Damary Sabrina Amaracitra](#) and Andry Alamsyah (Telkom University, Indonesia)

Advance ANN Algorithm and Research Challenges for Breast Cancer Detection and Classification with evaluation NI LabVIEW

Zarrar Haider (Brookfield Villages, Ireland & UCC, Ireland); Malik Zohaib (EST, Pakistan); Iqra Jabeen Mazhar (Quaid e Azam Medical College, Pakistan); Jawaria Ghazanfar (Shaikh Zayed Medical Complex, Ireland)

[Advanced Optical Imaging and Machine Learning for Breast Cancer Diagnosis: Wavelength Differentiation and Clinical Applications](#) 

[Hossam Mostafa Ibrahim](#) and Mohamed Hisham Fouad Aref (Egyptian Armed Forces, Egypt); Abdallah Abdelkader Hussein (Kobri El-Kobba Complex Hospital, Egypt); Mohamed A. Abbass (Military Technical College, Egypt); Ahmed M Salaheldin (Shorouk Academy, Egypt); Yasser Sabry (Ain Shams University, Egypt); Neven Saleh (Future University, Egypt); Amr Sharawi (Cairo University, Egypt)

[Patch nnU-Net for High-Resolution Semantic Segmentation of Dental X-ray Images](#) 

[Mennatollah Elkammah](#) (Faculty of Engineering, Alexandria University, Egypt); Ayman Khalafallah and Marwan Torki (Alexandria University, Egypt)

[A Hybrid Deep Learning and Machine Learning Framework for Breast Cancer Detection in Infrared Thermography](#) 

[Mostafa Hamed Mohamed](#) and Mohamed Hisham Fouad Aref (Egyptian Armed Forces, Egypt); Ahmed M Salaheldin (Shorouk Academy, Egypt); Ahmed M (Awadallah, Egypt); Neven Saleh (Future University, Egypt); Amr Sharawi (Cairo University, Egypt)

[A Comprehensive Study on Enhanced Brain Diseases Diagnosis with Microwave Imaging Techniques Using Multi Antenna Systems](#) 

[Sara Alsawy](#) (Arab Academy for Science and Technology Smart Village, Egypt); Ahmed Sayed Ismail Amar (University of Bradford, United Kingdom (Great Britain)); Mohamed Fathy Abo sree (Arab Academy For Science and Technology Engineering Faculty & AASTMT Company, Egypt); Darwish Mohamed (Arab Academy for Science and Technology, Egypt)

Tuesday, May 13 2:30 - 4:30

Keynote Speech 5

Keynote Title: "Non-volatile reconfigurable metasurface for EM manipulation and control"

Invited Speaker: Prof. Zhirun Hu

Affiliation: University of Manchester, UK

Room: Abdelaziz Seif Hall

Chair: Mahmoud Abdelrahman Abdalla (Military Technical College, Cairo, Egypt)

Wednesday, May 14

Wednesday, May 14 9:00 - 11:00

Wireless Communications

Room 2

Chairs: Amr Abdelaziz (The Ohio State University & Military Technical College, USA), Medhat M Mokhtar (High Institute for Engineering & Technology at Obour, Egypt)

[Enhanced Aeronautical Communications: RS-LDPC Performance with FBMC Modulation](#) 

[Mohamed EL-Sayed](#) (Egypt); Amr Nagy (Military Technical College Egypt, Egypt); Mahmoud Abdelaziz (Military Technical College, Egypt); Alaa Eldin Rohiem (MTC, Egypt)

[Performance Evaluation of OFDM Multi-Carrier Systems Using Long Short-Term Memory Networks](#) 

Shahzad Hassan and Mohammed Al Siy (Military Technological College, Oman); Salman Saadat (University of Doha for Science and Technology, Qatar); Noshaba Tariq (Cignet Network Consultancy and Training, Pakistan)

[Performance of Space-Air-Ground FSO Communications with Different Modulations](#)

Hassan Ahmed (Military Technical College, Egypt); Ramy Samy Zaghloul (Space Technology Center, Egypt); Ahmed Bendary and Alaa Eldin Rohiem (Military Technical College, Egypt)

[Energy-Efficient HMGRP with Load Balancing in Wireless Sensor Networks](#)

Sriram Valleppalli (SRM Institute of Science and Technology, Kattankulathur, India); Shanmukh Billuri (SRM Institute of Science & Technology, Kattankulathur, India); Ramesh S (SRM Institute of Science and Technology, India)

[Classification of Mobile Adware Variants Using Machine Learning Techniques](#)

Ansumana F Jadama, Abdullah Sami, Rohith Kumar Saravanan and Modou K Touray (University of New Brunswick, Canada)

Wednesday, May 14 9:00 - 11:00

Techniques of Electromagnetic Manipulation for Various Applications

Room 3

Chairs: Tamer Abuelfadl (Nile University, Egypt), Abdelmegid Allam (German University in Cairo, Egypt)

Invited Talks

*Invited Talk Title: "New era of emerging technologies for healthcare systems"

