



Air Defense College
The Egyptian Military Academy



ITC-EGYPT'2026

THE INTERNATIONAL TELECOMMUNICATIONS CONFERENCE

Innovate. Connect. Transform.



5G & Beyond



Satellite
Communications



IoT & Cloud
Computing



Wireless &
Networks



AI & Signal
Processing



27 – 30
July 2026



Cairo,
Egypt



Air Defense College
The Egyptian Military Academy

CONFERENCE PROGRAM



Welcome

A warm Thanks to each and every one of you for being here with us today. We are very pleased to be able to welcome those of you who have been with us for a long time now as well as those who are new to the 2026 International Telecommunications Conference, ITC-Egypt'2026, Air Defense College, Egyptian Military Academy, Cairo, Egypt.

We are proud to be able to organize and host our conference today here at this wonderful place with all the participants.

Before we get started, we would like to express our sincere appreciation to all who generously helped us make this event come together to become a success.



About ITC-Egypt'2026

The Sixth International Telecommunications Conference (ITC-Egypt'2026) is organized by the Air Defense College (ADC), Egyptian Military Academy. The conference will be held in Air Defense College, Egyptian Military Academy, Cairo, Egypt, from July 27-30, 2026. The conference will feature a comprehensive high-quality technical program covering the latest research and innovation in communications technologies.

Telecom Empowerment

The 6th International Telecommunications Conference (ITC-Egypt'2026) at the Egyptian Military Academy unites global researchers and top communications labs, featuring a robust technical program with six tracks, workshops, and research panels.

- Global collaboration with top researchers
- Six specialized tracks in communications
- Workshops, panels, and technical insights

The conference will include six technical tracks, Tutorial, projects Competition, keynotes, and technical/industrial research panels with prominent research leaders addressing emerging communications technologies.

The ITC-Egypt'2026 conference is technically supported by the IEEE-MTT-S, IEEE-APS, IEEE Egypt Section, and IEEE-AESS.



Technical Sessions

Day / Date	Time	Room 1	Room 2	Room 3	Room 4	Room 5	Room 6
Monday 27 July 2026	15:00 – 17:00	Track 1 - S1 Antennas & 5G Applications	Track 2 – S1 Radar Systems	Track 3 – S1 IoT Security	Track 4 – S4 Healthcare Informatics & Diagnostic Imaging 2	Track 5 – S1 Renewable Energy	Track 6 – S5 Next-Gen Networking, Mesh Relaying & Optical Comms
Tuesday 28 July 2026	12:00 – 14:00	Track 1 - S2 Microwave Circuits	Track 2 – S2 Robotics & Trajectory	Track 3 – S2 Medical AI & Automation	Track 4 – S5 LLMs, Optimization & Explainable AI	Track 5 – S2 Power Grid & Mobility	Track 6 – S6 Optical Wireless Communications & FSO Systems
	15:00 – 17:00	Track 1 - S3 UWB & MIMO	Track 2 – S3 Sensing & Security	Track 3 – S3 Robotics, UAVs, and Autonomous Agents	Track 4 – S6 Defense Mechatronics, Drones & Autonomous Systems	Track 6 - S1 Enterprise Security, SOC Simulation & Threat Detection	Track 6 – S7 Biomedical AI, Health Informatics & Assistive Robotics
Wednesday 29 July 2026	12:00 – 14:00	Track 1 - S4 Sensing & Meta-surfaces	Track 4 – S2 Adversarial Robustness, Phishing & Prompt Security	Track 6 – S3 Advanced Cybersecurity, Federated Learning & Wireless Security	Track 4 – S7 Defense Mechatronics, Drones & Target Tracking	Track 6 – S2 Enterprise Security, Threat Detection & Cryptography	Track 6 – S8 Assistive Technologies, Applied Modeling & Autonomous Systems
	15:00 – 17:00	Track 4 – S1 AI-Driven Cybersecurity & Intrusion Detection	Track 4 – S3 Healthcare Informatics & Diagnostic Imaging 1	Track 6– S4 5G/6G Wireless Networks, MIMO & Beamforming	Track 4 – S8 Telecom Data, Open RAN & 6G Networks	—	Track 4 – S9 6G Architectures, Image Analytics & Decision Systems

Keynote Talks

Tuesday, July 28, 2026, | 09:00-09:45 | Historical Building Hall
[Through-the-Wall Radar Imaging – A Historical Perspective](#)



Prof. Moeness Amin

Villanova University, United States of America

Wednesday, July 29, 2026, | 09:00-09:45 | Historical Building Hall
[MHz to THz Technologies Addressing Fundamental Science Questions](#)



Prof. Goutam Chattopadhyay

(NASA's Jet Propulsion Laboratory (JPL), California Institute of Technology (Caltech))



Invited Talks

Monday, July 27, 2026 | 13:15-13:45 | Main Hall

[Battery-less green circuits](#)



Prof. Mahmoud Wagih

Rankine / James Watt South, , University of Glasgow, Glasgow, United Kingdom



Panel Discussions

Tuesday, July 28, 2026, | 09:45-10:30 | Historical Building Hall

Panel Discussion “Education in the AI Era”

Prof. Mostafa Refaat

The Secretary General of the Supreme Council of Universities, Egypt.

Prof. Mohamed Elsaied Nasr

Department of Communications and Electronics Engineering, Faculty of Engineering, Tanta University

Miss. Ola Lorange

Egyptian Knowledge Bank

Wednesday, July 29, 2026, | 10:00-11:00 | Historical Building Hall

Panel Discussion “Cyber security”

Prof. Yahya Antar

Professor and Tier I Royal Military College of Canada.

Prof. Abdel Razik Sebak

Professor and Tier I Concordia University Research Chair in Millimeter-wave Antennas and Systems, Computer Engineering.

Prof. Hossam S. Hassanein

Director of School of Computing, Queen's University, Canada. IEEE Fellow, IEEE ComSoc DL.

Prof. Amr Youssef

The Secretary General of the Supreme Council of Universities, Egypt.

Prof. Ahmed Kishk

Department of Electrical and Computer Engineering, Concordia University, Canada. IEEE Fellow.

Tutorials

Tuesday, July 28, 2026, | 10:45-11:45 | Historical Building Hall
[Drone Simulations](#)



Prof. Dimitris Tzagkas

Snr Academic Development Manager United Kingdom.

Wednesday, July 29, 2026, | 11:00-13:00 | Historical Building Hall
[Cube Sat](#)



Prof. Jwad Siddiqui

Univ. of Calcutta - Royal Military College of Canada - Queen's Univ.

Thursday, July 30, 2026, | 09:00-10:00 | Main Hall
[Radar scattering techniques defense-related](#)



Prof. Ahmed Kishk

Department of Electrical and Computer Engineering, Concordia University, Canada. IEEE Fellow.

Thursday, July 30, 2026, | 10:00-11:00 | Main Hall
[PHY Security](#)



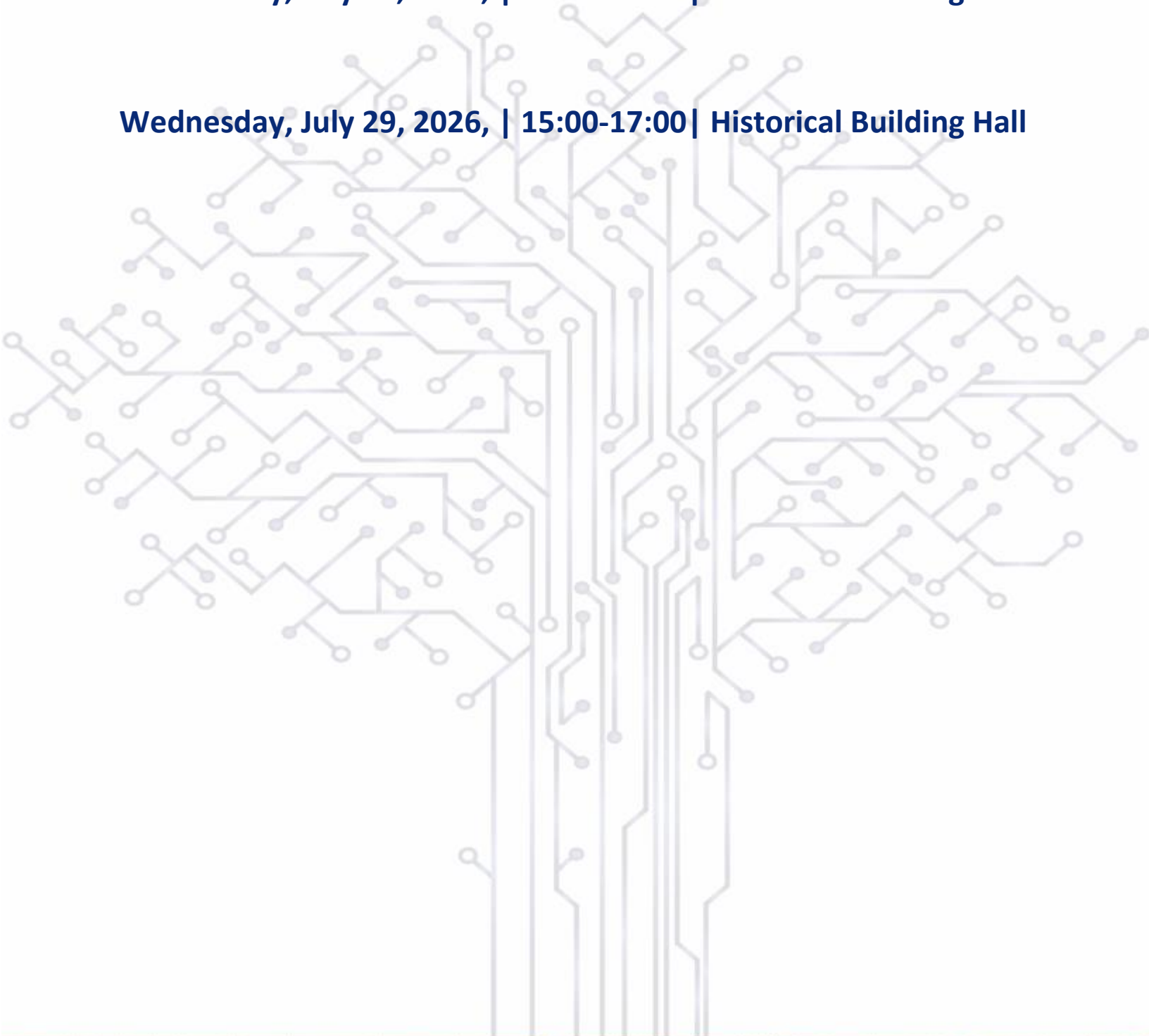
Prof. Amr Youssef

Professor in Concordia University, Canada.

IEEE Events

Wednesday, July 29, 2026, | 12:00-14:00 | Historical Building Hall

Wednesday, July 29, 2026, | 15:00-17:00 | Historical Building Hall



The background of the image is a dark, teal-toned cityscape at night. In the foreground, a complex network of red and blue lines connects numerous small, glowing nodes, resembling a data or communication network. Several vertical light beams with bright, glowing tips rise from the network, extending towards the top of the frame. The overall aesthetic is futuristic and technological.

DAY 1

Oral Presentations

Monday, July 27, 2026, | Time: 15:00 – 17:00

Room (1) / the Educational Complex | Track 1 - S1: Antenna & 5G Application

Chairs: *Session Chair: TBA*

- [Microstrip Patch Antenna for Breast Cancer Detection](#)
Youssef Amin (CIC - Canadian International College, Egypt); Sama Amr (CIC-Canadian International College, Egypt); Hazem Ahmed (CIC-Canadian International college, Egypt); Yahie Ezzeldien and Mohamed Hassan (CIC-Canadian International College, Egypt); Nermine M. Edward (Ain Shams University, Egypt).
- [Miniaturized Crescent Moon-Shaped Microstrip Antenna with Dual-Band X/Ku Operation for 5G and Wireless Systems Applications](#)
Ashraf Sayed Abdel Halim and Mohamed Ghanem (Canadian International College, Egypt); Ashraf Amin (Canadian International College - CIC, Egypt); Bassem Ashraf Mahmoud (Canadian International College (CIC), Egypt); Nahed El Mahallawy (The German University in Cairo, Egypt & Ain Shams University, Egypt); Omnia Hamdy (Cairo University, Egypt).
- [Single-Feed Penta-Band Stacked Microstrip Antenna with Hybrid Polarization for S-, C-, and X-Band Applications](#)
Ali Raafat (Ahram Canadian University, Egypt).
- [Design and Performance Analysis of a Mimo Circular Patch Antenna System for 5g and lot at 3.5 Ghz](#)
Fayza Bousalah (ABOU BEKR BELKAID University, Algeria); Hayat Benosman and Hamida Djelti (University of Tlemcen, Algeria).
- [Design and Characterization of a Broadband Open-Slot Antenna with Embedded L-Shaped Stub for 5G Millimeter-Wave Applications](#)
Mohamed S. El-Gendy (Electronics Research Institute, Egypt); Larbi Talbi (University of Quebec - Outaouais, Canada); Mohamed Mamdouh Mahmoud Ali (Assiut University, Egypt).
- [Desert-Resilient Dual-Band Reconfigurable Intelligent Metasurface Antenna with](#)

Thermally Compensated Beamforming for 5G mmWave Deployment in Arid Smart City Environments

Hasnaa Sameh Abdelhamid (Egypt).

