



## MENACOMM 2026

Hammamet – Tunisia  
12-14 May 2026

### Conference Program

MENACOMM 2026 | May 12 – 14, 2026, Hammamet – Tunisia

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## 2026 Middle East & North Africa COMMUNICATIONS Conference

12 – 14 May, 2026, Hammamet - Tunisia

<https://menacomm.org/>



Date	Time	Event	
Day 1 – Tuesday, May 12, 2026	8:00 – 9:00	Registration	
	9:00 – 09:30	<b>Welcome &amp; Opening Ceremony</b> General Chairs: Prof. Tarek Bejaoui & Prof. Rim Moussa Steering Committee Chair: Prof. Jacques Demerjian IEEE Tunisia Section Chair: Prof. Hassene Mnif IEEE Lebanon Section Chair: Prof. Nazih Moubayed Vice-Dean of the Faculty of Sciences of Bizerte : Prof. Habib Fathallah	
	09 :30 – 10:30	<b>Keynote Speaker 1: Prof. Khaled B. Letaief (President Emeritus IEEE ComSoc)</b>	
	10:30 – 10:45	Coffee Break	
	10 :45 – 11 :45	<b>Keynote Speaker 2: Prof. Michele Luglio (University of Rome Tor Vergata, Italy)</b>	
	11:00 – 13:30 (On-site/ Virtual)	<b>A1- AI and Medical Imaging for Healthcare</b>	
		<b>A2- Advancing IoT and AI for Smart Environments</b>	
		<b>A3V- Privacy-Preserving AI and Data Quality</b>	
		<b>A4V- AI in Education and Human-Centric Applications</b>	
		<b>A5V- Wireless Networks and Quantum Communications</b>	
	13:30 -14:30	Lunch	
	14:30 – 15:30	<b>Keynote Speaker 3: Prof. Imad Elhadj (American University of Beirut, Lebanon)</b>	
15 :30 – 16 :00	Coffee Break		
16:00 – 18:00 (On-site/Virtual)	<b>A6- Advances in Adaptive Networks and Autonomous Systems</b>		
	<b>A7V- AI for Cybersecurity and Network Defense</b>		
	<b>A8V- Telemedicine and AI in Healthcare</b>		
	<b>A9V- Advances in Communications and Networking</b>		
Day 2 – Wednesday, May 13, 2026	8 :00 – 9 :00	Registration	
	9 :00 – 10 :00	<b>Keynote Speaker 4: Prof. Abdallah Makhoul (University Marie et Louis Pasteur, France)</b>	
	10:00 – 10:30	Coffee Break	
	10 :30 – 12 :00 (on-site/online)	<b>B1- Next-Gen Networks and Advanced Communication Technologies</b>	
		<b>B2V- Advances in Communications and Antenna Systems</b>	
		<b>B3V- Next-Gen IoT &amp; AI-Powered Smart Apps</b>	
		<b>B4V- IoT Security and Privacy-Preserving Systems</b>	
	<b>Workshop: Sovereign AI: Designing the Future of Trusted Foundation Models</b>		
	12:00 -13:00	Lunch	
	13:00 --14:00	<b>Awards Ceremony</b>	
	14 :00 – 15 :00	<b>Keynote Speaker 5: Prof. Suat Özdemir (Hacettepe University, Türkiye)</b>	
	15:00 – 15:30	Coffee Break	
15 :30 – 17 :30 (on-site/online)	<b>B5- AI-powered Smart Solutions and Apps</b>		
	<b>B6- Cybersecurity and AI-Driven Network Security</b>		
	<b>B7V- Next-Gen AI for Smart Cities &amp; Dynamic Systems</b>		
	<b>B8V- Innovations in Cybersecurity</b>		
20:30 – 23:30	<b>Banquet</b>		
Day 3	From 13:30	<b>Social event</b>	

## Full MENACOMM 2026 Conference Program

The live sessions of the conference will be held in Hammamet, Tunisia - Time Zone (GMT/UTC + 01:00 hour)

Day 1 – Tuesday, May 12, 2026

09:00 – 09:30

### Welcome & Opening Ceremony

Room: Cesare

**Prof. Tarek Bejaoui & Prof. Rim Moussa** (General Chairs)

**Prof. Jacques Demerjian** (Steering Committee Chair)

**Prof. Hassene Mnif** (IEEE Tunisia Section Chair)

**Prof. Nazih Moubayed** (IEEE Lebanon Section Chair)

**Prof. Habib Fathallah** (Vice-Dean of the Faculty of Sciences of Bizerta)

09:30 - 10:30

**Keynote Speaker 1:** Prof. Khaled B. Letaief (HKUST, Hong Kong, President Emeritus IEEE ComSoc)

Title: *Transforming Connectivity: AI Innovations for Next-Gen Wireless Networks*

Session Chair: *Prof. Chadi Abou-Rjeily* (Lebanese American University - LAU, Lebanon)

10:45 - 11:45

**Keynote Speaker 2:** Prof. Michele Luglio (University of Rome Tor Vergata, Italy)

Title: *Innovations in satellite networks for advanced architectures and services*

Session Chair: *Prof. Habib Ammari* (Texas A&M International University, USA)