Speaker: Prof. Chaimaâ Kissi, Ibn Tofail University, Morocco

[Optimizing Radar Placement over Irregular Terrain for Coverage Area Enhancement Using Particle Swarm Optimization](#)

Hazem Kamel (Military Technical College, Egypt)

[Design and Fabrication of Multi-Band Mobile Handset Antennas](#)

Hazem Banna, Emad Robin and Nelly Mohammed (Modern Academy for Engineering and Technology, Egypt)

[Coaxial Feeding for a Chiral Photonic Topological Insulator Waveguide](#)

Mostafa M Elesawy (Military Technical College, Egypt); Mohamed Hagag (Military Technical College, Egypt & Purdue University, USA); Hany Mostafa Mohamed (MTC, Egypt); Ahmed Abdelraheem (Military Technical College, Egypt)

[A Broadband Polarization-Independent Metamaterial Absorber Based on Square-Shaped Resonator in the Visible Frequency Spectrum for solar energy harvest](#)

Mohammad Tariqu Islam (Universiti Kebangsaan Malaysia, Malaysia); Mohamed Ouda (Telecommunication and Network Engineering, University of Doha for Science and Technology, Qatar); Mohamed S. Soliman (Department of Electrical Engineering, Taif, Saudi Arabia)

Wednesday, May 14 9:00 - 11:00

AI-Powered Vision

Room 1

Chairs: Gouda Mohamed (EAF, Egypt), Aliaa Youssif (Arab Academy for Science and Technology, Egypt)

[Comprehensive Performance Evaluation of YOLOv8-11 Models for Object Recognition in Remote Sensing Imagery](#)

Mohamed Fathy (Military Technical College, Egypt); Mohamed Elhaddad (University of Victoria, Canada & Military Technical College, Egypt); Mohamed A. Elshafey (Computer Engineering and Artificial Intelligence, Military Technical College, Cairo, Egypt)

[Intrusion Detection in IoT Networks Using Deep Learning: A Comprehensive Approach](#)

Abdallah S. Elnamaky and Emad Elsamahy (Arab Academy for Science, Technology, and Maritime Transport, Egypt); Samir G. Sayed (Helwan University, Egypt & NTRA, Egypt); Ahmed Salem (AAST, Egypt)

[A comparative study between GAN and diffusion models for child image generation from parents' images](#)

Mohamed Emara and Mohamed Farouk (Arab Academy for Science Technology and Maritime Transport, Egypt); Mohamed Waleed Fakhr (Arab Academy for Science and Technology & AAST, Egypt)

[Detecting Bias in Arabic Political News: A Transformer-Based Ensemble Stacking Approach](#)

Ahmad Mohammed Abdelhameed (Nile University, Egypt & Fayoum University, Egypt)

[An Extensive Examination of Artificial Intelligence in Natural Language Generation](#)

Aneesh Pradeep, Hamidreza Ghandvar and Zokhidabonu Alisherova (New Uzbekistan University, Uzbekistan)

[Automated Detection of Plus Disease From Infant Retinal Images](#)

Kaushik J, Saad Bin Khalid, Sathvik Vittal and Srujan Muralidhar (PES University, India); Anand Vinekar (Narayana Nethralaya Postgraduate Institute of Ophthalmology, India); Gowri Srinivasa (PES University, India & Center for Pattern Recognition, India)

Wednesday, May 14 9:00 - 11:00

Intelligent Guidance and Planning of Multi-UAV Systems

Room 4

Chairs: Mohammed Abozied Hassan Abozied (MTC, Egypt), M. Saeed Darweesh (Nile University, Egypt)

[Hybrid Regularized Time-to-Go Estimation for Robust Intercept Guidance](#)

Islam Hosny Elnady, Sr and Mohammed Abozied Hassan Abozied (MTC, Egypt); Ahmed M. Kamel and Yehia Zakria Elhalwagy (Military Technical College, Egypt)

[Teaching Learning Based Optimization for Multi-Agent Multi-Target Assignment](#)

Muaaz Abdulrahem Shbo, M.Shbo (MTC, Egypt); Mohamed Ibrahim and Ahmed Taimour Hafez (Military Technical College, Egypt); Ahmed Elsaid Abdalla Ahmed (Automatic Control Group MTC, Egypt & Military Technical College, Egypt)

[Optimized Area Coverage Path Planning In Complex Environment Using Neural Network](#)

Mahmoud Elfoly, Mohamed Ibrahim, Hossam Hendy and Ahmed Taimour Hafez (Military Technical College, Egypt)

[Cooperative Control of Multiple UAVs Based on Optimized Fractional-Order PID Controller](#)

Bassam Elbasueny (Military Technical College, Egypt); Mohamed Atef Kamel (Military Technical College, Egypt & Concordia University Montreal, Canada); Ehab Said (Military Technical Collage, Egypt); Ibrahim Elsharif (MTC, Egypt)

[Helicopter Longitudinal and Lateral Motion Control using Extended Ackermann Formula and Greville Parameterization](#)