- A Compact Wideband Multi-Resonant Sub-THz Antenna with a Dominant 220 GHz Resonance for High-Resolution Imaging and G-Band Sensing Applications

Alaa M. Abada and Angie Eldamak (Ain Shams University, Egypt); Anwer Sayed Abd El-Hameed (Electronics Research Institute, Egypt); Hadia M. elhennawy (Ain Shams University, Egypt).

- A Compact Wideband PIFA Antenna Using Trapped Printed Gap Waveguide for High-Efficiency mmWave Applications

Haitham Mohamed Hamada (Higher Technological Institute HTI at 10th of Ramadan City, Egypt); Larbi Talbi (University of Quebec - Outaouais, Canada); Mohamed Mamdouh Mahmoud Ali (Assiut University, Egypt).

Monday, July 27, 2026, | Time: 15:00 – 17:00

Room (2) / the Educational Complex | Track 2 - S1: Healthcare and Biomedical AI

Chairs: Session Chair: TBA

- [Multistatic FMCW Radar Simulation and Target Characterisation](#)

Amgad Salama (ADC, Egypt & The Research and Development Centre, Egypt); Asmaa Hekal (Egyptian Chinese University (ECU), Egypt); Muhamed Abdulhadi Obied (Egyptian Chinese University, Egypt); Waleed Agamy (Alexandria University, Egypt); Zakaria Hassan Abdelwahab (King Saud University, Saudi Arabia); Amir Almslmany (Air Defence College, Egypt); Mostafa Elhoshy (Air Defense College, Egyptian Military Academy, Egypt); Ahmed Gamal Abdellatif Ibrahim (Egyptian Chinese University, Egypt & Air Defense College, Egyptian Military Academy, Egypt)

- [Orthogonal Fractal Waveform Sets for Multistatic Radar via Coprime Lacunarity and Wavelet-Domain Gram-Schmidt Orthogonalization](#)

Amgad Salama (ADC, Egypt & The Research and Development Centre, Egypt); Asmaa Hekal (Egyptian Chinese University (ECU), Egypt); Muhamed Abdulhadi Obied (Egyptian Chinese University, Egypt); Waleed Agamy (Alexandria University, Egypt); Zakaria Hassan Abdelwahab (King Saud University, Saudi Arabia); Amir Almslmany (Air Defence College, Egypt); Mostafa Elhoshy (Air Defense College, Egyptian Military Academy, Egypt); Ahmed Gamal Abdellatif Ibrahim (Egyptian Chinese University, Egypt & Air Defense College, Egyptian Military Academy, Egypt)

- [A Simulation Framework for Interactive Software-Defined Through-Wall Radar for Multi-Target Micro-Doppler Assessment and Visualization](#)

Mohamed Gabr Kishk (Suze Canal University, Egypt); Mahmoud Ahmed khalil (Ain Shams University, Egypt); Mohammed Taha Saber (Cairo University & Military Technical College, Egypt); Mostafa Youssif Rihan (Helwan University & Air Defence Collage, Egypt); Mohamed Hussein Emam Mabrouk (University of Ottawa, Canada); Amgad Salama (ADC, Egypt & The Research and Development Centre, Egypt); Sherief Fathi Nafea (Suez Canal University, Egypt)

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- [Radar Design and Implementation for Drone Detection at the 3 GHz Band Using Pulse Radar and FMCW Radar Techniques](#)
Ashraf Yahia Hassan (Benha University, Egypt & Egyptian Military Academy, Egypt); Ahmed Makram Abou ALmaaty (Air Defense College, Egypt & Egyptian Military Academy, Egypt)
 - [Performance Evaluation of Mismatched Filtering for Nonlinear Frequency Modulated Waveforms in PXIe-Based Radar System](#)
Abdelaziz Ramadan Elshazly (Military Technical College, Egypt)
 - [Design and Experimental Validation of a PXI-Based Ground-Based SAR System for NLFM Waveform](#)
Abdelaziz Ramadan Elshazly (Military Technical College, Egypt); Ahmed S. Amein (October 6 University, Egypt & University of Strathclyde, CeSIP, United Kingdom (Great Britain)); Fathy Mohamed Abdel Kader and Ahmad Fouad Youssef (Military Technical College, Egypt); Mohammed Elwan (Egyptian Academy of Engineering and Advanced Technology, Egypt)
 - [Design and FPGA Implementation of a Frequency-Steered Multi-Beam Radar Signal Processing System Using LFM Signals](#)
Ahmed Kamal Ibrahim, Soliman (Alexandria & ADC, Egypt)
 - [mmWave MIMO Radar for Long-Range High-Resolution Detection](#)
Wael Abdullah Ahmad (Technical University of Berlin); Maciej Kucharski (OmniChip, Poland); Herman Jalli Ng (Karlsruhe University of Applied Sciences, Germany); Dietmar Kissinger (Ulm University, Germany)

Monday, July 27, 2026, | Time: 15:00 – 17:00

Room (3) / the Educational Complex | Track 3 – S1: IoT Security

Chairs: *Session Chair: TBA*

- [Transformer-Enhanced Multi-Modal Cyberattack Detection for Secure Smart Microgrids](#)
Mohamed Abdullah Mosbah and Amr Mousa Abdel-Haii (Assiut STEM School, Egypt)
- [SentinelChain: A Decentralized AI-Blockchain Framework for Malware Detection and Cyber Threat Intelligence Sharing](#)
Mahmoud Mohamed Mahmoud Aboelnasr (Alamein International University, Egypt)
- [Towards a Machine Learning-Driven Framework for Continuous Device Authentication in Healthcare Zero Trust Architectures](#)
Karim H Moussa (Xi'an Jiaotong-Liverpool University & School of Internet of Things, China); Matilda Isaac (Xi'an Jiaotong-Liverpool University, China); Mohamed Ahmed Aly Soliman (ADC, EMA, Egypt & Alexandria University, Egypt); Marwa Elsherif (Alexandria University, Egypt)
- [A Hybrid Machine Learning-Based Intrusion Detection System for IoT Smart Homes and Healthcare Networks](#)
Marko Alkes Malak (Fayoum University, Egypt); Mahmoud Magdy Raouf (Mahmoud Magdy Raouf, Canada); Mahmoud Alskhawy (Mahmoud Alskhawy, Canada)
- [Simulation Framework for Generating Novel DDoS Attack Dataset and Machine Learning-Based Detection in Vehicular Ad Hoc Networks](#)
Martina Morcos (Egypt-Japan University of Science and Technology, Egypt); Maha Elsabrouty (Egypt Japan University for Science and Technology, Egypt)
- [A Modular Dual-Pipeline Anomaly Detection Architecture for IoT Security: Combining Gradient Boosting, Isolation Forest, and Decision Fusion](#)
Tasneem S.AbdElmajeed, Khaled Elhosiny, Marwa O. Al Enany and Adham Ateia (Badya University, Egypt).

- [Network Anomaly Detection Using AI Models](#)

Rawan Ibrahim and Yahya Ahmed (Badya university, Egypt); Rawda Abokhalil Bedir, Nadine Ahmed and Marwa O. Al Enany (Badya University, Egypt)

- [Hybrid CNN-LSTM Framework for Multi-Class Intrusion Detection in Modern Networks](#)

Mostafa Elhoshy (Air Defense College, Egyptian Military Academy, Egypt); Ahmed Ayoub (Egyptian Chinese University, Egypt); Salwa Serag Eldin (Tanta University, Egypt); Ashraf Althbiti (Taif University, Saudi Arabia)

Oral Presentations

Monday, July 27, 2026, | Time: 15:00 – 17:00

Room (4) / the Educational Complex | Track 4 – S4: Healthcare Informatics & Diagnostic Imaging

Chairs: *Session Chair: TBA*

- [ECG-Based Multi-Class Diagnosis of COVID-19 and Cardiovascular Diseases via Transfer Learning](#)
Hager Hamed Abdelrady (Queen's University, Canada); Alaa Ehab Mohammed, Hind Alaa Fathy, Aya Abdallah Abdelmonam and Dina Mohamme Ali (Queens, Canada).
- [Clinically-Informed Machine Learning for Cardiovascular Disease Risk Prediction: Feature Engineering, Ensemble Modelling, and Decision Threshold Optimisation](#)
Eman Mostafa Elsayed, Mariam Anwer Mohammed, Nourhan Ibrahim Salem and Rania Mohsen Atia (Queens University, Canada).
- [Hessian-Guided Co-Optimization of Pruning and Quantization for Temporal Attention Networks in Healthcare IoT DDoS Detection](#)
Amr A. Ahmed (Sphinx University, Egypt); Maie M. Aboghazalah (Nahda University, Egypt); Ahmed Khairt Hammad (Isra University, Jordan); Abdelaziz Abdelbar (Nahda University, Egypt); Yasser Abdel Satar (Sphinx University, Egypt).
- [Electric Vehicle Charging Session Energy Prediction](#)
Nehal Mohamed Abd EL Ghani, Norhan Kamal Hosny Mahmoud and Lamyia Mamdouh Sayed (Queen's University, Canada).
- [Automatic Multi-Label Stuttering Detection from Speech Using Attention-Enhanced Deep Neural Networks](#)
Ali Diyaa Ahmed, Engy Refaai, Alyaa Tamer Fakhry and Soher Mohamed (Modern Academy, Egypt); Aya Adel Muhammed Hassan (Ain Shams University, Egypt); Rana Ehab Abd El Qader and Mohammed Abdelfattah Abdelaziz (Modern Academy, Egypt).
- [A Unified Deep Learning Framework for Multi-Stage PCB Defect Detection and](#)

Component Verification

Mohamed Mahmoud Arafa, Abdelrahman Nabil Ewis, Abdelghany Syed Abdelghany, Mohamed Khaled Hanoura, Mohamed Samir Ahmed and Hanaa Salem Marie (Delta University for Science and Technology, Egypt).

- Comparative Analysis of Graph Neural Network Architectures for Explainable Malware Detection Using Control Flow Graphs

Esraa Elhossieny, Ahmed Tarek Aziz, Zeyad H. ElShafei, Yara Wael Anwar and Salma Hani ElSheshtawi (Egypt-Japan University of Science and Technology, Egypt); Walid Gomaa (Egypt Japan University of Science and Technology, Egypt).

- Reliable Ensemble Learning Approach for Predicting Molecular Properties

Sahar K. Hussin and Mariam Mahmoud (SUT, Egypt); Dalia Ezzat (Elsewedy University of Technology, Egypt).

Monday, July 27, 2026, | Time: 15:00 – 17:00

Room (5) / the Educational Complex | Track 5 – S1: Renewable Energy

Chairs: *Session Chair: TBA*

- [Design of a Low-Cost Shoe-Based Piezoelectric Energy Harvesting Device](#)
Kyrillos Khalf Selim, Faisal El-Hamdii, Ahmed El-Tantawy and Mohamed Abdel Fattah (Helwan University, Egypt); Mariam K. Shehata (Suez University, Egypt).
- [Cuckoo Search Algorithm-Based PID Controller for Precision Climate Regulation in Greenhouses](#)
Mohammed H. Al-Mola (University of Mosul, Iraq); Mohd Hanif Mohd Ramli (Universiti Teknologi MARA, Malaysia); Sherif I. Abdelmaksoud (New Cairo Technological University, Egypt).
- [Optimized Intelligent Control of a Photovoltaic Solar Tracker Using PID and Metaheuristic Algorithms Under Wind Disturbance](#)
Sherif H. Alhosary, Rowan M. Nasr and Sherif I. Abdelmaksoud (New Cairo Technological University, Egypt).
- [A LiDAR-Enabled Ground Rover Framework for Smart Monitoring in Utility-Scale Solar Power Systems: Design and Preliminary Validation](#)
Omar Shabana (Exponent, USA & UC Berkeley, USA); Khalid Mosalam (University of California, Berkeley, USA).
- [Public Transport-Drone Collaboration for Energy-Efficient Last-Mile Delivery: A Heuristic and Genetic Algorithm Approach](#)
Jahanara Thasnim, Mohamed S. Hassan and Ahmed Osman (American University of Sharjah, United Arab Emirates); Aboelmagd Noureldin (Royal Military College of Canada & School of Computing, Queen's University, Canada).