12:00 – 13:30

### Session A1: AI and Medical Imaging for Healthcare

Session Chair: *Prof. Hela Mahersia* (University of Carthage, Tunisia)

Room: Cesare

**1571236441 Noise Benchmarking and Denoising Evaluation on the ENID Medical Imaging Dataset**

Yosr Haddad (University of Carthage, Tunisia); Hela Mahersia (University of Carthage, Tunisia & National Engineering School of Tunis, Tunisia)

**1571257164 A Comparative Study of Deep Learning Models for Pancreatic CT Image Denoising**

Ranim Bejaoui (University of Carthage, Tunisia); Rim Mahouachi (University of Carthage); Hela Mahersia (University of Carthage, Tunisia & National Engineering School of Tunis, Tunisia)

**1571257394 Comparative Evaluation of Classical Filters and Conditional GANs for MRI Image Denoising**

Nourhen Yahyaoui, Selma Batti and Habib Fathallah (University of Carthage, Tunisia)

**1571257142 Pachychoroid Detection Based on Artificial Intelligence Algorithms**

Khedhira Mariam (University of Carthage, Tunisia); Hela Mahersia (University of Carthage, Tunisia & National Engineering School of Tunis, Tunisia); Fadi Kacem (University of Carthage, Tunisia)

**1571232255 Automated Knowledge Graph Construction from Unstructured Medical Data**

Fatma Safi (Université de Carthage, Tunisia); Fadi Kacem (University of Carthage, Tunisia); Walid Jallouli (Habib Bougatfa Hospital, Tunisia); Habib Fathallah (University of Carthage, Tunisia)

**1571233206 Explainable Kidney Stone Detection from CT Scans: Integrating Grad-CAM with YOLO Model**

Fatma Safi (Université de Carthage, Tunisia); Fadi Kacem (University of Carthage, Tunisia); Walid Jallouli (Habib Bougatfa Hospital, Tunisia); Habib Fathallah (University of Carthage, Tunisia)

**Session A2: Advancing IoT and AI for Smart Environments**

Session Chair: **Prof. Jihene Rezgui** (University of Montreal & College maisonneuve, Canada)

Room: Cornélia

**1571257033 Energy-Efficient IoT Localization with Uncertainty-Aware EKF and Hybrid Markov-CNN-PCA Models**

Maher Jabberi (University of Sousse, Tunisia); Bassem Sellami (UMR Espace-Dev, University of Pe, France); Hakiri Akram (University of Pau & Pays de l'Adour, France); Abderrazak Jemai (INSAT Institute, Tunisia & Researcher at SERCOM/EPT, Tunisia)

**1571257305 Real-Time Forest Fire Risk Assessment in Tunisia: Integrating LoRaWAN IoT with Machine Learning and FWI**

Rania Maaoui, Olfa Dridi and Habib Fathallah (University of Carthage, Tunisia); Karim Fathallah (Laboratory Idea Lab, Tunisia)

**1571258027 Satellite-IoT Access Technologies and Simulation Frameworks in 6G Non-Terrestrial Networks: Limitations and Modeling Challenges**

Khaoula Kacem (SUP'COM, Tunisia); Nawel Zangar (ESIEE PARIS, France); Soumaya Hamouda (SupCom, Tunisia)

**1571247136 Spatiotemporal Data Acquisition and Validation Pipeline for Groundwater Storage Based on Satellite Gravimetry and Hydrological Models**

Eya Dridi (University of Carthage, Tunisia); Dorsaf Omri (University of Tunis El Manar, Tunisia); Tarek Bejaoui and Habib Fathallah (University of Carthage, Tunisia)

**1571257205 A Comprehensive Survey of Driver Behavior Classification in Smart Transportation Systems: From Rule-Based Models to AI Agents**

Chaima Tayachi and Olfa Dridi (University of Carthage, Tunisia); Mohamed Barkaoui (University Laval, Tunisia); Habib Fathallah (University of Carthage, Tunisia)

**Session A3V: Privacy-Preserving AI and Data Quality**

Session Chair: **Dr. Marianne Abi Kanaan** (Antonine University, Lebanon)

Room: Colisée

**1571254503 Generating Synthetic Tabular Data Using Large and Small Language Models**

Uendi Muça (University of Marie et Louis Pasteur, France); Hadi Koubeissy (BMW Group, Germany); Abdallah Makhoul (University of Marie et Louis Pasteur, France & Femto-St, France)

**1571256727 Genetic Algorithm-Based Privacy Budget Optimization for Differentially Private Gradient Boosting Decision Trees**

Marianne Abi Kanaan (Antonine University, Baabda, Lebanon); Elie Chicha (Holy Spirit University of Kaslik, Lebanon); Jean-François Couchot (University of Franche-Comté, France); Maroun Abi Assaf (USEK, Lebanon)

**1571248361 A Retrieval-Augmented Framework for Executable Context-Aware Data Quality Assessment**

Hadi Fadlallah and Ibrahim Dhaini (University of Sciences and Arts in Lebanon, Lebanon); Rima Kilany Chamoun (Saint-Joseph University, Lebanon & USJ-ESIB, Lebanon)