Ameen M Albayhani and Abdulrahman H. Bajodah (King Abdulaziz University, Saudi Arabia)

Wednesday, May 14 9:00 - 1:30

Poster Session 2

Room: Main Hall Entrance

Chairs: Tamer Mekawy Accepted (MTC, Egypt), Ahmed Fawzy Daw, Sr (MSA University, Egypt), Ahmed Elrewny (Military Technical College, Egypt), Mohamed Naguib (The Ohio State University, USA)

[Software-Defined Radio-Based Simulation and Processing of GPS L1 Signals for LEO Satellites Navigation](#)

Ahmed Abdelhady Ahmed, Hossam Hendy, Amr Abd el azeem Ali and Ahmed M. Kamel (Military Technical College, Egypt)

[IMU Denoising Using Feedforward Neural Networks for Enhanced Attitude Estimation Accuracy](#)

Hany Mamdough (Military Technical College, Egypt); Mohammed Abozied Hassan Abozied (MTC, Egypt); Yehia Elhalwagy (MSA University, Egypt); Ahmed M. Kamel (Military Technical College, Egypt)

[Route to Clean Cities: Waste Collection Optimization with UGVs](#)

Farah Ahmed (German University in Cairo, Egypt); Omar M. Shehata (Multi-Robot Systems (MRS) Research Group, German University in Cairo, Egypt); Jessica Magdy, Marwan Khalil, Ziad Yasser, Hoor Amr, Youssef Amir and Maryam Mohamed (German University in Cairo, Egypt)

[Harmonizing Recurrent and Attention Mechanisms: The Fused Gate Model](#)

Abdelrahman Mohamed Hussein Mohamed (Arab Academy for Science, Technology and Maritime Transport, Egypt & Independent Researcher, Egypt); Shady Zahran (Technical Researches and Development, Canada)

[AI-Driven Deep Learning and Robotic Arm System for Post-Harvest Sorting](#)

Yousef Abdelhafeez, Amr Haddad, Suhaila Hussien, Ahmed Ramadan, Aya Mohamed, Shahd Abdelrady and Nashwa El-Bendary (Arab Academy for Science, Technology & Maritime Transport, Egypt)

[Using Virtual Reality to Simulate a Classroom For Online Learning](#)

Abdelghafar R. Elshenaway, Alaa Hussien, Youssef Ehab About Sheour, Mohamed Mohsen Elhalfway, Youssef Hany Mohamed, Mahmoud Ali Elgohary and Mohammed Ehab Abdelati (Pharos University in Alexandria, Egypt)

[Multi-Label Emotion Detection in Dialectal Arabic and English Using DeepSeek and SILMA AI](#)

Khloud Khaled Elsayed (Nile University, Egypt); Ensaf H Mohamed (Nile Univ, Egypt & Helwan Univ, Egypt); Walaa Medhat (Nile University, Egypt)

[The Impact of Quantum Noise on Shor's Algorithm and Its Cryptographic Applications](#)

Wael Mohamed Fawaz Abdel-Rehim (Suez University, Egypt & King Salman International University, Egypt)

[Dataset Preprocessing Leveraging Vision Language Models: Storytelling for Accident Detection and Description](#)

Mohamed Yossri Elwaly, Amgad Abdo and Aly Ahmed Sewelam (Alexandria University, Egypt); Sarah Elshamy and Asmaa Zayed (Pharos University in Alexandria, Egypt); Mohamed Elsayed Elsayed (Pharos University in Alexandria & Arab Academy for Science Technology & Maritime Transport, Egypt); Mohamed Abdou (Alamein International University, Egypt); Mohamed Saleh (Pharos University, Egypt)

[Chronic Kidney Disease Detection Augmented with Hybrid Explainable AI](#)

Mohamed Desoky and Nada Gamal ElAdl (Galala University, Egypt); Tamer Abuhmed (Sungkyunkwan University, Korea (South)); Shaker El-Sappagh (Galala University, Egypt)

Wednesday, May 14 9:00 - 11:00

ICEENG Panel Meeting (2)

TPC Members

Room: Abdelaziz Seif Hall

Wednesday, May 14 11:30 - 1:30

Signal Processing & Radar Applications

Room 2

Chairs: Hossameldin Aboubakr Badr Hassan (Military Technical College, Egypt), Ahmed E. El-Mahdy (German University in Cairo, Egypt)

Invited Talks

*Invited Talk Title: "Polarization Imaging in Computer Vision"

Speaker: Associated Prof. Hamada Rizk, Osaka University, Japan

[Scalable Cell-Free Massive MIMO for Indoor Industrial IoT Factory with Multi-Antenna Users](#) 

[Amel Mohamed Mahmoud](#) (Cairo University, Egypt & Canadian International College, Egypt); Ahmed Hesham Mehana and Yasmine Fahmy (Cairo University, Egypt)

[Optimized Multi-Radar Hand Gesture Recognition: Robust MIMO-CNN Framework with FPGA Deployment](#) 