Monday, July 27, 2026, | Time: 15:00 – 17:00

Room (6) / the Educational Complex | Track 6 – S5: Next-Gen Networking, Mesh Relaying & Optical Comms

Chairs: *Session Chair: TBA*

- [MAV-FALCON: End-To-End MAVLink-Enabled FBMC Aerial Link for Command, Control, and Networking](#)
Youssef Shaban Abd El-Hadi, Mahmoud Abosrea Albasosi and Mohamed Mohamed Kamal Ibrahim (Cairo University, Egypt); Mohammed Taha Saber (Cairo University & Military Technical College, Egypt); Mohamed Riad El Ghoneimy (Cairo University, Canada); Abdelrhman Mohamed Abotaleb (Cairo University, Egypt & McMaster University, Canada).
- [Slice-Aware AP Selection for Cell-Free Massive MIMO Systems](#)
Fatma Gamal (Assiut University, Egypt); Ahmed Osama (Assuit University, Egypt); Shoukry Shams (Concordia University, Canada); Mahmoud Elsaadany (MacEwan University, Canada).
- [Generative Semantic Mesh Relaying for Disaster-Resilient Communication Beyond Cellular Networks](#)
Abanoub Benyamin Yacoub and Adel Ehab Adel (Universiti Sains Malaysia, Malaysia); Ebtehal Tamer Elshahhat (Ministry of Communicaton, Egypt).
- [High-Power Analog Radio-over-Fiber System Enabled by SBS Suppression and ML-Based Predistortion](#)
Felipe Pinto (INATEL, Brazil); Luiz Augusto Melo Pereira (Instituto Nacional de Telecomunicações, Brazil); Luciano Leonel Mendes (Inatel, Brazil); Arismar Cerqueira Sodr  Junior (INATEL, Brazil).

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- [Fully Open-Source SDR Platform Driven Hybrid a-RoF/FSO Fronthaul for B5G Applications](#)
Renan Matheus (National Institute of Telecommunications, Brazil); Frederico Francisco de Paula Campos (Instituto Nacional de Telecomunicações - INATEL, Brazil); Felipe Pinto (INATEL, Brazil); David Fabian Tavera Gutierrez (National Institute of Telecommunications, Brazil); Paulo Kiohara (Instituto Nacional de Telecomunicações, Brazil); Evandro Conforti (University of Campinas - UNICAMP, Brazil); Arismar Cerqueira Sodré Junior (INATEL, Brazil)
 - [Digital Predistortion for Optical Transmitters in Distributed Data Centers Using Fast-Convolution and Closed Loop Learning](#)
Mahmoud Abdelaziz (Zewail City of Science and Technology, Egypt)
 - [Performance Analysis of 4-QAM-OFDM Based Inter-Satellite Optical Wireless Communication Link at 80 Gbps Under Pointing Errors and Varying Link Distances](#)
Mehtab Singh (Chandigarh University, India); Somia A. Abd El-Mottaleb (Alexandria Higher Institute of Engineering and Technology, Egypt)

DAY 2



Oral Presentations

Tuesday, July 28, 2026, | Time: 12:00 – 14:00

Room (1) / the Educational Complex | Track 1 – S2: Microwave Circuits

Chairs: *Session Chair: TBA*

- [A Broadband GaN Power Amplifier for Sweep Jamming Applications Using Radial-Stub-Modified Branch-Line Coupling](#)
Azhar Hamdi (Zagazig University, Faculty Of Engineering, Egypt); Ahmed Elrefai (Air Defense College, Egypt & Zagazig University', Egypt); Fathi A. Farag (Zagazig University, Egypt); Amir Essam Almslmany (Alexandria University, Egypt).
- [Design of a Compact Ka-Band Planar Magic-T Based on SIW Technology](#)
Yassin Nezar (German University in Cairo, Egypt); Mahmoud Gadelrab Ahmed Gadelrab (Egypt); Shoukry Shams (Concordia University, Canada); Mahmoud Elsaadany (MacEwan University, Canada); Abdelmegid Allam (German University in Cairo, Egypt).
- [High Isolation Stacked Stripline Ferrite Circulator for Ka-Band Applications](#)
Eyad Sameh (German University in Cairo, Egypt); Mahmoud Gadelrab Ahmed Gadelrab (Egypt); Ahmed Elsaadany (Scientific Microwave Corporation, Canada); Shoukry Shams (Concordia University, Canada); Mahmoud Elsaadany (MacEwan University, Canada); Abdelmegid Allam (German University in Cairo, Egypt).
- [A Phase-Compensated Feed-Forward Architecture for Wideband Multi-Blocker Interference Cancellation in Low-IF Receiver Front-Ends](#)
Ahmed Medhat (Military technical college, Egypt); Ahmad Eldahshan, Hesham Ahmed and Mohammad Darwish (Military Technical College, Egypt).
- [Design of a Compact Ultra-Wide Frequency Tunable Range Bandpass Filter with Simple Biasing Network](#)
Jasser Yahia Abd El Azeem (Military Technical college, Egypt); Ahmed Elelimy Abounemra (Military Technical College, Egypt).

Oral Presentations

- [An Ultra-Wideband High-Power Coaxial Microwave Rotary Joint with Stable Rotational Performance](#)

Mohamed Mowafy (The Egyptian Technical Research and Development Centre, Egypt); Ahmed Fathallah Elagamy (Ain Shams University, Egypt); Amr K. Awad (The Research and Development Centre, ADC, Cairo, Egypt & Electronics and Communications Engineering, Zagazig University, Egypt).

- [An Economical L-Band Coaxial Rotary Joint with Low Insertion Loss for Radar Applications](#)

Mohamed Mowafy (The Egyptian Technical Research and Development Centre, Egypt); Ahmed Fathallah Elagamy (Ain Shams University, Egypt); Amgad Salama (ADC, Egypt & The Research and Development Centre, Egypt); Amr K. Awad (The Research and Development Centre, ADC, Cairo, Egypt & Electronics and Communications Engineering, Zagazig University, Egypt).

Tuesday, July 28, 2026, | Time: 12:00 – 14:00

Room (2) / the Educational Complex | Track 2 – S2: Robotics & Trajectory

Chairs: *Session Chair: TBA*

- [High-Fidelity Bond Graph Modeling of a Series Elastic Bipedal Robot with Structural Compliance](#)
Amir R. Ali (The German University in Cairo (GUC), Egypt & PI of the Applied-Science & Robotics Laboratory for Applied-Mechatronics ARATronics Laboratory, Egypt); Ayman Tarek (German University in Cairo (GUC), Egypt).
- [Energy-Based Dynamic Modeling and Stability Analysis of a Backward-Knee Robotic Leg Using Bond Graph Theory](#)
Amir R. Ali (The German University in Cairo (GUC), Egypt & PI of the Applied-Science & Robotics Laboratory for Applied-Mechatronics ARATronics Laboratory, Egypt); Mohamed Lokma (German University in Cairo, Egypt).
- [3D Laser Guidance Trajectory Control for Ground-to-Air Precision Interception Model](#)
Abdallah Adel (ASWU, Egypt); Ahmed M. Al-Atasy (Egyptian Military Academy, Egypt); Mostafa Elhoshy (Air Defense College, Egyptian Military Academy, Egypt); Ahmed Makram Abou ALmaaty (Air Defense College, Egypt & Egyptian Military Academy, Egypt); Amir Essam Almslmany (Alexandria University, Egypt).
- [Modular Smoothing and Dynamic Safety Margins for Enhanced Multi-Agent Path Planning](#)
Ahmed S Abdel-Rahman (Egyptian Military Academy, Egypt); Sherief Fathi Nafea and Basem Elhady El saeed (Suez Canal University, Egypt); Ayman A. El-Badawy (German University in Cairo, Egypt).
- [Multi-Domain Bond Graph MRAC for Mitigating Thermal Voltage Saturation in Voice](#)

Coil Motors

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

- [Dynamically Adaptive Constraint Management for LCMV Beamforming in Microwave Wireless Power Transfer to UAVs](#)

Yassin Elkady, Abdelmegid Allam and Dina El-Damak (German University in Cairo, Egypt).

- [A Data-Driven CNN-NN Hybrid Model for Prognostics of Satellite Battery Degradation](#)

Ahmed Adam (Egypt); Ahmed Mokhtar Refaie (Space Technology Center, Egypt); Sherif Helmy (Nuclear Power Plants Authority (NPPA), Egypt); Mohamed Abd El Aziz Hasan Abd El Rahman (Ain Shams University, Egypt).

Oral Presentations

Tuesday, July 28, 2026, | Time: 12:00 – 14:00

Room (3) / the Educational Complex | Track 3 – S2: Medical AI & Automation

Chairs: *Session Chair: TBA*

- [ViT-Radar: Explainable MaxViT Framework for Robust Human Activity Recognition in Smart Home Environments](#)
Aser Mohamed, Mohamed Rady, Mohamed Elsayed and Islam Mohamed (Galala University, Egypt); Tamer Abuhmed (Sungkyunkwan University, Korea (South)); Shaker El-Sappagh (Galala University, Egypt).
- [Explainable Multimodal Autism Screening Framework with NAO Social Robot Deployment](#)
Ahmed Métwalli (Arab Academy for Science, Technology, and Maritime Transport, Egypt); Laila Tarek and Miran Samer (Arab Academy for Science Technology and Maritime Transport College of Artificial, Egypt); A. M. Elshaer (Alexandria & Arab Academy for Science, Technology, and Maritime Transport, Egypt).
- [The Electrophysiological Impact of Wi-Fi on Plants](#)
Minara Sooriyaarachchi and Ahmed Abdelhadi (University of North Dakota, USA).
- [Design and Implementation of a Model-Based Pediatric Rehabilitation Exoskeleton Using IMU Sensing, Embedded Control, and IoT Monitoring](#)
Merihan Mohammad (CIC - Canadian International College, Egypt); Mustafa Mohamed Abdelhamid Ezzat Shaker, Ahmed Mohamed Mustafa, Mohamed Hamdy, Andrew Ashraf and Yassin Ashraf (Canadian International College, Egypt).
- [Smart Heart Disease Detection Using Multimodal ECG in a Cloud-Edge IoMT Environment](#)
Zeinab Ibrahim (AAST, Egypt); Noha M. Ghatwary (Arab Academy for Science and Technology & AAST, Egypt); Mohamed Aboul-Dahab (Arab Academy for Science and Technology, Egypt); Hesham Aly (Arab Academy for Science Technology and Maritime Transport, Egypt).

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- [\(NEUROTIX: A Neural Interface System for Real-Time Cognitive Adaptation\)](#)
Rofida Ayman and Malak Mohamed Abdelghany (Obour stem school, Egypt).
 - [Smart Kitchen System Using IoT and Artificial Intelligence for Gas Monitoring and Recipe Recommendation](#)
Samar Nady Mohamed and Nagwa Gamal Goher (Nahda university, Egypt); Nourhan Hamed Abdullah, Alaa Barakat Ewis, Rofida Mohamed Saad, Yomna Mohammed Sayed, Alaa Salah Sayed and Ayman Samir Ibrahim (Nahda University, Egypt).
 - [Human-Focused Behavioral Anomaly Detection in AWS CloudTrail Logs Using Two-Stage Isolation Forest](#)
Marko Alkes Malak (Fayoum University, Egypt); Abdelazez Mohamed (Abdelazez Mohamed, Canada).