**1571248363 Agentic AI for Context-Aware and Autonomous Data Quality Assessment**

Fatima Mubarak and Hadi Fadlallah (University of Sciences and Arts in Lebanon, Lebanon)

**1571260769 AI Agent-Based Sound Dataset Generation and Neural Network Classification**

Zahraa Almokaddem and Rami Tawil (Lebanese University, Lebanon)

**1571239111 A Hyper-Heuristic Framework for Human-in-the-Loop Combinatorial Optimization**

Kassem Danach, Sr (Al Maaref University, Lebanon & Chairperson, Lebanon); Jomana Al Haj Hassan (Management Information Systems, Lebanese International University, Lebanon); Samir Haddad and Jinane Sayah (University of Balamand, Lebanon); Joseph Merhej (Faculty of Sciences II, Lebanon); Chadi Kallab (Lebanese American University, Lebanon)

**Session A4V: AI in Education and Human-Centric Applications**

Session Chair: *Dr. Charbel Gemayel (Antonine University, Lebanon)*

Room: Caligula

**1571239060 AI-Driven Prediction of Students' Academic Performance in Higher Education**

Mohamad Fayed, Ziad Doughan and Soubhi Abou Chahine (Beirut Arab University, Lebanon)

**1571242983 Enhanced Stacking Ensemble Using Multi-Level Meta-Learning for Student Course Evaluations Sentiment Analysis**

Ramzi Habbal, Ziad Doughan and Soubhi Abou Chahine (Beirut Arab University, Lebanon)

**1571256957 Unlocking Student Autonomy: The Indirect Positive Effect of Generative AI Use on Academic Performance via Self-Regulated Learning**

Suryateja Jonathan Gandha (Bina Nusantara University, Indonesia); Jeklin Harefa (BINUS University, Indonesia)

**1571256404 Fine-Tuning and Agentic Workflows for Lebanese Arabizi Understanding and Generation**

Joseph Azar (Université Marie et Louis Pasteur & Femto-ST / DISC, France); Abbass Abdullah, Amir Amine, Mohammad Khalife and Hassan Bazzi (Université Marie et Louis Pasteur, France); Raphaël Couturier (University Bourgogne Franche-Comté, France)

**1571235002 LoRA-Efficient BERT for Arabic Aspect-Based Sentiment Analysis**

Asma Mohammed Shayea (UOB, Bahrain); Mohab A Mangoud M (University of Bahrain, Bahrain)

**Session A5V: Wireless Networks and Quantum Communications**

Session Chair: *Dr. Amna Riaz (Northumbria University, United Kingdom)*

Room: Hannibal

**1571251023 ALIGN: Experimental Ground Characterisation of 976nm and 1550nm Beacon/Data Lasers for CubeSat Optical Inter-Satellite Links**

Amna Riaz (Northumbria University, United Kingdom (Great Britain))

**1571236081 Reliability Analysis of UAV-Assisted Urban FSO Backhaul Under Joint Weather, Turbulence, and Pointing Errors**

Amani Chouikhi (SupCom, Tunisia); Maha Sliti (University of Carthage, higher school of communication of tunis, Tunisia)

**1571257403 Design and Performance Analysis of a Quantum-Illumination LiDAR System**

Hawraa Slaiman and Sara Abou Chakra (Lebanese University, Lebanon); Hassanein Rabah (Wise Analysis, Ltd, United Kingdom (Great Britain))

**1571260897 Perspectives on Routing in LEO/NTN Space Networks: Classical, Agentic, and Quantum**

Charbel Mattar (LaRRIS, Lebanese University, Fanar, Lebanon); Jacques Bou Abdo (University of Cincinnati, USA); Abdallah Makhoul (University of Marie et Louis Pasteur, France & Femto-St, France); Benoit Piranda (University Marie et Louis Pasteur, France & FEMTO-ST Institute, France); Jacques Demerjian (Lebanese University, Lebanon)

**1571257182 Deep vs. Shallow Neural Networks for Power Control in Full-Duplex D2D Communication**

Bachar Chaabani and Oussama Bazzi (Lebanese University, Lebanon)

**1571248851 Code IM-Assisted RIS for D2D Communications with Hardware Imperfections and Phase Noise**

Widad Belaoura (Université M'hamed Bougara Boumerdès, Algeria); Saud Althunibat (Princess Sumaya University for Technology, Jordan); Mazen Omar Hasna (Qatar University, Qatar); Khalid A. Qaraqe (Hamad Bin Khalifa University & College of Science and Engineering, Qatar)

**14:30 - 15:30**

**Keynote Speaker 3: Prof. Imad Elhadj (American University of Beirut, Lebanon)**

Title: *AI For or Against Privacy?*

Session Chair: *Dr. Jad Bassil ((University Marie and Louis Pasteur, Femto-St Institute, France)*

Room: Cesare

**16:00 – 18:00**

**Session A6: Advances in Adaptive Networks and Autonomous Systems**

Session Chair: *Dr. Jad Bassil (University Marie and Louis Pasteur, Femto-St Institute, France)*