[Taher S. Ahmed](#) (Military Technical College, Egypt); Magdy Elbahnasawy (Technical Research Center, Egypt); Ahmad Fouad Youssef (Military Technical College, Egypt)

[Precise Range-Doppler Estimation in LFM Pulsed MIMO Sonar Systems](#) 

[Ahmed Yasser](#) (Military Technical College, Egypt & MTC, Egypt); Hossam Tork, Adel Abdallah and Ahmad Fouad Youssef (Military Technical College, Egypt)

Wednesday, May 14 11:30 - 1:30

Radio Wave Propagation in Guided and Unbounded Media

Room 3

Chairs: Dalia Elsheakh, dalia (Electronics Research Institute & ElTahrir St. Dokki Giza, Egypt), Ahmed Ibrahim (El-Minia University, Egypt)

Invited Talks

*Invited Talk Title: "Time-Modulated Frequency Diverse Array for Wireless Power Transmission"

Speaker: Prof. Saber Zein Eldien, Faculty of Electronic Engineering, Menoufia University, Egypt

[Comparative Analysis of Particle Swarm Optimization \(PSO\) and Genetic Algorithms \(GA\) for Optimal Radar Coverage Area Maximization](#) 

Hazem Kamel and [Ahmed Assem El-Kashef](#) (Military Technical College, Egypt)

[A Compact Circularly Polarized Conformal GPS Antenna for Vehicle Tracking Applications](#)

[Mohamed El Atrash](#) (MSA University); Duria Y. Khalil (MSA University, Egypt); Mahmoud Abdelrahman Abdalla (Military Technical College, Cairo, Egypt)

[A New LCRLH-Based Reconfigurable Phase Shifter for High-Resolution Applications](#)

[Ahmed Mohamed Zinham](#), Ahmed Fawzy Daw, Sr and Hazem Amr Youssef (MSA University, Egypt); Mahmoud Abdelrahman Abdalla (Military Technical College, Cairo, Egypt)

Swastika-Shaped Multiple Square Split Resonator-Based Metamaterial Absorber for 5G and Wi-Fi Communication Systems

Mohammad Tariqul Islam (Universiti Kebangsaan Malaysia, Malaysia); Mohamed Ouda (Telecommunication and Network Engineering, University of Doha for Science and Technology, Qatar); Mohamed S. Soliman (Department of Electrical Engineering, Taif, Saudi Arabia)

Wednesday, May 14 11:30 - 1:30

New AI Trends

Room 1

Chairs: Mohamed A. Elshafey (Computer Engineering and Artificial Intelligence, Military Technical College, Cairo, Egypt), Essam H. Houssein (Faculty of Computers and Information - Minia University, Egypt)

[Improving Arabic Image Captioning with Vision Language Models](#) 

[Abdelrahman Mohamed Sayed](#) (Military Technical College, Egypt); Mohamed Elhaddad (University of Victoria, Canada & Military Technical College, Egypt); Gouda I. Salama (Military Technical College, Egypt); Aiman Saad (MTC, Egypt)

[PETRA: A Personalized Educational Tutoring Tool for Recursive Assistance Leveraging Multi-model LLMs for Dynamic Programming Learning](#) 

[Dalia Walid Hewedy](#) (German University in Cairo, Egypt); Aya Salama Abdelhady (GUC, Egypt)

[**A Hybrid Sentiment Analysis Model for Enhanced Stock Market Movement Predictions**](#)

Karim Salaheldeen (Arab Academy for Science, Technology and Maritime Transport, Egypt); Amani Saad and Mazen Nabil Elagamy (Arab Academy for Science and Technology, Egypt); C. Fathy (Computer Engineering Department, College of Engineering and Technology, Arab Academy for Science and Technology (AAST), Alexandria, 1029, Egypt, Egypt)

[**ETL: Ensemble-at-Training for Low-cost Open-source Large Language Models**](#)

Amr Zaki (Queen's University, Canada); Mahmoud Khalil (Computers and Systems Engineering Dept., Ain Shams University, Egypt); [Hazem Abbas](#) (Ain Shams University, Egypt)

[**AI-Powered Autism Screening: Leveraging Gain Ratio Feature Selection for Improved Machine Learning Models**](#)

[Qusai Yousef Shambour](#) and Mosleh Abualhaj (Al-Ahliyya Amman University, Jordan)

[**Efficient Fault Detection in Photovoltaic Systems Using Machine Learning: A Comparative Analysis of Tree-Based Models**](#)

[Omar Mohammed Alqaraghuli](#) (Ulniversity of Altinbas, Iraq); Abdullahi Abdu Ibrahim (Altinbas University, Turkey)

Wednesday, May 14 11:30 - 1:30

Emerging Trends in Power Electronics for energy distribution and automotive techniques

Room 4

Chairs: Abdelfattah Eliwa (Military Technical College, Egypt), Ibrahim Safwat (MTC, Egypt)

[**Design and Performance Optimization of a Low-Power Half-Bridge LLC Resonant Converter Using GaN FETs**](#)