Oral Presentations

Tuesday, July 28, 2026, | Time: 12:00 – 14:00

Room (4) / the Educational Complex | Track 4 – S5: LLMs, Optimization & Explainable AI

Chairs: *Session Chair: TBA*

- [Beyond Cross-Entropy: Robust Domain Generalization via Minimum Error Entropy](#)
Mahmoud Soliman, Ahmed Elgazwy and Omar Abdelaziz (University of British Columbia, Canada); Mohamed S Shehata (University of British Columbia, Canada & Memorial University, Canada).
- [VA-Nadam: Variance-Based Adaptive Nadam Optimizer for Stable and Efficient Training of Deep Neural Networks](#)
Soliman Younis and Amany Sarhan (Elsewedy University of Technology, Egypt).
- [SEAL++: Addressing Catastrophic Forgetting, Scalability, and Accessibility in Self-Adapting Language Models](#)
Hany Mostafa Mossad (Arab Academy for Science & Technology, Egypt); Aliaa Youssif (AAST, Egypt).
- [AI-Based Arabic Text Correction Using a Dynamic Confidence-Based Fusion Framework](#)
Esraa Hassan Ali Elsayed (Electronics and Communications Department, Faculty of Engineering Misr University for Science and Technology Giza, Egypt); Heba Ahmed Elnemr (Computer and Software Department, Faculty of Engineering, Misr University for Science and Technology Giza, Egypt); Mohamed Hussein Moharam (Electronics and Communications Department, Faculty of Engineering Misr University for Science and Technology Giza, Egypt); Mohsen Rashwan (Electronics and Communications Department, Faculty of Engineering Cairo university Giza, Egypt).
- [An AI-Powered Educational Code Review Platform: Integrating Static Analysis and](#)

Localized RAG with Qwen2.5

Youssef Moussa (The British University in Egypt, Egypt); Ahmed Youssef (Military Technical College, Egypt).

- Explainability-Guided Verification for Detecting Unreliable Predictions in Lightweight Machine Learning Models

Youssef E. Mohamed, Mazen H. Elnahal, Nasr Y. Nasr and Marwa O. Al Enany (Badya University, Egypt).

- Towards Efficient Semantic Communication: A Comparative Study of Multi-Task and Pipeline Models for Environmental Social Media Data

Ghada Shafiq (Mansoura University, Egypt).

- Generalized VLM-Based in-Car Violence Detection Leveraging Synthetic Data

SeifEldin Zeidan (German University in Cairo, Egypt); Shashank Mishra and Jason Raphael Rambach (German Research Center for Artificial Intelligence, Germany); Mohammed A.-Megeed Salem (German University in Cairo & Ain Shams University, Egypt).

Oral Presentations

Tuesday, July 28, 2026, | Time: 12:00 – 14:00

Room (5) / the Educational Complex | Track 5 – S2: Power Grid & Mobility

Chairs: *Session Chair: TBA*

- [AI-Driven Unsupervised Anomaly Detection over Communication Networks for Cyber-Resilient Smart Inverters in Hybrid AC/DC Microgrids](#)
Chou-Mo Yang, Mahmoud Elsisy and Chun-Lien Su (National Kaohsiung University of Science and Technology, Taiwan).
- [Methane-Hydrogen Mixture Flow in Pipe: CFD and Exergy Study](#)
Abdelrahman Osama Moussa, Ihab G. Adam, Sherif Haddara, Hesham M. Khalil and Yasser Abuouf (Alexandria University, Egypt).
- [Stability-Informed Defense Prioritization for Power Grid Protection Against Coordinated Drone Attacks](#)
Mohamed Shamseldein (Ain Shams University, Egypt).
- [Stability-Constrained Siting of Pulsed Counter-UAS Loads in Transmission Substations](#)
Mohamed Shamseldein (Ain Shams University, Egypt).

Oral Presentations

Tuesday, July 28, 2026, | Time: 12:00 – 14:00

Room (6) / the Educational Complex | Track 6 – S6: Optical Wireless Communications & FSO Systems II

Chairs: *Session Chair: TBA*

- [Performance Evaluation of PAM-4 Modulation in Free-Space Optical Links Under Cairo, Egypt Atmospheric Conditions](#)
Mehtab Singh (Chandigarh University, India); Somia A. Abd El-Mottaleb (Alexandria Higher Institute of Engineering and Technology, Egypt); Marwa Samara (Alexandria Higher Insitute for Engineering and Technology, Egypt).
- [Impact of Beam Divergence and Aperture Diameter on 16-PSK FSO System Performance Under Cairo Weather at 120 Gbps](#)
Mehtab Singh (Chandigarh University, India); Somia A. Abd El-Mottaleb (Alexandria Higher Institute of Engineering and Technology, Egypt); Gargi Verma (Chandigarh University, India).
- [Hardware-Faithful Simulation Platform for Simultaneous Light Communication and Energy Harvesting Using Photovoltaic Cells](#)
Ghada Shaban Eldeghady, Eng. (MUST, Egypt); Mohamed Hassan (Misr University for Sience and Technology, Egypt); Fady Mokbel, Nour Aref, Hadeer Mamdouh and Mohannad Mohamed (Misr University For Science And Technology, Egypt); Mohamed Hussein Moharam (Misr University For Science and Technolgy & Engineering, Egypt).
- [Reliability Analysis of VLC Systems Under Signal-Dependent Shot Noise](#)
Sara H. ElFar (Concordia University, Canada); Salama Said Ikki (Lakehead University, Canada); Abdel R. Sebak (Concordia University, Canada).
- [Joint Optimization of PAPR Reduction and Digital Predistortion](#)
Ali Ayman Ali Mahmoud Rizk and Mahmoud Abdelaziz (Zewail City of Science and Technology, Egypt).

Tuesday, July 28, 2026, | Time: 15:00 – 17:00

Room (1) / the Educational Complex | Track 1 – S3: UWB & MIMO

Chairs: Session Chair: TBA

- [Design of a High-Performance MIMO Antenna](#)
Hassan Ali Ragheb (The British University in Egypt, Egypt); Mariam Hossam (University of Waterloo, Canada); Roshdy M Mahmoud (British University in Egypt, Egypt).
- [Novel Design for IoE Applications of a Miniaturized Antenna Array](#)
Baba-ahmed Mohamed Zakarya (Université Abou Bekr Belkaid, Tlemcen, Algeria); Mohammed Amin Rabah (Université de Chlef, Algeria); Taleb Rahma Djaouda, Hayat Benosman, Hamilil Ikram and Souria Cheffar (University of Tlemcen, Algeria).
- [Design and Implementation of a UWB CPW Monopole Antenna Sensor for Wearable Respiratory Monitoring](#)
Hader Ashraf (Benha University, Egypt); Anwer Sayed Abd El-Hameed (Electronics Research Institute, Egypt); Islam Mansour (Benha University, Egypt); Gehan Shehata (Shubhra University, Egypt).
- [Semi-Circular Slit-Embedded UWB Antenna Featuring Dual Band Filtering Functionality](#)
Ahmed Ismaiel (Army Air Defence College, Egypt); Ahmed Khairy (Egyptian Military Academy Air Defense College, Egypt).
- [Low-Profile THz MIMO Antenna Design with Reduced Mutual Coupling for 6G Wireless Systems](#)
Naser Ojaroudi Parchin and Haleh Jahanbakhsh Basherlou (Edinburgh Napier University, United Kingdom (Great Britain)); Ahmed Ismaiel (Army Air Defence College, Egypt); Sherif A. Khaleel (College of Engineering AASTMT, Egypt); Ahmed Gamal Abdellatif Ibrahim (Egyptian Chinese University, Egypt & Air Defense College, Egyptian Military Academy, Egypt); Saied Alaa Eldin Ramadan (Egyptian Military Academy, Egypt).
- [A Compact UWB Antenna Design with Integrated Dual Interference Rejection Bands](#)
Naser Ojaroudi Parchin (Edinburgh Napier University, United Kingdom (Great

Britain)); Ahmed Ismaiel (Army Air Defence College, Egypt); Ahmed Gamal Abdellatif Ibrahim (Egyptian Chinese University, Egypt & Air Defense College, Egyptian Military Academy, Egypt); Saied Alaa Eldin Ramadan (Egyptian Military Academy, Egypt).

- Wideband RF Power Amplifier Design Using Graphical Smith Chart Approach

Hossam Reda Mohammed (Air Defense College, Egypt); Mohammed El-Banna, Hosam E Mostafa and Amir Essam Almslmany (Alexandria University, Egypt); Mohammad Darwish (Military Technical College, Egypt).

Tuesday, July 28, 2026, | Time: 15:00 – 17:00

Room (2) / the Educational Complex | Track 2 – S3: Sensing & Security

Chairs: *Session Chair: TBA*

- [An Integrated Framework for Active API Security Verification in Microservices Architectures](#)
Mohamed Hani (Delta University for Science and Technology, Egypt).
- [Wideband DOA Estimation Using Joint Time-Frequency Sparse Representation](#)
Michael Melek (Cairo University, Egypt).
- [Inverse-Free Variational Bayesian Learning for Bistatic near-Field ISAC](#)
Ahmed A. Tawfik (Port Said University, Egypt); Ahmad H. Eid (Faculty of Engineering, Port-Said University, Egypt); Sherif M Abuelenin (Port-Said University, Egypt); Ahmed Elzanaty (University of Surrey, United Kingdom (Great Britain)).
- [Two-Dimensional PKO-Based Optimization for Sidelobe Level Reduction in Planar Antenna Arrays](#)
Samaa Hany Seif Elyazal (Suez Canal University, Egypt); Doaa Gamal (SCU, Egypt); Ahmed Magdy (Suez Canal University, Egypt).
- [Detection Theory, Experimental Progress, and Engineering Limits Toward Practical Sensing to Explore Quantum Radar Beyond the Hype](#)
Wael Badawy (Egyptian Russian University, Egypt).
- [Accuracy Assessment of UAV-Based Direct Georeferencing Using Post-Processed Kinematic GNSS Measurements: A Case Study of Port Terminal Construction in Damietta, Egypt](#)
Khaled Hesham Kamal (Faculty of Engineering, Cairo University); Mahmoud Abdelrahman Abd Rabbou (Faculty of Engineering, Cairo University, Egypt); Mohamed Gomaa (Cairo, Egypt).

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- [Microfluidic Impedance Biosensing Platform for Label-Free Detection and Viability Assessment of Escherichia Coli](#)

Sameh Sherif (Egypt-Japan University of Science and Technology, Egypt); Maha Elsabrouty (Egypt Japan University for Science and Technology, Egypt); Osamu Muta (Kyushu University, Japan); Rahema Ndeda and Irene Muisyo (Jomo Kenyatta University of Agriculture and Technology, Kenya).

Oral Presentations

Tuesday, July 28, 2026, | Time: 15:00 – 17:00

Room (3) / the Educational Complex | Track 3 – S3: Robotics, UAVs, and Autonomous Agents

Chairs: *Session Chair: TBA*

- [Design and Implementation of an IoT-Based Smart Vending Machine Based on Real-Time Inventory Monitoring](#)
Mohamed Emad Eldin Ali (University of hertfordshire, Egypt); Mohamed Elghitany (Ain Shams University, Egypt); Abdelgwad Elashry (University of Hertfordshire - Global Academic Foundation, Egypt).
- [A Network Coding-Based Approach to Enhancing Scalability and Reliability in Dynamic VANETs](#)
Maryam Saied Mustafa, Yasmine Fahmy and Doha Hamza (Nile University, Egypt).
- [Mode Division Multiplexed Underwater Optical Wireless Communication Using Laguerre-Gaussian Beams: Performance Analysis Under Varying Water Turbidity Conditions](#)
Mehtab Singh (Chandigarh University, India); Somia A. Abd El-Mottaleb (Alexandria Higher Institute of Engineering and Technology, Egypt).
- [Integrated ROS-Based Cooperative Multi-Robot Autonomous Exploration and Mapping](#)
William Tarimo (Connecticut College, USA); Moustafa Mahmoud Sabra (Remitly.Inc, Egypt & Connecticut College, USA); Mohammad Mahmoud Sabra (Helwan University, Egypt).
- [A Low-Cost UAV Perception Stack for Obstacle-Aware Image Acquisition and 3D Reconstruction via MAVLink Proximity Sensing and FPGA Image Enhancement](#)
Eman Abass (AlRyada University, Egypt & Cybersecurity Program Leader, Egypt).

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- [H.A.W.K.-C2: Hazard Assessment & Warfare Kinetics Command-and-Control System](#)
Hossam Zein (University of Helwan, Egypt); Haitham Hassan (University of Warwick, United Kingdom (Great Britain)).
 - [Smart Predictive Analytics for IIoT](#)
Zahraa Ismail (The British University in Egypt, Egypt); Hesham Hany (The British University in Egypt Elshorouk, EGY, Egypt); Mira M. Zarie and Moamen Gamal (The British University in Egypt Elshorouk, Egypt).
 - [Digital Twin-Based Control Framework for a Delta Robot Integrated with Conveyor Belt and Vision System for Smart Manufacturing](#)
Kyrollos Samy Marcus (ECU, Egypt & Ain shams University, Egypt); Mohamed Elghitany (Ain Shams University, Egypt).