Room: Cesare

**1571247920 Would Learning Help? Adaptive CRC-QC-LDPC Selection for Integrity in 5G-NR V2X**

Sarah Al-Shareeda (The Ohio State University, USA & Istanbul Technical University, Turkey); Gülcihan Özdemir (Istanbul Technical University, Turkey); Arouj Fatima (Emerging Energy Contracting Est, Bahrain); Mădălin-Dorin Pop (Politehnica University of Timișoara, Romania); Bander A Jabr and Yasser Bin Salamah (King Saud University, Saudi Arabia); Jacques Demerjian (Lebanese University, Lebanon)

**1571246786 Secure Connected k-Coverage in Spatial Wireless Sensor Networks**

Habib M Ammari (Texas A&M International University, USA); Dakshanya Maddala (Texas A&M University-Kingsville, USA)

**1571256552 Evaluating Multi-Agent Path Finding Algorithms for Modular Robot Reconfiguration**

Omar Khalil (University Marie et Louis Pasteur, Femto-St Institute, France); Jad Bassil (University Marie and Louis Pasteur, Femto-St Institute, Cnrs, Montbéliard, France); Perla Tannoury (University of Bourgogne Franche-Comte, France); Benoit Piranda (University Marie et Louis Pasteur, France & FEMTO-ST Institute, France); Abdallah Makhoul (University of Marie et Louis Pasteur, France & Femto-St, France)

**1571256555 Self-Reconfiguration of Modular Robotic Systems and Programmable Matter Using Reinforcement Learning**

Khodor Ghayad (Antonine University, Lebanon); Jad Bassil (University Marie and Louis Pasteur, Femto-St Institute, Cnrs, Montbéliard, France); Abdallah Makhoul (University of Marie et Louis Pasteur, France & Femto-St, France); Roger Achkar (Antonine University, Lebanon); Jad Nassar (Antonine University & TICKET Lab, Lebanon)

**1571259668 Benchmarking ROS2 Nav2 for Autonomous Indoor Navigation in a Simulated Institutional Environment**

Jihene Rezgui, Noah Favreau and Ilian Djorf (College Maisonneuve, Canada)

**Session A7V: AI for Cybersecurity and Network Defense**

Session Chair: **Dr. Amna Eleyan** (Manchester Metropolitan University, United Kingdom)

Room: Cornélia

**1571252251 Adversarially Robust Channel Estimation for One-Bit Massive MIMO Using Auxiliary Classifier GAN**

Tarek Ali, Mohammed Al-Khalidi, Ali Kashif Bashir and Amna Eleyan (Manchester Metropolitan University, United Kingdom (Great Britain)); Rabab Al-Zaidi (University of Salford, United Kingdom (Great Britain))

**1571269292 Adaptive Hyperheuristic Framework for Dynamic Network Defense Optimization**

Kassem Danach, Sr (Al Maaref University, Lebanon & Chairperson, Lebanon); Samir Haddad (University of Balamand, Lebanon); Jomana Al Haj Hassan (Management Information Systems, Lebanese International University, Lebanon); Jinane Sayah (University of Balamand, Lebanon); Joseph Merhej (Faculty of Sciences II, Lebanon); Chadi Kallab (Lebanese American University, Lebanon)

**1571236066 A Controller-Centric ML-Driven Security & Knowledge Plane for SDN-NFV Architectures**

Zakiya Alfughi (Western University, Canada); Abdelkader Ouda (University of Western Ontario, Canada)

**1571242125 An Analytical Framework for Integrating Artificial Intelligence into Cybersecurity Decision-Making**

Afia Naeem Alam Din and Wael M El-Medany (University of Bahrain, Bahrain)

**1571257438 DDoS Attack Detection in Cloud Systems Using a Hybrid Stacked Ensemble**

Nematullah Khan, Raad Alharthi, Fahad Alzahrani and Mourad Benmalek (Al Yamamah University, Saudi Arabia); Abdelouahid Derhab (King Saud University, Saudi Arabia)

**1571252253 Adversarial Defense Strategies for 6G PHY: A Comprehensive Survey**

Tarek Ali, Mohammed Al-Khalidi, Ali Kashif Bashir and Amna Eleyan (Manchester Metropolitan University, United Kingdom (Great Britain)); Rabab Al-Zaidi (University of Salford, United Kingdom (Great Britain)); Tarek Bejaoui (University of Carthage, Tunisia)

**Session A8V: Telemedicine and AI in Healthcare**

Session Chair: **Prof. Hela Mahersia** (University of Carthage, Tunisia)

Room: Colisée

**1571257414 AI-Driven Recovery Prediction Using Wearable Sensors for Musculoskeletal Injury**

Joseph Mouhayar (Ticket Research Lab Antoine University, Baabda, Lebanon); Youssef Keryakos and Youssef Bou Issa (Ticket Research Lab Antoine University, Baabda); Christian Salim (Inria, France)

**1571232472 A Supervisor-Coordinated Multi-Agent Architecture with ReAct Reasoning and FHIR Integration, Achieving 41% Diagnostic Time Reduction in Telemedicine Workflows**

Muthukumarapandian Chandrasekaran (CitiusTech, USA)

**1571256416 Zero-Shot ECG Arrhythmia Classification from Waveform Images: An Experimental Study with Vision-Language Models**

Joseph Azar (Université Marie et Louis Pasteur & Femto-ST / DISC, France); Raphaël Couturier (University Bourgogne Franche-Comté, France); Ke Du (China Pharmaceutical University, China); Jiaxing Yan (Qingyi (Shanghai) Intelligent Technology Co., Ltd., China)