Isuru Munasinghe and [Ashen Rodrigo](#) (University of Moratuwa, Sri Lanka)

[**A Grid-Tied Photovoltaic-Battery System for Bidirectional Electric Vehicle Charging**](#)

[Ossama Talal Dankar](#), Mohamed Tarnini and Abdallah El Ghaly (Beirut Arab University, Lebanon); Nazih Moubayed (CRSI, Faculty of Engineering, Lebanese University, Lebanon); Khaled Chahine (American University of the Middle East, Kuwait)

[**Optimizing Prony's Order for Filtering Non-Periodic Components in Signals**](#)

[Byron Orlando Palate](#) (Sao Paulo University & Independent Consultant, Ecuador)

[**Introducing the Entropy as a Fundamental Property of the Electric Conductors**](#)

[Salama Abdelhady](#) (Aswan University, Egypt)

[**Performance Evaluation of PID, LOR, and SMC for DC-DC Buck Converters Under Multiple Disturbances and Uncertainties**](#)

[Mohamed Sameh Elkerdany](#), Mohamed Mamdouh and Amr Sarhan (Military Technical College, Egypt)

Wireless Charging System for EV Vehicles

Shreya Sonawane (Vishwakarma Institute of Technology, India); Shivanand Satao, Omkar Shinde and Sharvari Savardekar (Vishwakarma Institute of Technology, Pune, India)

Wednesday, May 14 11:30 - 1:30

We WorkShop (1)

Workshop Title: "Technology Evolution in Communication Science by Using Optical Fiber Cables (1)".

Invited Speakers:

Omaima Mohamed Abdelhalim Elsayed, Telecom Egypt, Cairo, Egypt.

Ahmed Mostafa Ali Abdelrazek, Telecom Egypt, Cairo, Egypt.

Mostafa Sobhy Omar Mostafa, Telecom Egypt, Cairo, Egypt.

Saly Abdelazeez Ibrahim Hasan, Telecom Egypt, Cairo, Egypt.

Room: Abdelaziz Seif Hall

Chairs: Adel Abdallah (Military Technical College, Egypt), Ahmed Hosni Elghandour (Military Technical College, Egypt), Mohammed Ibrahim Hosni Elsayed (Military Technical College, Egypt)

Wednesday, May 14 2:30 - 4:30

Remote Sensing

Room 2

Chairs: Ahmed S. Mashaly (Military Technical College, Egypt), Wael Murtada (National Authority for Remote Sensing and Space Sciences, Egypt)

Invited Talks

*Invited Talk Title: "Development of Egyptian Intelligent Geoinformatics Systems for Processing of Remotely Sensing Data"

Speaker: Prof. Dr. Ahmed Serwa, Civil Engineering Department, Faculty of Engineering in Mataria- Helwan University-

[**Deep Learning Semantic Segmentation-Based Scan-to-BIM for Indoor Point Clouds**](#)

[Mostafa Mahmoud Hanafy Mahmoud](#) and Mahmoud Adham Abdelhameed Arif (Land Surveying and Geo-Informatics, the Hong Kong Polytechnic University, Egypt & Cairo University, Egypt); Yaxin Li (The Hong Kong Polytechnic University, Hong Kong); Wu Chen (Hong Kong Polytechnic University, Hong Kong)

[A Comparative Study of YOLO Versions for Airplane Detection in Remote Sensing Satellite Images](#)

[Rashad Adel Harhash](#), Tarek Mahmoud and Ibrahim Sh. Sanad (Military Technical College, Egypt); Mohamed E. Hanafy, Dr (Military Technical College, Egypt)

[A Deep Learning-Based Detection of Ground Deformation Using a Single Interferogram](#)

[Mahmoud Elhussien Ibrahim Abdallah](#) (The Hong Kong Polytechnic University, Hong Kong & Mansoura University, Egypt); Xiaoli Ding (The Hong Kong Polytechnic University, China); Samaa Tayeb (Mansoura University, Egypt); Songbo Wu (The Hong Kong Polytechnic University, Hong Kong)

[Optimizing Weekly Temporal Patterns of Barchan Dune Migration Using Multi-Sensor Fusion and Inversion Techniques](#)

[Islam A Saleh](#) (Cairo University, Egypt); Wenbin Xu (Central South University, China); Zhijia Zheng (Fuzhou University, China); Lei Xie (Central South University, China); Tarek Zayed (The Hong Kong Polytechnic University, Hong Kong)

Wednesday, May 14 2:30 - 4:30

IEEE AP Egypt Chapter Workshop

Workshop Title: "Emerging Trends in Microwave Sensors for Biomedical Applications".

Invited Speakers:

Prof. Dalia Elsheakh, Electronics Research Institute, Egypt.

Prof. Angie R. Eldamak, Faculty of Engineering - Ain Sham University, Egypt.

Prof. Anwer S. Abd El-Hameed, Electronics Research Institute, Egypt.

Prof. Sahar Ali Fawzi, Faculty of Engineering - Cairo University, Egypt.