Oral Presentations

Tuesday, July 28, 2026, | Time: 15:00 – 17:00

Room (4) / the Educational Complex | Track 4 – S6: Defense Mechatronics, Drones & Autonomous Systems

Chairs: *Session Chair: TBA*

- [AI-Driven Smart Authentication and Secure Weapon Storage Framework for Mechatronic Systems Using Biometrics and IoT](#)

Amal NassaR and Eman NassaR (Higher Technological Institute, Egypt); Mazen Amr Ali and Mohamed Ahmed Elsayed Saad (Air Defense College Egyptian Military Academy, Egypt); Mohamed Awad Awad (Air Defense College Egyptian Military Academy, Egypt); Bhaa Alaa Fahmy (Air Defense College Egyptian Military Academy, Egypt); Mahmoud Ramadan Rajab (Air Defense College Egyptian Military Academy, Egypt); Mohamed Mahmoud Yousry, Ahmed Sameer Mohamed, Mohamed Wessam Eldin and Mostafa Mohamed Kher (Air Defense College Egyptian Military Academy, Egypt); Mohamed Walid Sleet (Air Defense College Egyptian Military Academy, Egypt); Ahmed Fouad Fouad (Air Defense College Egyptian Military Academy, Egypt); Ahmed Makram Abou ALmaaty (Air Defense College, Egypt & Egyptian Military Academy, Egypt); Ahmed Khairy (Egyptian Military Academy Air Defense College, Egypt); Mohamed Bakr (Air Defense College, Egyptian Military Academy, Egypt); Shady H. Elgohary (Egyptian military academy, Egypt); Ahmed Abdel Nassar (Military Academy Air Defense College Egypt, Egypt).

- [Design and Development of a Covert Autonomous Surveillance Robot Using Computer Vision and Stealth Technologies](#)

Amal NassaR and Eman NassaR (Higher Technological Institute, Egypt); Ahmed Makram Abou ALmaaty (Air Defense College, Egypt & Egyptian Military Academy, Egypt); Mahmod Abdshakor, Adham Rahman, Adham Herz, Ahmed Mohammed, Mohammed Ibrahim, Islam Siam, Mohammed Ahmed, Mohammed El-Azazi, Youssef El-Sayed, Mostafa Razek, Mohammed Abul Fotouh, Mazen El-Saadani and Anwar Harfoush (Air Defense College Egyptian Military Academy, Egypt); Ahmed Elrefai (Air Defense College, Egypt & Zagazig University', Egypt); Amir Essam Almslmany (Alexandria University, Egypt).

- Design and Implementation of a Low-Cost Autonomous Soldier Follower Robot for Rugged Terrains

Eman NassaR and Amal NassaR (Higher Technological Institute, Egypt); El-Sayed Abdo, Mohammed Mohammed, Eid Abdel Fattah and Mohammed El-Rajbi (Air Defense College Egyptian Military Academy, Egypt); Yousef Abd Elfatah (Air Defense College, Egyptian Military Academy, Egypt); Abdel Rahman Heikal and Karim Ahmed El-Hassanin (Air Defense College Egyptian Military Academy, Egypt); Ahmed Mohy, Yousef Eldeeb, Hassan Ali, Mohammed El-Dein and Abd Elrahman Fahmy (Air Defense College, Egyptian Military Academy, Egypt); Ahmed Ismail, Yousef Shaban Abdelfatah and Mahmud Abdshakor (Air Defense College Egyptian Military Academy, Egypt); Ahmed Makram Abou ALmaaty (Air Defense College, Egypt & Egyptian Military Academy, Egypt); Ahmed Khairy (Egyptian Military Academy Air Defense College, Egypt); Ahmed H. EL-Sakka (Alexandria University, Egypt); Shady H. Elgohary (Egyptian military academy, Egypt).

- Design and Implementation of an Electric Actuation System for a 23 mm Gun Model with Camera-Based Targeting

Mona Ahmed Younis (Higher Technological Institute & Egyptian Military Academy, Egypt); Shihab Eldin Saeed (Egyptian Military Academy, Egypt); Samir Hani Samir (Egyptian Military academy, Egypt); Ziad Ahmed Awad, Mohamed Abdelgawad Ibrahim, David Joseph Saad, Ziad Ahmed Hamida, Mohamed Abdel Nasser Abdullah, Abdul Rahman Khaled, Mazen Ismail Ismail, Ibrahim Mohamed Ibrahim, Salah Aladdin Abdul Rahman and Mohamed Housini Mohamed (Egyptian Military Academy, Egypt); Ahmed H. EL-Sakka (Alexandria University, Egypt); Ahmed Makram Abou ALmaaty (Air Defense College, Egypt & Egyptian Military Academy, Egypt); Ahmed Khairy (Egyptian Military Academy Air Defense College, Egypt); Shady H. Elgohary (Egyptian military academy, Egypt).

- Thermal Object Detection for Advanced Driver-Assistance Systems

Wael Badawy (Egyptain Russian University, Egypt).

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- [Design and Implementation of a Small Bird-like Aircraft \(Drone\) Operating as a Loitering Munition Aerial/Ground Mine](#)

Mona Ahmed Younis (Higher Technological Institute & Egyptian Military Academy, Egypt); Abdelrahman Ehab Ibrahim, Sameh Mohamed Wahdan, Mohamed Ahmed Atteya, Mohamed Abdelrahman Esmat, Mohamed Nabih mohamed Elsayed, Mostafa Mohamed Mohamed, Mohamed Ashraf Mohamed Aref, Mohamed Ahmed Farouk, Abdelrahman Mohamed Abdelrahman, Youssef Mohamed Attia Mohamed, Mohamed Ahmed Attia Ibrahim, Ali Mohamed Mohamed and Ahmed Maher Taha Abdelgawad (Egyptian Military Academy, Egypt); Amar Hassan (Egypt); Ahmed Khairy (Egyptian Military Academy Air Defense College, Egypt); Shady H. Elgohary (Egyptian military academy, Egypt); Ahmed Makram Abou ALmaaty (Air Defense College, Egypt & Egyptian Military Academy, Egypt); Saied Alaa Eldin Ramadan (Egyptian Military Academy, Egypt).

- [Swarm of Retrofitted Drone for Fire Detection, Mapping, and Predictive Analysis](#)

Shahd Mohamed (University of Hertfordshire UH-GAF, Egypt); Samar Moustafa Ismail (University of Hertfordshire (UH-GAF), Egypt); Hossam Hassan Ammar (University of Hertfordshire - Global Academic Foundation, Egypt).

- [A Resource-Aware Reinforcement Learning Framework for Adaptive Drone Security Assessment](#)

Muhammed Karam (Air Defense College, Egyptian Military Academy, Egypt); Ahmed Adel (Egyptian Military Academy, Egypt); Osama El-Azab (Mansoura University, Egypt); Ahmed Mahmoud Saad (Air Defence College- Egyptian Military Academy & Air Defence College Egyptian Military Academy, Egypt); Muhammed Mekky (Alexandria University, Egypt); Ahmed Khairy (Egyptian Military Academy Air Defense College, Egypt).

Tuesday, July 28, 2026, | Time: 15:00 – 17:00

Room (5) / the Educational Complex | Track 6 – S1: Enterprise Security, SOC Simulation & Threat Detection

Chairs: *Session Chair: TBA*

- [Advanced Encrypted File Sharing and Organizational Access Control](#)

Ali E. Takieldean (Delta University for Science and Technology, Egypt & Cyber Security, Egypt); Shahd Mahmoud Farhat, Abdelrahman Elsaed Elsaed, Ahmed Salah Elnaggar and Omar Sherif Ibrahim (Delta University for Science and Technology, Egypt); Eslam A. Takieldean (Horus University, Egypt); Magde Z. Rashad (Mansoura University, Egypt).

- [A Modular Integrated Cybersecurity Platform for Web Applications, Identity Management, and Incident Response](#)

Ali E. Takieldean (Delta University for Science and Technology, Egypt & Cyber Security, Egypt); Malak Sherif, Ahmed Mohammed Fahmy Basha, Mohamed Alamer Abdelazez, Fares Ahmed Elsayed, Asmaa Ragab and Abdulrahman Maher Al-Gohary (Delta University for Science and Technology, Egypt); Eslam A. Takieldean (Horus University, Egypt); Magde Z. Rashad (Mansoura University, Egypt).

- [Q-Learning-Driven Adaptive Honeynet for Intelligent Cybersecurity](#)

Ali E. Takieldean (Delta University for Science and Technology, Egypt & Cyber Security, Egypt); Doniya Mohamed Abd-Elhady, Mariam Habib, Abdallah Mohamed, Maryam Asr, Basant Magdy, Merna Mohammed and Mostafa Magdy (Delta University for Science and Technology, Egypt); Eslam A. Takieldean (Horus University, Egypt).

- [Firewall Incident Response Automation Tool](#)

Ahmed Azzam, Fatma Muhammed, Maryam Ahmed, Basel Mohamed and Samir Mohamed (Delta University for Science and Technology, Egypt); Ali E. Takieldean (Delta University for Science and Technology, Egypt & Cyber Security, Egypt); Eslam A. Takieldean (Horus University, Egypt).

Oral Presentations

- [Intelligent Behavior-Based Threat Detection & Prevention System for Web Applications](#)

Ali E. Takieldeem (Delta University for Science and Technology, Egypt & Cyber Security, Egypt); Raneem Raneem Hany and Sarah Mustafa (University for Science and Technology, Egypt); Maram Ehab Fouad and Rawan Adel Ahmed (Delta University for Science and Technology, Egypt); Eslam A. Takieldeem (Horus University, Egypt); Farah Ayman Abdelbaseer Elshaer (Delta University for Science and Technology, Egypt).

- [An Integrated Multi-Agent Framework for Intelligent Web Vulnerability Assessment and Automated Verification](#)

Ali E. Takieldeem (Delta University for Science and Technology, Egypt & Cyber Security, Egypt); Ahmed Azzam (Delta University for Science and Technology, Egypt); Abdalrahman Eslam, Ahmed Eslam, Mennaallah Ahmed, Dina Abdelmoneam, Rahma Mohamed, Aya Aly, Saif Mohammed and Fares Saber (Delta university for science and technology, Egypt); Eslam A. Takieldeem (Horus University, Egypt); Magde Z. Rashad (Mansoura University, Egypt).

- [Cyber-FIE: A Software-Induced Memory Fault Injection Framework for Evaluating AES-256 Resilience on ESP32](#)

Ali E. Takieldeem (Delta University for Science and Technology, Egypt & Cyber Security, Egypt); Ziad A. Mashaly, Mohamed H. El Sherbini, Haitham M. Attia and Sayed H. Hagag (Delta University for Science and Technology Gamsa, Egypt); Eslam A. Takieldeem (Horus University, Egypt).

- [CyberSOCSim: A Multi-Phase AI-Driven SOC Simulation Platform with Intelligent Threat Detection and Automated Response](#)

Ali E. Takieldeem (Delta University for Science and Technology, Egypt & Cyber Security, Egypt); Mahmoud Mohamed Lotfy (Delta University for Science and Technology Gamsa, Egypt); Mohamed Ahmed, Yousef Khalid, Doha Ehab and Engy Said (Delta University for Science and Technology, Egypt); Eslam A. Takieldeem (Horus University, Egypt); Samia Mohammed Abd-Alhalem (DU, Egypt).

Tuesday, July 28, 2026, | Time: 15:00 – 17:00

Room (6) / the Educational Complex | Track 6 – S7: Biomedical AI, Health Informatics & Assistive Robotics I

Chairs: *Session Chair: TBA*

- [A Digital-Twin Framework for Scalable 5G-Inspired ISAC People Counting in Healthcare Environments](#)
Sebastian Ratto V, Ahmed N. Sayed and Abdelrahman Elbadrawy (University of Waterloo, Canada); Arien Sligar (Ansys Inc., USA); George Shaker (University of Waterloo & Spark Tech Labs, Canada).
- [Improved Glioblastoma MGMT Methylation Prediction Using Hybrid CoAtNet-Radiomics with Modality-Aware Attention Fusion and Ensemble Learning](#)
Hadeer Mohamed Sherif, Fatma EL-Zahraa A. EL-Gamal, E Daydamony and Mohammed M Elmogy (Mansoura University, Egypt).
- [MT-CardioNet: A Multi-Task Deep Learning Framework for Cardiac Disease Classification and Outcome Prediction](#)
Ahmed O. Abouelatta (Mansoura National University, Egypt); Adel M. Osman (Mansoura University, Egypt); Noha Hussen (Elsewedy University of Technology, Egypt).
- [Breast Cancer Detection Using YOLO and Intensity-Based Segmentation](#)
Sherif Abdelfattah, Lavanya Mandava and Silas Mattern (Bradley University, USA); Mahmoud M Badr (SUNY Poly, USA).
- [Secure Cloud-Based Federated Deep Reinforcement Learning Framework for Glucose Regulation](#)
Sherif Abdelfattah (Bradley University, USA); Mahmoud M Badr (SUNY Poly, USA); Mohamed Baza (College of Charleston, USA).