**1571245299 Autism Spectrum Disorder Detection: Privacy-Preserving AI Approaches**

Shyamali Das (Silicon University, India); Ali Ahmed (Victoria University of Wellington, New Zealand); Pamela Choudhury (SIT Bhubaneswar, India); Hrudaya Kumar Tripathy (KIIT University, USA); Tarek Gaber (The University of Salford, United Kingdom (Great Britain)); Mahmoud H. Qutqut (Gulf University for Science & Technology, Kuwait & Applied Science Private University, Jordan)

**1571256461 AI-Driven Communication-Aware Lightweight Transformer-Neuro-Fuzzy Framework for Robust EEG Monitoring over Wireless Telemedicine Networks**

Alaa Daher (Electrical and Computer Engineering, Lebanon); Mohammad Ayache (Beirut Arab University (BAU), Lebanon); Soubhi Abou Chahine (Beirut Arab University, Lebanon)

**1571256219 An Optimized Deep Learning Model for Sleep Apnea Detection**

Malik Abualzait (Associate Researcher, Jordan); Mahmoud H. Qutqut (Gulf University for Science & Technology, Kuwait & Applied Science Private University, Jordan); Ali Ahmed (Victoria University of Wellington, New Zealand); Fadi Almasalha (Applied Science Private University, Jordan)

**1571245703 Vision Transformer-Based ECG Arrhythmia Classification with Dual-Mode Augmentation for IoT Healthcare Systems**

Aymen Abid (CES Lab - ENIS, Sfax, Tunisia); Omar Cheikhrouhou (CES Laboratory, National School of Engineers of Sfax, Tunisia & University of Sfax, Tunisia); Olfa Gaddour (National School of Engineers of Sfax, Tunisia & ENIS/University of Sfax, Tunisia)

**Session A9V Advances in Communications and Networking**

Session Chair: **Dr. Sara Abou Chakra** (Lebanese University, Lebanon)

Room: *Caligula*

**1571236089 Learning-Assisted Proactive Reattachment in Tree-Structured VLC-VANETs**

Rim Touhami (SUP'COM, Tunisia); Maha Slihi (University of Carthage, higher school of communication of tunis, Tunisia)

**1571257384 Agentic AI in Distributed SDN: Synchronization and Design Framework**

Rawan Alsheikh and Etimad Fadel (King Abdulaziz University, Saudi Arabia); Nadine Akkari (Jeddah International, Saudi Arabia)

**1571276464 Task-Aware Semantic Communications for 6G Under Finite Blocklength: Joint Reliability, Blocklength, Power and Compute Optimisation**

Iacovos Ioannou (Philips University, Cyprus & University of Cyprus and CYENS Centre of Excellence, Cyprus); Ala Khalifeh (German University of Jordan, Jordan); Nagaradjane Prabagarane (Sri Sivasubramaniya Nadar College of Engineering, India); Vitawat Sittakul (King Mongkut's University of Technology North Bangkok, Thailand); Vasos Vassiliou (University of Cyprus & CYENS Center of Excellence, Cyprus)

**1571228076 Performance Evaluation of Tomcat Across Oracle Linux Versions in a Legacy Environment**

Elisa Benetti (LepidaScpA, Italy); Gianluca Mazzini (LepidaSpA & UniFe, Italy)

**1571268828 Cloud-Native, AI-Augmented Fault Correlation and Root Cause Analysis for Multi-Vendor Networks**

Sesha Kiran Gonaboyina (IEEE Member, USA); Balu Chavan (Independent Researcher, USA); Nareshkumar Soundarajan (Concentrix Catalyst, USA)

**Day 2 – Wednesday, May 13, 2026**

**09:00 - 10:00**

**Keynote Speaker 4: Prof. Abdallah Makhoul (University Marie et Louis Pasteur, France)**

Title: *Toward Intelligent Programmable Matter: Distributed Self-Reconfiguration and Embedded AI*

Session Chair: *Prof. Hela Mahersia (University of Carthage, Tunisia)*

Room: Cesare

**10:30 – 12:00**

**Session B1: Next-Gen Networks and Advanced Communication Technologies**

Session Chair: *Prof. Chadi Abou-Rjeily (Lebanese American University - LAU, Lebanon)*

Room: Cesare

**1571240696 A Novel Probabilistic Relay Selection Protocol for Buffer-Aided Cooperative Networks**

Chadi Abou-Rjeily (Lebanese American University (LAU), Lebanon); Naim Aoun (Lebanese American University, Lebanon)

**1571239439 Stomata-Inspired Reconfigurable Square Ring Slot Antennas for 5G Applications**

Buthaina Al Siyabi (Sultan Qaboos University, Oman & University of Technology and Applied Science, Oman); Hassan Al-Lawati (Sultan Qaboos University, Oman); Mohammed Bait-Suwailam (Communication and Information Research Center, Sultan Qaboos University, Oman & Dept. of ECE, Sultan Qaboos University, Oman); Joseph Jervase (Sultan Qaboos University, United Arab Emirates)