A. Prof. Mohamed Ali Mohamed Roshdy, Faculty of Engineering - Cairo University, Egypt.

Room 3

Chairs: Ahmed Abdelraheem (Military Technical College, Egypt), Mohamed Hagag (Military Technical College, Egypt & Purdue University, USA)

Wednesday, May 14 2:30 - 4:30

AI-Powered Electrical Engineering

Room 1

Chairs: Tarek Mahmoud (Military Technical College, Egypt), Sherin Youssef (AAST, Egypt)

[A Novel Approach for Enhancing Audio Modality in Multimodal Deception Detection Environment Using Liquid Neural Networks](#)

[Ahmed Tarek Elbattawy](#) and Khaled Badran (Military Technical College, Egypt); Mohamed Elhaddad (University of Victoria, Canada & Military Technical College, Egypt)

[Designing and Implementing a Smart Parking Management System for Smart Cities](#)

Hesham Ali Sakr, Hs (Elsewedy University Of Technology, Egypt & SUT, Egypt); [Mohamed Ehab](#), Mohamed Asherf, Najwa Elsayed Mohamed, Mohamed Tarek Mohamed, Mohamed Ahmed Shoiieb, Alyaa A. Hamza and Abdelgwad Elashry (SUT, Egypt)

[Experimental Investigation of Temperature Rise and Life Expectancy in a 10MVA Power Transformer](#)

[Tshepo Wiseman Makhubela](#) and Bonginkosi A. Thango (University of Johannesburg, South Africa); Francis Nnachi (Tshwane University of Technology, South Africa)

[Predicting Software Engineering Trends from Scientific Papers with a Combined Framework of Clustering and Topic Modeling](#)

[Marwa Mahmoud](#) (German University in Cairo (GUC), Egypt); Maggie Mashaly (German University in Cairo, Egypt); Mervat Abu-Elkheir (The German University in Cairo & Media Engineering and Technology, Egypt)

[A Distributed Machine Learning Approach for Forecasting Temperature and Voltage Imbalances in IoT Systems](#)

[Nihat Abdullayev](#) (ADA University & Azerconnect Group LLC, Azerbaijan)

[Machine learning framework for energy consumption optimization using the TabPFNRegressor algorithm](#)

Hager Saleh (Faculty of Computers and Artificial Intelligence Hurghada University, Hurghada, Egypt); [Zaher Baali](#) (College of Informatics, Midocean University Comoros, Southeastern Africa); Shaker El-Sappagh (Faculty of Computer Science and Engineering Galala University Suez, Egypt)

Wednesday, May 14 2:30 - 4:30

Modern Protection Techniques

Room 4

Chairs: Mohammed Yehia Amer (Military Technical College, Egypt), Mahmoud M Badreldien (MTC, Egypt)

Invited Talks

*Invited Talk Title: "White Paper: Energy Efficiency in Power Distribution"

Speaker: Eng. Mohamed Hesham, Siemens Company, Egypt

[Enhancing Power Quality in Renewable-Integrated Grids Using Small Modular Reactors](#)

Raouf Mohamed Ghounimy Elfaramawy, Raf (Nuclear Power Plants Authority, Egypt); Amr Sarhan (Military Technical College, Egypt); Sherif Helmy (Nuclear Power Plants Authority (NPPA), Egypt); Amged El-Wakeel (Nuclear Power Plants Authority, Egypt)

[A Co-Simulation Approach for Fault Detection in Induction Motor Drive Systems Using Finite Element and Spectral Analysis](#)

Ibrahim M Gaber (Arab Academy for Science, Technology & Maritime Transport, Egypt); Rania Assem Ibrahim (Co-Author, Egypt); Hamdy Ashour (Arab Academy for Science and Technology (AAST), Egypt); Mohamed M Sedky (Alexandria University, Egypt)

[Advanced Fault Detection in Power Transmission Systems Using Hybrid DT-MLP model with ROS and ENN techniques](#)

Amir R. Ali (The German University in Cairo (GUC), Egypt & PI of the Applied-Science & Robotics Laboratory for Applied-Mechatronics ARAtronics Laboratory, Egypt); Hossam KamaI (German University in Cairo (GUC), Egypt)

Wednesday, May 14 2:30 - 4:30

We WorkShop (2)

Workshop Title: "Technology Evolution in Communication Science by Using Optical Fiber Cables (2)".

Invited Speakers:

Omaima Mohamed Abdelhalim Elsayed, Telecom Egypt, Cairo, Egypt.

Ahmed Mostafa Ali Abdelrazek, Telecom Egypt, Cairo, Egypt.

Mostafa Sobhy Omar Mostafa, Telecom Egypt, Cairo, Egypt.

Saly Abdelazeez Ibrahim Hasan, Telecom Egypt, Cairo, Egypt.