Oral Presentations

- [Event-Driven Modeling for Short-Term Glucose Prediction from Irregular CGM-Insulin Data](#)

Lavanya Mandava (Bradley University, USA); Husam Ghazaleh (Benedictine University, USA); Guilin Zhao (Southwest Jiaotong University, USA); Rahul Biswa Karma (Bradley University, USA).

- [A RAG-Enhanced Pepper Humanoid Robot for Hospital Reception and Supervised Patient Support](#)

A. M. Elshaer (Alexandria & Arab Academy for Science, Technology, and Maritime Transport, Egypt); Abdelrhman Karam, Aly Ahmed Lotfy Mohamed Ahmed, Amira Elsayed Zaki Zayed, Mohamed Amr, Yousef Ahmed Tawfik and Amr Emara (Arab Academy for Science & Technology, Egypt).

DAY 3



Oral Presentations

Wednesday, July 29, 2026, | Time: 12:00 – 14:00

Room (1) / the Educational Complex | Track 1 – S4: Sensing & Meta-surfaces

Chairs: *Session Chair: TBA*

- [A 1-Bit Reconfigurable Holographic Surface for Simultaneous Beam Steering and Enhanced OAM Generation](#)

Haitham Mohamed Hamada (Higher Technological Institute HTI at 10th of Ramadan City, Egypt); Larbi Talbi (University of Quebec - Outaouais, Canada); Mohamed Mamdouh Mahmoud Ali (Assiut University, Egypt).

- [A Simple 1-Bit Reconfigurable Intelligent Surface Holography Using Gerchberg-Saxton Algorithm in Fresnel Zone](#)

Islam Afifi (Cairo University, Egypt); Larbi Talbi (University of Quebec - Outaouais, Canada); Mohamed Mamdouh Mahmoud Ali (Assiut University, Egypt).

- [Performance Enhancement of GB-SAR Using Non-Uniform Virtual Antenna Arrays](#)

Bassant H El Swiefy (Electronic Reseach Institute, Egypt); Anwer Sayed Abd El-Hameed (Electronics Research Institute, Egypt); Angie Eldamak (Ain Shams University, Egypt); Hala Elsadek (Electronics Research Institute, Egypt); Hadia M. elhennawy (Ain Shams University, Egypt).

- [Groundwater Localization Techniques Utilizing Meander Line Antenna](#)

Reem Zaky (AAST, Egypt); Sherif Eldyasti (Arab Academy for Science and Technology & AAST, Egypt); Mohamed Atef Abbas (Arab Academy for Science, Technology and Maritime Transport, Egypt); Mohamed Fathy Abo sree (Arab Academy for Science and Technology & AASTMT Company, Egypt).

- [Dual Band Circularly Polarized Binary Unit Cell for Reconfigurable Intelligent Surface Applications in C and X Bands](#)

Mohammad Ali and Abdel-Razik Sebak (Concordia University, Canada).

- [Performance Analysis of Patch vs. Meander Line Antennas in Ground Penetrating](#)

Radar for Underground Iron Detection

Ahmed Essam Diaaeldin Hassanein (AAST, Egypt); Sherif Eldyasti (Arab Academy for Science and Technology & AAST, Egypt); Mohamed Fathy Abo sree (Arab Academy for Science and Technology & AASTMT Company, Egypt).

- A Broadband Synthesized Multistage Feeding Network for Low-Sidelobe Antenna Arrays

M. Housini, Nihal F. F. Areed, Seham Abd-Elsamee and Salma Mohamed Seif (Mansoura University, Egypt); Ahmed Alieldin (The Egyptian Technical Research and Development Centre, Egypt).

Wednesday, July 29, 2026, | Time: 12:00 – 14:00

Room (2) / the Educational Complex | Track 4 – S2: Adversarial Robustness, Phishing & Prompt Security

Chairs: *Session Chair: TBA*

- [Evaluating Lightweight Machine Learning for Malicious Web Request Detection Under Group-Aware Splitting](#)
Mohamed Youssef (Queen's University, Canada); Mohanad Ghoraba (Mohanad Ghoraba, Canada).
- [Evaluating Adversarial Robustness of ML-Based NIDS Under FGSM and PGD Evasion Attacks: A Comparative Study](#)
Hanaa Mahmoud (Queens university, Canada).
- [RAG-anti-Poisoning: A Hybrid Defense Framework Against Prompt Injection and Corpus Poisoning Attacks in Retrieval-Augmented Generation Systems](#)
Bassant Madkour and Mohamed Salah (Queen's University, Canada); Samy Ezzat (Cyshield, Egypt); Salman Rakin (Queen's University, Canada); Sherif Gamal (Mansoura University, Egypt); Sherif Eletriby (Menoufia University, Egypt).
- [Adversarially Hardened Hierarchical Machine Learning for IoT Intrusion Detection on CICIOT2023](#)
Eid Abd Elrihem Ahmed Mohamed, Ahmed Abdelhamed Hussein Mohamed and Ahmed Sherif (Queen's University, Canada).
- [EdgePhish-5G: Hybrid BERT-TF-IDF Phishing URL Detection for Real-Time 5G Edge Deployment](#)
Hassan Albattra (Misr University for Science and Technology, Egypt & Queen's University, Canada); Rania Abul Seoud (Faculty of Engineering Fayoum University, Egypt); Dina Ahmed Salem (Misr University of Science and Technology, Egypt).
- [Explainable AI-Based Phishing URL Detection](#)
Naira Saeed Hassan AL-Battra (Queen's University, Canada).

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- [RAG-Shield: A Three-Layer Ensemble Defense Against Prompt Injection in RAG Pipelines](#)

Yasmeen Algendy and Yomna Algendy (Queen's University, Canada).

- [Beyond the Hype: Mapping Machine Learning Readiness Across Blockchain Attack Layers, Gaps, Trends, and a Roadmap](#)

Dalia Tourky (Ministry of Higher Education, Egypt); Arabi Keshk (Faculty of Computers and Information - Menofia University, Egypt); Sherif Eletriby (Menoufia University, Egypt); Marwa O. Al Enany (Badya University, Egypt).

Oral Presentations

Wednesday, July 29, 2026, | Time: 12:00 – 14:00

Room (3) / the Educational Complex | Track 6 – S3: Advanced Cybersecurity, Federated Learning & Wireless Security

Chairs: *Session Chair: TBA*

- [Leakage-Free Subject-Independent Evaluation of Deep Learning Models for EEG-Based Depression Detection](#)
Kholoud Elnaggar, Mostafa Elgayar and Mohammed M Elmogy (Mansoura University, Egypt).
- [Hardware-Efficient 4D Chaos Cipher for Secure Image Transmission in Resource-Constrained Environments](#)
Ahmed Khaled, Marawan Khaled, Yasseen Ahmed, Mohamed Mostafa Awad, Mohamed Adel, Ahmed Yasser and Essam Abdellatef (Alamein International University, Egypt).
- [Federated Learning for Secure Intrusion Detection in Non-IID IoT Networks](#)
Aya Gamal Ayad, Nehal Ahmed Sakr, Noha Ahmed Hikal and Mohammed M Elmogy (Mansoura University, Egypt).
- [Autonomous Dual-Agent Reinforcement Learning for Cyber Warfare Simulation in Vulnerable Web Environments](#)
Roqia Tamer ElShahhat, Elsayed Hassan, Mohamed Khaled Zidan and Ahmed Mahmoud Anwer (Queen's University, Canada); Ahmed Adel (Egyptian Military Academy, Egypt).
- [Cloud-Native Fine-Tuning and Deployment of a Small Language Model for Explainable IoT Intrusion Analysis](#)
Mostafa Mohie Mohamed Anwar Elofy and Mohamed Kamal Abdullah Hasan (Queen's University, Canada); Elsayed Mohamed Elsayed (Queen's University, Canada); Roqia Tamer ElShahhat (Queen's University, Canada); Sherif Gamal (Mansoura University, Egypt).

- [SDN-Enabled Self-Optimized Handover Framework for 5G Networks](#)

Ali Mohamed Ali Ali, Abdelhamid Elsayed Abdelhamid Elrefaey, Yousif Khaled Saad Salem, Mohamed Elsayed Abdelrazek Abdelmajeed, Islam Fathy Abdelmohsen Abdelhamid and Hala B Nafea (Mansoura University, Egypt).

- [A Novel Energy-Efficient Trajectory Optimization for UAV-RIS Enhanced 6G THz Networks](#)

Heba Salah, Heba M. Abdel-Atty and Nada Ahmed Ezz-Eldien (Port Said University, Egypt).

- [Optimal Age of Information Scheduling in Deterministic Dual-Channel Networks](#)

Pansee Safwat Mohamed Ellessawy (Linkoping University, Sweden); Karim A. Banawan (American University in Cairo, Egypt); Ahmed Arafa (University of North Carolina at Charlotte, USA); Tamer Abuelfadl (Nile University, Egypt); Mohammed Karmoose (Nile University, Egypt & Alexandria University, Egypt).

Wednesday, July 29, 2026, | Time: 12:00 – 14:00

Room (4) / the Educational Complex | Track 4 – S7: Defense Mechatronics, Drones & Target Tracking

Chairs: *Session Chair: TBA*

- [A Hybrid AI-Rule-Based Framework for Automated Fire Alarm Design Checking and Review from CAD/BIM Drawings](#)
Muhammed Karam (Air Defense College, Egyptian Military Academy, Egypt); Muhammed Karam Fathi El Sayed (Adc, Egypt & Ain Shams University, Egypt); Mustafa Karam Fathi (SSH, Egypt); Eslam Fouda and Ehab Mohamed Ali (Air Defense College, Egypt); Ahmed Khairy (Egyptian Military Academy Air Defense College, Egypt).
- [Adaptive Unscented Kalman Filtering for Nonlinear Radar Tracking with Deep Learning-Based Noise Models](#)
Abdulrahman Khaled Sayed Goda (Egypt); Ali Maher and Ahmad Fouad Youssef (Military Technical College, Egypt).
- [Object Detection and Multi-Object Tracking for Autonomous Driving: A Structured Survey and Unified Adaptive Perspective](#)
Osama El-Azab (Mansoura University, Egypt); Ahmed Adel (Egyptian Military Academy, Egypt); Muhammed Karam (Air Defense College, Egyptian Military Academy, Egypt); Amin Elleboudy (Mansoura university, Egypt).
- [A Multimodal Intelligent System for Marine Oil Spill Detection and Spread Analysis Using SAR Imagery, Trajectory Modeling, and Historical NLP Validation](#)
Hanaa Salem Marie, Mariam Gad, Noor Barakat, Lobna Ahmed El-Sayed, Mariam Ashraf Azmy and Esraa Ali Abu El-Khir (Delta University for Science and Technology, Egypt).

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- [Dual-Path Focus-Aware Fusion Transformer with Competitive Reliability Gating and Multi-Scale Edge Preservation](#)
Mahmoud Hegazy (Mahmoud Hegazy, Egypt & Mansoura University, Egypt); Muhammed Karam (Air Defense College, Egyptian Military Academy, Egypt); Eslam Fouda (Air Defense College, Egypt).
 - [Machine Learning for Hyperspectral Image Analysis: A Comprehensive Review](#)
Ahmed Al-Agouz (Cairo University, Egypt); Mohammed Ibrahim Hosni Elsayed, Adel Abdallah and Alaaeldin Mahmoud (Military Technical College, Egypt).
 - [Uncertainty-Guided IoT Sensor Placement for Urban Climate Monitoring Using a Stochastic Physics-Informed Diffusion Model](#)
Mariam Labib Francies, Abeer Khalil and Hanan M Amer (Mansoura University, Egypt); Mohamed Maher Ata (Zewail City of Science and Technology, Egypt).