**1571257391 Flexible Phase Shifter Based on Liquid Metal Vias for Reconfigurable Antenna Applications**

Sana Gharsalli (University of Carthage, Tunisia & Polytechnic School of Tunisia, Tunisia)

**1571236908 WIP: AI-Based Dynamic 5G Channel Optimization for TSN over 5G Using MPNN-TD3**

Syed Tasnimul Islam (Chemnitz University of Technology, Germany)

**1571249510 ELAP: End-To-End Latency Prediction for Edge Computing Applications**

Akash Cuntur Shrinivasmurthy (Dortmund University of Applied Sciences and Arts, Germany); Ali Kadhum Idrees and Jaime S Burbano (University of Applied Sciences and Arts Dortmund, Germany); Rolf Schuster (Open Edge Computing Initiative, Germany)

**1571236775 Sensor Antennas for Early Warning Systems: Requirements, Challenges and Future Directions**

Rula S Alrawashdeh (Mutah University, Jordan)

**Session B2V: Advances in Communications and Antenna Systems**

Session Chair: *Dr. Sara Abou Chakra (Lebanese University, Lebanon)*

Room: Hannibal

**1571248589 An Electrical Model for Software Defined Radio Sub-THz Systems**

Chady Geagea (Lebanese University, Lebanon); Ali Al-Hadi Tlais (American University of Beirut, Lebanon); Sara Abou Chakra (Lebanese University, Lebanon); Gunes Karabulut Kurt (Ecole Polytechnique de Montreal, Canada)

**1571236753 Frequency Diversity 3D Printed DRA for Wireless Applications**

Jana Mohammad AlNatour (The University of Jordan, Jordan); Layan T. AbuRayyan (University of Jordan, Jordan); Raneem Farouq Abdelrahim (Khalifa University, United Arab Emirates); Yanal S Faouri (The University of Jordan, Jordan)

**1571263447 Secrecy Analysis of Pinching-Antenna Systems**

Osamah S. Badarneh (German Jordanian University, Jordan); Hugerles S Silva (University of Brasília, Brazil); Meysam Ghanbari (Hamad Bin Khalifa University, Qatar); Yazan H. Al-Badarneh (The University of Jordan, Jordan); Tamer Khattab and Mazen Omar Hasna (Qatar University, Qatar); Khalid A. Qaraqe (Hamad Bin Khalifa University & College of Science and Engineering, Qatar)

**1571236756 3D Printed Microstrip Array Antenna Loaded with Dielectric Resonators for Frequency Agility Applications**

Layan T. AbuRayyan (University of Jordan, Jordan); Raneem Farouq Abdelrahim (Khalifa University, United Arab Emirates); Jana Mohammad AlNatour and Yanal S Faouri (The University of Jordan, Jordan)

**Session B3V: Next-Gen IoT & AI-Powered Smart Apps**

Session Chair: **Prof. Abdelaziz Sahbani** (University of Carthage, Tunisia)

Room: Colisée

**1571256396 Adaptive First-Person Shooter: Real-Time Game Difficulty Adjustment Based on Player Stress Levels**

Joseph Azar (Université Marie et Louis Pasteur & Femto-ST / DISC, France); Georges Chaiban, Nabil Moussa and Bilal Zahraman (Université Marie et Louis Pasteur, France)

**1571243785 IoT-Enabled Deep Learning System for Strawberry Cultivation Viability and Disease Detection in Senegal: Ka-Nguessa**

Fatoumata Baldé (Université Alioune Diop de Bambey, Senegal); Mamadou Korka Diallo and Alla LO (Université Alioune DIOP de Bambey, Senegal)

**1571255911 Design of an IoT-Based Smart Water Quality Monitoring System with Artificial Intelligence**

Hala Ben Ali, Elaf Ebdah and Luae' Al-Tarawneh (Princess Sumaya University for Technology, Jordan)

**1571250816 A Speech-Aware Edge System for Adaptive Acoustic Masking in IoT Devices**

Saeed Serwan Abdulsattar and Mohab A Mangoud M (University of Bahrain, Bahrain); Fayzeh Abdulkareem Jaber (University of Technology Bahrain, Bahrain & Arabian Gulf University, Bahrain)

**1571250437 Design and Deployment of a Minimal Federated Learning Prototype for IoT Devices**

Sajjad Abdulla and Mohab A Mangoud M (University of Bahrain, Bahrain)

**Session B4V: IoT Security and Privacy-Preserving Systems**

Session Chair: **Prof. Nadine Abbas** (Lebanese American University – LAU, Lebanon)

Room: Caligula

**1571235675 BlindGate: A Gateway Architecture for Practical Privacy-Preserving Deep Packet Inspection on Encrypted Traffic**

Evan Gunawan (BINUS University, Indonesia); Yohan Muliono (Bina Nusantara University, Indonesia)

**1571255859 Real-Time Visual Privacy Preservation in Mobile Mixed Reality**

Zaynab Al Haj, Salam A. Tabet, Ayman Kayssi and Imad H Elhadj (American University of Beirut, Lebanon)

**1571252594 Secure Coded Caching in Wireless Networks**

Batoul Zghaib (Saint Joseph University, Lebanon & ULFG, Lebanon); Yasser Fadlallah (University of Sciences and Arts in Lebanon, Lebanon)