Room: Abdelaziz Seif Hall

Chairs: Adel Abdallah (Military Technical College, Egypt), Ahmed Hosni Elghandour (Military Technical College, Egypt), Mohammed Ibrahim Hosni Elsayed (Military Technical College, Egypt)

Thursday, May 15

Thursday, May 15 9:00 - 11:00

Nano and Microelectronics Special Session

Room 2

Chairs: Ayman Eltager (Military Technical Collage, Egypt), Khaled Ali Shehata (Arab Academy for Science and Technology, Egypt)

Invited Talks

*Invited Talk Title: "The Role of Electrodes in Enhancing the Performance of Electronic Devices: Insights from Perovskite Solar Cells and Glucose Monitoring Sensors"

Speaker: Prof. Sameh O. Abdellatif, British University in Cairo, Egypt

*Invited Talk Title: "Sustainable Microelectronics: From Green Fabs to Self-Powered ICs"

Speaker: Dr Aida Elsabban, Ministry of Communication, Egypt

The Role of Electrodes in Enhancing the Performance of Electronic Devices: Insights from Perovskite Solar Cells and Glucose Monitoring Sensors

Sameh Osama (The British University in Egypt, Egypt)

Sustainable Microelectronics: From Green Fabs to Self-Powered ICs

Aida AF Elsabban (British University in Egypt (BUE), Egypt)

[Optimized Test Pattern Reduction for Gate-Exhaustive Faults Using MTTG and Quine-McCluskey STC](#)

Mariam Taher and Hossam Moetaz Shousha (Cairo University, Egypt); Ahmed Saeed (Future University in Egypt, Center of Nanoelectronics and Devices, the American, Egypt); Yehea Ismail (American University in Cairo, Egypt)

[Down scaling Impact on The ION/IOFF Ratio of Nanosheet FET Digital Application](#)

Firas Natheer Agha (University of Mosul, Iraq); Khalid Khalel Mohammed (Ninevah University, Iraq); Hussain Al Abdulqader (University of Nizwa, Oman); Billel Smaani (Centre Universitaire Abdel Hafid Boussouf Mila, Algeria)

Thursday, May 15 9:00 - 11:00

Navigation Engineering

Room 3

Chairs: Ashraf Abosekeen (Military Technical College, Egypt), Tamer Habib (National Authority for Remote Sensing and Space Science, Egypt)

[Stereo ORB-SLAM3 Underwater Performance Evaluation](#)

[Hossam Elkesky](#) (Ain Shams University, Egypt); [Samer Mohamed](#) (AinShams University, Egypt); [Mohammed Ibrahim Awad](#) and [Hossam Abd El munim](#) (Ain Shams University, Egypt)

[A Smartphone-Enabled Framework for Vehicle Positioning Using Sensor Fusion and Map-matching Algorithm](#)

[Mostafa Mahmoud Hanafy Mahmoud](#) and [Mahmoud Adham Abdelhameed Arif](#) (Land Surveying and Geo-Informatics, the Hong Kong Polytechnic University, Egypt & Cairo University, Egypt); [Mahmoud Abd El Rahman](#) and [Adel Hassan](#) (Cairo University, Egypt)

[Adaptive VINS-GNSS Fusion with Intelligent Switching and Failure Detection for Robust Autonomous Vehicle Localization](#)

[Mahmoud Adham Abdelhameed Arif](#) (Land Surveying and Geo-Informatics, the Hong Kong Polytechnic University, Egypt & Cairo University, Egypt); [Wu Chen](#) (Hong Kong Polytechnic University, Hong Kong); [Mostafa Mahmoud Hanafy Mahmoud](#) (Land Surveying and Geo-Informatics, the Hong Kong Polytechnic University, Egypt & Cairo University, Egypt); [Ahmed Mansour](#), [Yang Yang](#) and [Yaxin Li](#) (The Hong Kong Polytechnic University, Hong Kong)

[Robust and Adaptive Control Strategies for Re-entry Vehicles](#)

[Ahmed Rabie Abd Elhamid, Nagy](#), (Ain Shams University, Egypt & Faculty of Engineering, Egypt); [Ibrahim Arafa](#) (Military Technical College, Egypt); [Hussein A Elsayed](#) and [Hadia M. elhennawy](#) (Ain Shams University, Egypt)

[Enhanced Loosely Coupled INS/GPS Integration Using Non-Holonomic Constraints for ground vehicles](#)

[Khalid M Nasr, King](#), [Sherif Mostafa](#), [Ali Maher](#) and [Ahmed M. Kamel](#) (Military Technical College, Egypt)

[Metaheuristic Optimization for Multi-AGV Path Planning in Search and Rescue Missions](#)

[Arwa H. Ghoneim](#) and [Ahmed M Elsoda](#) (German University in Cairo, Egypt); [Heba A. Abdelmawla](#) (German University in Cairo (GUC), Egypt); [Khaled Elbadawy](#) and [Linah Tamer](#) (German University in Cairo, Egypt); [Lobna Tarek](#) (The German University in Cairo, Egypt); [Jessica Magdy](#) (German University in Cairo, Egypt); [Omar M. Shehata](#) (Multi-Robot Systems (MRS) Research Group, German University in Cairo, Egypt)