Oral Presentations

Wednesday, July 29, 2026, | Time: 12:00 – 14:00

Room (5) / the Educational Complex | Track 6 – S2: Enterprise Security, Threat Detection & Cryptography

Chairs: *Session Chair: TBA*

- [Analytical Security Enhancement of ESP-NOW and LoRa Protocols Using Lightweight Cryptographic Frameworks](#)

Ali E. Takieldeem (Delta University for Science and Technology, Egypt & Cyber Security, Egypt); Muhammad Ali Ghanem Ali and Ahmed Mofreh Elmekkawi (Delta University for Science and Technology, Egypt); Bahaa Gamal Ali Ahmed, Mohammed Essam Elghazzawy, Mohammed Soliman Abdelwhab and Moaz Mohamed Ahmed (Delta University for Science and Technology, Gamsa, Egypt); Eslam A. Takieldeem (Horus University, Egypt); Doaa M Darwish (Delta University for Science and Technology, Egypt).

- [An Intelligent ML-Based Hierarchical Framework for Real-Time Network Intrusion and Anomaly Detection \(NetShield Pro\)](#)

Ali E. Takieldeem (Delta University for Science and Technology, Egypt & Cyber Security, Egypt); Hagar Ashraf ElBeyali and Yasmin Hani Abd Elghafar (Delta University for Science and Technology, Egypt); Eslam A. Takieldeem (Horus University, Egypt); Samia Mohammed Abd-Alhalem (DU, Egypt).

- [AI-Based System for Real-Time DDoS Attack Detection: Design, Implementation, and Evaluation](#)

Ali E. Takieldeem (Delta University for Science and Technology, Egypt & Cyber Security, Egypt); El Sayed Hussein Haggag (Delta University, Egypt); Shahd Amr Mohamed Salman, Eman Mohamed Tag, Ali Fathy El Gazayrli, Mohamed Ebrahim Abo Al-Ezz and Mohamed Ebrahim Abd Elkader (Delta University For Science And Technology, Egypt); Eslam A. Takieldeem (Horus University, Egypt).

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- [An Integrated Network Monitoring and URL Phishing Detection System Using Machine Learning, Web-Based Dashboard, and Intelligent Chatbot](#)
Ali E. Takieldeem (Delta University for Science and Technology, Egypt & Cyber Security, Egypt); Ahmed Azzam and Mahmoud Mohamed Alkattan (Delta University for Science and Technology, Egypt); Seif Weam Ahmed (Artificial, Aland Islands); Huda Abd Elmonem Gomaa (Delta University for science and technology, Egypt); Nermen Maher Emara (Artificial, Algeria); Ghada Yaser Elqatri (Artificial, Andorra); Aya El-Sayed El-Metwally (Delta University for Science and Technology, Egypt); Eslam A. Takieldeem (Horus University, Egypt).
 - [Safe Plug: A USB / BadUSB Monitoring and Protection System for Endpoint Security](#)
Elsayed Sameh Saad (Delta University For Science And Technology, Egypt); A. Taki (Air Defense Collage, Egypt); Mohamed Amoud and Ahmed Abdo (Delta University For Science And Technology, Egypt); Ali E. Takieldeem (Delta University for Science and Technology, Egypt & Cyber Security, Egypt).
 - [Enhancing Patient Privacy in Healthcare Data Sharing Through Differential Privacy and Blockchain](#)
Mahmoud AbdElkarim Elbamby (Menoufia University, Egypt).
 - [Chaotic Cryptography: Foundations, Applications, and Integration with Quantum, IoT, and 6G](#)
Ahmed Elbially, Yousef Gaith and Ahmed Allam (New Mansoura University, Egypt); Khadija Magdy Ali and Taghred Ahmed Farhat (New Mansoura University, Egypt & Nothing, Egypt); Ibrahim Attiya (Zagazig University, Egypt & New Mansoura University, Egypt).
 - [Phishing-Focused Enhancement for Multiclass Malicious URL Detection Using LightGBM with Grid Search Optimization](#)
Doniya Mohamed and Mostafa Elgayar (Mansoura University, Egypt); Tarek Hassan (D U, Egypt); Mohammed M Elmogy (Mansoura University, Egypt).

Wednesday, July 30, 2026, | Time: 12:00 – 14:00

Room (6) / the Educational Complex | Track 6 – S8: Assistive Technologies, Applied Modeling & Autonomous Systems

Chairs: Session Chair: TBA

- [Eye-Control v2.0: A Machine Vision and IoT-Based Hybrid Assistive Framework for Severe Quadriplegia](#)
Noha Hussen (Elsewedy University of Technology, Egypt); Youssef Mahmoud Saber, Hisham Rabe Abdrahman, Mohamed Walaa Ahmed and Marez Rafaat Lotfy (Elsewedy University of Technology, Egypt).
- [Humanova: An AI-Driven Adaptive Framework for Cognitive Load Management in Human-Centered Productivity Systems](#)
Athar Hussein Ali (Elsewedy University of Technology, Egypt); Amira Magdi Nasrelden (Elsewedy university of technology, Egypt); Nisreen Ashraf Ebrahaim and Ashraf Adel Mohamed (Elsewedy University of Technology, Egypt); Ahmed Y Abdelkafy (SUT, Egypt); Noha Hussen (Elsewedy University of Technology, Egypt)..
- [American Sign Language Recognition Using YOLO-Based Hand Detection and MediaPipe](#)
Sherif Abdelfattah, Saifuddin Mahmud and Mohammed Abdul Rahman (Bradley University, USA); Mahmoud M Badr (SUNY Poly, USA).
- [AI-Driven Autonomous Agricultural Robotic Framework for Real-Time Crop Health Monitoring and Precision Actuation](#)
Habiba Wael Haroun, Mahmoud Galal Moneer, Nibal Ahmed Elesawy, Omar Mosaad Mohamed Abdelaal, Mahmoud Mohamed El-Saeed, Mahmoud Sami Nassef, Ahmed Elsherif Ebrahim, Mahmoud Gamal Mahmoud, Mahmoud Metwaly Shawky and Mahmoud Gamal Abdellatif (Misr Higher Institute For Engineering And Technology, Egypt); Eman Ahmed Elsayed Khashan (Misr Higher Institute for Engineering and Technology, Egypt); Sally Elghamrawy (MISR Higher Institute for Engineering and Technology & American University in Cairo AUC, Egypt).

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- [Investigate Gradient Boosting Ensemble Models for Valuing Football Player Prices with High-Dimensional Feature Integrity](#)
Mahmoud Abdelaziz Eissa and Mohammed Mahmoud Shiha (Menoufia University, Egypt).
 - [Crowdsourcing Usage in Software Engineering - a Survey](#)
Nahla Farouk AbdelFattah (Computers and Artificial Intelligence- Cairo University, Egypt); Akram Salah and Soha Makady (Cairo University, Egypt).
 - [A Hybrid Hidden Markov Model-Guided Gated Recurrent Unit Framework to Minimize Cold-Start Latency in Serverless FaaS](#)
Ahmed Alqassas (Matrouh University, Egypt); Nagham Mekky (Mansoura University, Egypt); Amr Amin (Matrouh University, Egypt); Mohammed M Elmogy (Mansoura University, Egypt).
 - [Safety Analysis of Connected and Autonomous Vehicle Systems: A Layered Perspective](#)
Wafaa Kassab, Mohamed S. Hassan and Taha Landolsi (American University of Sharjah, United Arab Emirates).

Oral Presentations

Wednesday, July 29, 2026, | Time: 15:00 – 17:00

Room (1) / the Educational Complex | Track 4 – S1: AI-Driven Cybersecurity & Intrusion Detection

Chairs: *Session Chair: TBA*

- [AI-Driven Intrusion Detection System for IoT Networks Using XGBoost and Behavioral Flow Analysis](#)
Mohamed A Ali (MTI University, Egypt & Maadi, Egypt).
- [SkyShield: A Hierarchical Defense Architecture for UAVs Integrating Federated Deep Learning Ensembles and Post-Quantum Cryptography](#)
Amr Mohsen Mahmoud (Cairo University, Egypt); Ammar Ibrahim El Sayed (Military Technical College, Egypt).
- [An Integrated Framework for Active API Security Verification in Microservices Architectures](#)
Zeyad Mohamed, Mohamed Hani and Nabil Mohamed (Delta University for Science and Technology, Egypt).
- [Real-Time Dynamic Triage: A Multi-Tiered Phishing Detection Framework](#)
Maikael Saad (Suez Canal University, Egypt); Doaa Gamal (SCU, Egypt).
- [ArabGuard: A Multi-Layered Framework for Detecting Prompt Injection in Egyptian Dialect and Franco-Arabic](#)
Doaa Karem (Capital University, Egypt).
- [A Multi-Objective Reward Enhancement for DQN-Based Trace Coverage in Automated Penetration Testing](#)
Muhammed Karam (Air Defense College, Egyptian Military Academy, Egypt); Muhammed Karam Fathi El Sayed (Adc, Egypt & Ain Shams University, Egypt); Khalid Mostafa Ezzat Ibrahim (Ain Shams University & Air Defense College, Military Academy, Egypt); Walid M. Saad (Air Defence Technical Research and Development Center (ADTRC), Egypt); Amir Essam Almslmany (Alexandria University, Egypt);

Mahmoud A. Shawky (German International University, Egypt).

- [Hybrid Detection of TCP ACK Flooding Attacks Using Machine Learning and Traffic Analysis](#)

Mahmoud Shaban (Egypt); Ammar Ibrahim El Sayed and Mahmoud Abdelaziz (Military Technical College, Egypt).

- [SEWS: SHAP-Entropy Weighted Selection for Lightweight Machine Learning-Based Intrusion Detection in IoT Networks](#)

Adham Eltahlawy (Mansoura University, Egypt); Ammar Ibrahim El Sayed (Military Technical College, Egypt); Eman AbdElhalim and Mohy Eldin A. Abo-Elsoud (Mansoura University, Egypt).

Wednesday, July 29, 2026, | Time: 15:00 – 17:00

Room (2) / the Educational Complex | Track 4 – S3: Healthcare Informatics & Diagnostic Imaging

Chairs: Session Chair: TBA

- [UniViT-MIL: A Unified Vision Transformer and Multi-Instance Learning Framework with Attention Heatmaps for Multi-Cancer Histopathology and Biomarker Prediction](#)
Amr Mousa Abdel-Haij, Malak Helmy Mohamed, Mohamed Abdullah Mosbah, Haneen Mohamed Ragab and Nada Sameh Sayed (Assiut STEM School, Egypt).
- [Hybrid CNN-CatBoost Learning for Multi-Class Alzheimer's Disease Staging from MRI: A Comparative Study](#)
Wael Mohamed Fawaz Abdel-Rehim (Suez University, Egypt & King Salman International University, Egypt).
- [Benchmarking YOLO Architectures for Mammography Screening: Performance Analysis and Critical Evaluation of Silent Failure Modes](#)
Abdelrahman Abdelatty ElSayyad and Mohamed Ghetas (Galala University, Egypt).
- [Multi-Task 3D CNN for Impacted Tooth Classification and Localization in CBCT with 2D/3D Visualization](#)
Maram H. Ismail (October University for Modern Sciences & Arts (MSA), Egypt); Mazen A. Ebrahim (MSA University, Egypt & University of Greenwich, United Kingdom (Great Britain)); Mohamed Gamal Saad (October University for Modern Sciences & Arts (MSA), Egypt); Tamer M Nassef (October University of Modern Sciences and Arts (MSA), Egypt).
- [Basera, Structure-Aware Hybrid Explainable Retinal Disease Screening for Resource-Limited Settings](#)
Amal Eldesoky, Moaaz Yasser, Paula Samy Oza, Ahmed Mahmoud and Omar Mekki (Higher Technological Institute, Egypt); Manar Fathy Al-Sayed (Helwan University, Egypt & Higher Technological Institute, Egypt).

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- [An Empirical Analysis of Transfer Learning Limitations in Dermatological Image Classification](#)
Mazen H. Elnahal, Youssef E. Mohamed, Marwa O. Al Enany, Mohamed A. Eid and Nasr Y. Nasr (Badya University, Egypt).
 - [Multi-Class Chronic Disease Prediction Using Integrated Healthcare Data Warehouse and Machine Learning](#)
Rola T. Helal, Ghada K. El-Monayer, Nada A. El-Banna and Dai G. Shahin (New Mansoura University, Egypt); Omar M Elzeki (Mansoura University, Egypt).
 - [Smart Healthcare Analytics for Stroke Prediction](#)
Mohamed Hamdi Mohamed (New Mansoura University,, Egypt); Ghada K. El-Monayer, Mohamed Tawfeek Mohamed, Mohamed Emad Hamdy and Rahma Yasser Mohamed (New Mansoura University, Egypt); Omar M Elzeki (Mansoura University, Egypt).