**1571256285 Towards Real-Time Service Classification in Tor: A Supervised Machine Learning Approach**

Reem Khalife (Lebanese University, Lebanon); Bassem Haidar (ESIEA, France); Carole Bassil (Lebanese University, Lebanon)

**1571256701 Federated DDQN for SDN Intrusion Prevention Under Cross-Domain Heterogeneity**

Rafi Srayoui (Lebanese University, Lebanon); Bassem Haidar (ESIEA, France); Carole Bassil (Lebanese University, Lebanon)

**1571252245 Adversarial Robustness of Lightweight Channel Estimators for Secure 6G Edge Networks**

Tarek Ali, Mohammed Al-Khalidi, Ali Kashif Bashir and Amna Eleyan (Manchester Metropolitan University, United Kingdom (Great Britain)); Rabab Al-Zaidi (University of Salford, United Kingdom (Great Britain)); Tarek Bejaoui (University of Carthage, Tunisia)

**Workshop: Sovereign AI - Designing the Future of Trusted Foundation Models**

Session Chair: **Prof. Habib Fathallah** (University of Carthage, Tunisia)

Room: Cornélia

**1571267766 Exploring Vision-Language Models for Weakly Supervised Video Anomaly Detection: Experiments and Analysis**

Olfa Saket, Anis Ben Aicha and Habib Fathallah (University of Carthage, Tunisia)

**1571266199 Pretrained Biomedical Foundation Models: Comparative Analysis and Practical Applications in Healthcare**

Mounira Zouaghi, Fadi Kacem and Habib Fathallah (University of Carthage, Tunisia)

**1571266518 Exploring Open-Weight Foundation Models: From Transformers to Multimodal AI**

Chaima Tayachi and Olfa Dridi (University of Carthage, Tunisia); Mohamed Barkaoui (University Laval, Tunisia); Habib Fathallah (University of Carthage, Tunisia)

**1571266576 Toward Sovereign Foundation Models for the MENA Region: Balancing Efficiency, Cultural Alignment, and Data Sovereignty**

Housseem Eddine Lassoued and Habib Fathallah (University of Carthage, Tunisia); Anis Ben Aicha (SUPCOM, Tunisia)

**1571266599 A Survey on Foundation Models for Industrial Intelligence: Architectures, Training Paradigms, and Applications**

Nourhen Yahyaoui and Habib Fathallah (University of Carthage, Tunisia); Mohamed Barkaoui (University Laval, Tunisia); Bilel Elayeb (RIADI-GDL Research Lab., Tunisia)

**1571272011 A Home Energy Management System Using Alternating Operation and Temperature-Controlled AC**

Mohsen Nasri (LMON, Tunisia)

14:15 - 15:15

**Keynote Speaker 5: Prof. Suat Özdemir** (Hacettepe University, Türkiye)

Title: ***Digital Twin-Driven Task Offloading for Next-Generation IoT Networks***

Session Chair: ***Dr. Nadine Akkari*** (Jeddah International, Saudi Arabia)

Room: Cesare

15:30 – 17:30

**Session B5: AI-powered Smart Solutions and Apps**

Session Chair: ***Prof. Abdelaziz Sahbani*** (Universoty of Carthage, Tunisia)

Room: Cesare

**1571234557 Communication and Machine Learning Framework for Just-in-Time Adaptive Interventions Targeting Eating Behavior**

Edward Sazonov (The University of Alabama, USA); Delwar Hossain and Siavash Esfandiari Fard (University of Alabama, USA); Md Billal Hossain (The University of Alabama, USA); Megan A McCrory (Boston University, USA); Janine Higgins (Children's Hospital Colorado, USA); Graham Thomas (Brown University, USA)

**1571232462 A Simulation Framework for Pre-Deployment Optimization of Digital Twin Architectures in Resource-Constrained Precision Agriculture**

Sourour Meddeb and Selma Batti (University of Carthage, Tunisia); Khaled Boussetta (Universite Sorbonne Paris Nord, France); Habib Fathallah (University of Carthage, Tunisia)

**1571236620 MD-AGC: A Multi-Descriptor Adaptive Gamma Correction for Enhanced Urban Mapping and Smart City Analysis**

Chaima Ben Fraj, Bf (University of Carthage, Tunisia & Artificial Intelligence Data Engineering Applications Laboratory, Tunisia); Dorsaf Omri (University of Tunis El Manar, Tunisia); Tarek Bejaoui (University of Carthage, Tunisia)

**1571255134 PSO-Driven Actionable Counterfactual Explanations for Smart Building Energy Management**

Özgecan Muyanlı Kopan (Hacettepe University, Turkey); İbrahim Kök (Ankara University, Turkey); Feyza Yildirim Okay (Gazi University, Turkey); Suat Ozdemir (Hacettepe University, Turkey)

**1571236764 State of Charge Estimation for Electric Vehicle Batteries Using Temporal Convolutional Networks**

Ghada Toumi (University of Carthage, Tunisia); Abdelaziz Sahbani (University of Tunis El Manar, Tunisia & University of Carthage, Tunisia); Hela Mahersia (University of Carthage, Tunisia & National Engineering School of Tunis, Tunisia)