Thursday, May 15 9:00 - 11:00

AI Ethics in Healthcare

Room 1

Chairs: [Mohamed Elhaddad](#) (University of Victoria, Canada & Military Technical College, Egypt), [Emad Elsamahy](#) (Arab Academy for Science, Technology, and Maritime Transport, Egypt)

[Exploring the Accuracy and Performance: A Comparative Analysis of Deep Learning Techniques for ICD Prediction from Clinical Notes](#)

[Mostafa M Elbehery](#) (Military Technical Collage, Cairo, Egypt); [Mohamed S. Mohamed](#) (Military Technical College, Egypt); [Mohamed A. Elshafey](#) (Computer Engineering and Artificial Intelligence, Military Technical College, Cairo, Egypt)

[Mental Stress Prediction Using Machine Learning and Facial Emotion Recognition](#)

[Swedheetha C](#) (B.E (ECE), India); [Nihilsankar E](#) (Velammal College of Engineering and TechnologC, India); [Ramkishan C B](#) (Anna University, India & Velammal College of Engineering and Technology, India)

[Optimized Real-time Mortality Prediction System based on Combining Machine Learning, Explainable AI and Big Data Platforms](#)

[Hager Saleh](#) (South Valley University, Egypt); [Nora El-Rashidy](#) (Kafrelsheikh University, Egypt); [Shaker El-Sappagh](#) (Galala University, Egypt); [Sara Lotfy](#) (South Valley University, Egypt); [Elnomery Zanaty](#) (Sohag University, Egypt); [Nahla F. Omran](#) (South Valley University, Egypt)

[An interpretable model for the diagnosis of Alzheimer's disease using deep learning and machine learning](#)

[Nourhan Ibrahim](#), [Lamiaa A. Elrefaei](#) and [Eman Abdel-Ghaffar](#) (Benha University, Egypt)

[scExplore: A Comparative Study of Molecular Embeddings for Single-Cell Perturbation Analysis](#)

[Ankush H.V](#), [Arya Vinayak Raghuram](#), [Ganya Umesh](#) and [Adithi S Murthy](#) (PES University, India); [Gowri Srinivasa](#) (PES University, India & Center for Pattern Recognition, India)

[Large language models for automated sleep staging](#)

[Akshay Prasad Honnavalli](#), [Hrishi Preetham G](#), [Aaryan Hemant Badyal](#) and [Adithya Sharma C A](#) (PES University, India); [Gowri Srinivasa](#) (PES University, India & Center for Pattern Recognition, India)

Thursday, May 15 9:00 - 11:00

MTC Workshop

Workshop Title: "Radar Remote Sensing and Radar Imaging Applications".

Invited Speaker:

Assoc. Prof. [Ahmed Azoz](#), Military Technical College, Cairo, Egypt.

Room 4

Chair: [Hossameldin Aboubakr Badr Hassan](#) (Military Technical College, Egypt)

Thursday, May 15 9:00 - 11:00

Poster Session 3

[Mariam Osama Ahmed](#), "Fine-tune LLMs for Enhanced Conference Recommendation"

[Habiba Sherif Sayed](#), "AI-Powered Healthcare System for Medical Diagnosis and Treatment Planning"

Abdelrhman Salah Salem, "AI-Driven Energy Optimization Framework for Sustainable Urban Development"
Aalaa Abdelnasser Mahran, "Rehabilitation Lower Limb Exoskeleton and Orthosis: Role in Rehabilitation, Challenge and Design"
Hazem Abdullah Kortam, "UAV Detection, Tracking and Jamming System"
Ahmed Ragab Mogoda, "Intelligent Vehicle Control System: OTA Updates with Real-Time Diagnostics via CAN Bus"
Nouran Ahmed Haggag, "Microwave Imaging for Bone Fracture"
Nour Sherif, "AI-Enhanced EEG-Based Autopilot Activator for Fighter Jets"

Room: Main Hall Entrance
Chairs: Adel Abdallah (Military Technical College, Egypt), Mohamed Aboelazm (MTC, Egypt), Mohamed Ismail Ahmed (Electronics Research Institute, Egypt & PSATRI, King Saud University, Egypt), Ahmed Bendary (Military Technical College, Egypt), Mohamed Reda Ismail (MTC, Egypt)

Thursday, May 15 9:00 - 11:00

ICEENG 2026 Panel Meeting

TPC 2026 Members

Room: Abdelaziz Seif Hall

Thursday, May 15 11:30 - 12:30

Keynote Speech 6

Keynote Title: "IEEE Egypt Technical Activities"

Invited Speaker: Prof. Ahmed Madian
Affiliation: Nile University

Room: Abdelaziz Seif Hall
Chair: Mahmoud Abdelrahman Abdalla (Military Technical College, Cairo, Egypt)

EDAS at bravo for 197.52.175.15 (Sat, 10 May 2025 14:01:42 -0400 EDT) (User 1556123 using Win10:Chrome 136.0 1.003/7.700 sj [Request help](#))