Wednesday, July 29, 2026, | Time: 15:00 – 17:00

Room (3) / the Educational Complex | Track 6 – S4: 5G/6G Wireless Networks, MIMO & Beamforming

Chairs: *Session Chair: TBA*

- [A Squeeze-and-Excitation Convolutional Neural Network for Theoretically-Grounded Robust Drone RF Detection Under Adversarial Conditions](#)
Omar Nour (Modern Academy for Engineering and Technology, Egypt); Yousef Mahmoud Jaber (Modern Academy, Egypt).
- [Smartphone-Based Indoor Localization Using Wi-Fi RSSI Fingerprinting in IoT Dynamic Environments](#)
Sophie Barr (MacEwan University, Canada); Fatma Gamal (Assiut University, Egypt); Shoukry Shams (Concordia University, Canada); Mahmoud Elsaadany (MacEwan University, Canada).
- [Dynamic Connected Hybrid Precoder with Low-Resolution Analog Phase Shifters Based on Cross-Entropy for mmWave Massive MIMO System](#)
Ahmed Osama (Assuit University, Egypt); Fatma Gamal (Assiut University, Egypt); Shoukry Shams (Concordia University, Canada); Mahmoud Elsaadany (MacEwan University, Canada).
- [A Unified Coalition-Voting Game Approach for Intelligent Resource Allocation in 6G Tier-2 HetNets](#)
Vivek Pathak (Koneru Lakshmaiah Education Foundation, Hyderabad, India); Kayam Saikumar (Koneru Lakshmaiah Education Foundation, India); Mahmoud M Badr (SUNY Poly, USA); Mohamed Baza (College of Charleston, USA).
- [Mismatch-Aware Deep Reinforcement Learning for RIS-Assisted MU-MIMO Systems Under Imperfect CSI and Practical Phase-Dependent Amplitudes](#)
Waleed Abd-Elshafi Ali (Higher Institute of Engineering- El-Shorouk City-El- Shorouk Academy, Egypt); Salma Tarek Elsayed, Ahmed Elsayed Ahmed, Sama Tarek Elsayed and Abdullah Mohamed Elmahdy (Higher Institute of Engineering, EL-Shorouk Academy, Egypt)

- [Nested Miniaturized U-Shaped MIMO Antenna](#)

Sama Mohamed Shokry and Hassan Ali Ragheb (The British University in Egypt, Egypt).

- [A Fairness-Regularized Voting-Coalitional Potential Game for Resource Allocation in Tier-2 6G HetNets](#)

Vivek Pathak (Koneru Lakshmaiah Education Foundation, Hyderabad, India); Mohamed Baza (College of Charleston, USA); Kayam Saikumar (Koneru Lakshmaiah Education Foundation, India); Amar A Rasheed (Sam Houston State University, USA); Mahmoud M Badr (SUNY Poly, USA).

- [Joint IRS Placement and Beamforming for Multi-User MIMO: Verified MISO Benchmarking and WMMSE-Based Sum-Rate Optimization](#)

Waleed Abd-Elshafi Ali (Higher Institute of Engineering- El-Shorouk City-El- Shorouk Academy, Egypt); Ahmed Ayman Abdallah (Higher Institute of Engineering, EL-Shorouk Academy, Egypt); Mohamed Hesham Saber (Higher Institute of Engineering EL-Shorouk Academy, Egypt); Samah Walid Saad (Higher Institute of Engineering, EL-Shorouk Academy, Egypt); Abdallah Usama (Elshorouk Academy, Egypt).

Wednesday, July 29, 2026, | Time: 15:00 – 17:00

Room (4) / the Educational Complex | Track 4 – S8: Telecom Data, Open RAN & 6G Networks

Chairs: *Session Chair: TBA*

- [Graph Neural Networks for Dynamic Topology Optimization in Non-Terrestrial Networks for Remote Areas](#)
Yusuf Islam Demir and Seyit Karatepe (Türk Telekom, Turkey); Mustafa Serdar Osmanca (Trük Telekom, Turkey).
- [Direction-of-Arrival Estimation Under Unknown Mutual Coupling via Deep Unfolding and Differentiable Spectral Analysis](#)
Amgad Salama (ADC, Egypt & The Research and Development Centre, Egypt); Samy Darwish (PUA, Egypt); Ahmed Gamal Abdellatif Ibrahim (Egyptian Chinese University, Egypt & Air Defense College, Egyptian Military Academy, Egypt); Aly Mohamed Gaballa (Delta University for Science and Technology, Egypt).
- [A Scalable Multi-Agent Graph-Orchestrated Workflow for Telecom Network Data](#)
Mahinour Alaaeldin Mohamed Maamoun Elsarky (Ericsson Egypt Limited, Egypt); Abdulrahman AbouOuf (Ericsson Egypt, Egypt); Mariam Elsobky (Ericsson, Egypt).
- [Hybrid Communication Systems Based on Deep Learning Models in Industry 4.0](#)
Omar Ahmed Shawqy Anwar (Misr University for Science and Technology, Egypt); Mohamed Hussein Moharam (Misr University For Science and Technology & Engineering, Egypt); Fadi Reda, Ahmed Adel, Yehie Yasser, Mohamed Ehab and Mohamed Khaled (Misr University for Science and Technology, Egypt); Ghada Shaban Eldeghady, Eng. (MUST, Egypt).
- [NEVERA: A Verified Retrieval-Augmented Framework for Safe Intent-to-Policy Automation in Open RAN Networks](#)
Ahmed Waleed Reda Gad (Horus University, Egypt).

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- [A Comparative Analysis of Large Language Model Architectures and Retrieval-Augmented Generation Paradigms for Telecom Operations](#)
Noha Mohamed Hamza (Modern University For Technology and Information, Egypt).
 - [Multi-Armed Bandit Based Discrete Pinching Antenna Activation: A Rate Maximization Approach](#)
Basem M. ElHalawany (Faculty of Engineering at Shoubra, Benha University, Egypt & Kuwait College of Science and Technology, Kuwait); Ibrahim Al-Nahhal (Memorial University, Canada); Mohamed I. Ibrahem (Augusta University, USA); Mostafa Fouda (Idaho State University, USA).
 - [Deep Learning-Based Power Control for Uplink Cell-Free Massive MIMO Systems with Rate-Splitting Multiple Access](#)
Amr Gadalla (Zewail City of Science, Technology and Inonvation, Egypt); Samy S. Soliman (Cairo University - Zewail City of Science and Technology, Egypt).

Oral Presentations

Wednesday, July 29, 2026, | Time: 15:00 – 17:00

Room (6) / the Educational Complex | Track 4 – S9: 6G Architectures, Image Analytics & Decision Systems

Chairs: *Session Chair: TBA*

- [Lightweight Frequency-Aware Transformers for High-Fidelity Signal Restoration](#)
Hazem Abbas (Ain Shams University, Egypt & Queen's University at Kingston, Canada).
- [Cloud Networking 2030: An Integrated Nine- Dimensional Architecture for AI Fabrics, Programmable Data Planes, Zero Trust Security, and 6G Convergence](#)
Mohamed Osama and Ziad Hamed (Badya university, Egypt); Marwa O. Al Enany (Badya University, Egypt); Hoda Ahmed, Malak Mohamed and Mohamed Gamal (Badya university, Egypt).
- [From Data to Decision: A Journey-Aware Business Intelligence Architecture for Enhancing E-Commerce Recommendations](#)
Nada Magdy Saad (Capital University, Egypt); Yehia Helmy (Faculty of Commerce and Business Administration, Egypt); Ahmed Mohamed Abd-Elwahab (Capital University, Egypt).
- [Behavior-Guided Deep Learning for Student Engagement Recognition](#)
Khaled Ayman, Hussein Elsayed, Mohammed Arafah, Lamees Nasser, Ibrahim Sadek and Safaa Moneer (Helwan University, Egypt).
- [UNMASK: A Data-Centric Image Deepfake Detector for Cross-Generator Generalization Under Distribution Shift](#)
Bahgat Yasser Bahgat, Awad Sameh Awad, Farah Darwish and Eman E. Hamd (October University for Modern Sciences and Arts (MSA), Egypt); Tamer M Nassef (October University of Modern Sciences and Arts (MSA), Egypt).

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- [A Time-Varying Block-Based Chaotic Image Encryption Scheme Using Adaptive Complex Logistic Maps](#)

*Tarek Awad Elbendary (Mansoura University & Egyptian Military Academy, Egypt);
Ahmed Khairy (Egyptian Military Academy Air Defense College, Egypt).*

- [Prediction Learner Based on Integrated Education Datamarts for Early Academic Risk for Data Warehousing](#)

*Solayman Sameh Solayman, Ghada K. El-Monayer, Omar Ahmed Fattouh Amria,
Omar Hatem Moharam and Abdel Rahman Gamal Ismail (New Mansoura University,
Egypt); Omar M Elzeki (Mansoura University, Egypt).*

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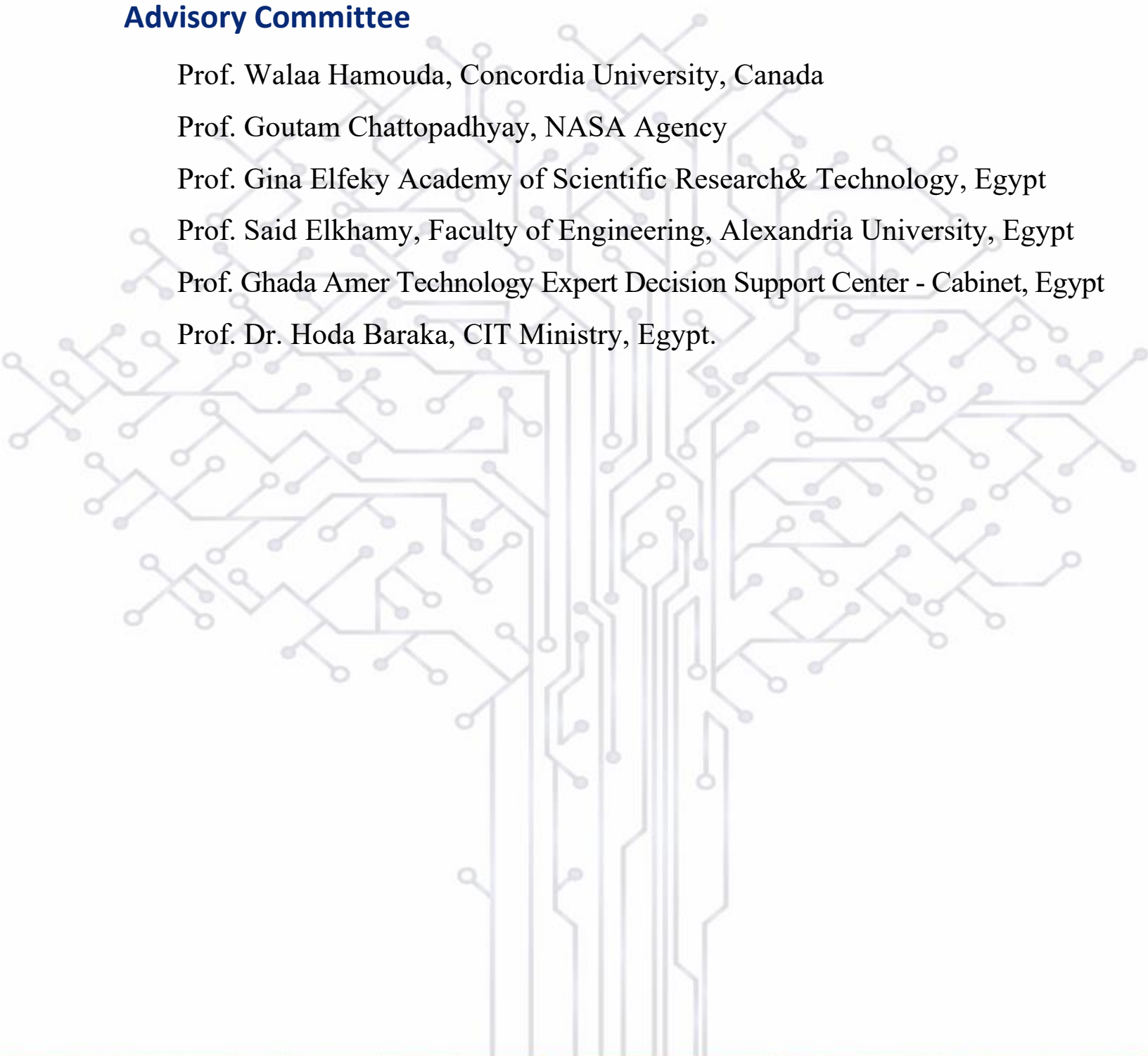
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Dr. Ayman Radwan

Instituto Superior Técnico,
Lisbon, Portugal



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