**1571256529 Accuracy and Coverage Assessment of Water Polo Positioning System**

Florent Cotton (Samovar, Télécom SudParis, Institut Polytechnique de Paris, France & Efrei Research Lab, France); Elizabeth Colin (EFREI Paris, France); Laurie Contevelle (Efrei Paris, France); Christiano Rodrigues (Federal University of Ceará, Brazil & Engineering School of Information and Digital Technologies (EFREI), France); Wegrzyn-Wolska Katarzyna (EFREI PARIS, France)

## **Session B6: Cybersecurity and AI-Driven Network Security**

Session Chair: **Prof. Ahmed M. El-Hajj** (*American University of Beirut, Lebanon*)

Room: Cornélie

### **1571234950 Integrating Post-Quantum Cryptography and AI-Driven Security in Multi-Tier Network Architectures**

Mustafa El Bizri (Beirut Arab University, Lebanon); Ahmed M. El-Hajj (American University of Beirut, Lebanon); Layth Sliman (EFREI- Paris, France); Ali Massoud Haidar (Beirut Arab University, Lebanon)

### **1571236359 LLM-Based Advanced Persistent Threat Attribution: A Novel Framework for Enhanced Cyber Threat Intelligence**

Adel Alshamrani (University of Jeddah, Saudi Arabia)

### **1571257375 Autonomous Security Framework for AI-Native 6G Networks: Architecture and Threat Taxonomy**

Faten Hasni and Nefzi Arij Salha (University of Carthage, Tunisia); Hakiri Akram (University of Pau & Pays de l'Adour, France); Abderrazak Jemai (INSAT Institute, Tunisia & Researcher at SERCOM/EPT, Tunisia)

### **1571257385 A Formal Framework for Provable Security in AI-Native 6G Networks**

Nefzi Arij Salha and Faten Hasni (University of Carthage, Tunisia); Hakiri Akram (University of Pau & Pays de l'Adour, France); Abderrazak Jemai (INSAT Institute, Tunisia & Researcher at SERCOM/EPT, Tunisia)

## **Session B7V: Next-Gen AI for Smart Cities & Dynamic Systems**

Session Chair: **Dr. Kabalan Chaccour** (*Antonine University, Lebanon*)

Room: Colisée

### **1571245252 Evaluating Temporal Fusion Transformers for Short-Horizon Urban Traffic Forecasting Under Real-World Deployment Constraints**

Khang Hoang Nguyen and Dennis Xu (Johns Creek High School, USA)

### **1571269285 A Hybrid Learning--Optimization Framework for Dynamic Vehicle Routing Using Real-World Postal Delivery Data**

Kassem Danach, Sr (Al Maaref University, Lebanon & Chairperson, Lebanon); Samir Haddad (University of Balamand, Lebanon); Jomana Al Haj Hassan (Management Information Systems, Lebanese International University, Lebanon); Jinane Sayah (University of Balamand, Lebanon); Joseph Merhej (Faculty of Sciences II, Lebanon); Chadi Kallab (Lebanese American University, Lebanon)

### **1571251754 AI-Assisted Emergency Dispatch for Smart Cities: A Multi-Source Data Fusion Approach**

Christophe Guyeux (University of Franche-Comté, France)

### **1571262982 Cross-Layer AI Optimization of Signaling and Media Planes in Cloud-Based Contact Center Architectures**

Balakrishnan Devaraj (Cognizant Technology Solutions, USA); Gokul Pandey (IEEE Senior Member, USA); Rajesh Kumar Kallapari and Dharma Chada (USA)

### **1571267401 Anomaly Detection and Exceedance Forecasting in IoT Sensor Networks: An MLOps Pipeline Approach**

Vipin Kataria (Picarro, USA); Nitin Kumar (Marriott International, USA); Vishal Bharadwaj Meruga (Valparaiso University, USA)

## **Session B8V: Innovations in Cybersecurity**

Session Chair: **Dr. Amna Eleyan** (*Manchester Metropolitan University, United Kingdom*)

Room: Caligula

### **1571230773 Business Continuity and Disaster Recovery: A Public Administration Use Case**

Enrica Salbaroli (Lepida SpA, Italy); Gianluca Mazzini (University of Ferrara and LepidaSpA, Italy)

### **1571231240 Leveraging Identity and Access Management to Mitigate Insider Threats**

Zlatan Moric (Algebra University, Croatia); Vedran Dakic and Chinecherem Kalu Kalu (Algebra Bernays University, Croatia)

### **1571234878 MAIR: A Modular AI-Ready Framework for Scalable Incident Response and Autonomous Governance in Next-Decade Cybersecurity**

Olufunsho I. Falowo and Jacques Bou Abdo (University of Cincinnati, USA)

### **1571236768 Comparing and Evaluating the Effectiveness of File Activity-Based Authentication Compared to Multi Factor Authentication**

Matthew Austin Vincenzo (Bina Nusantara University, Indonesia); Nathan Jason Lowen (Universitas Bina Nusantara, Indonesia); Adior Gandawidjaja and Aditya Kurniawan (Bina Nusantara University, Indonesia)

### **1571236769 A Security Architecture for Hybrid PaaS Mitigating Identity, Network, and Application Risks**

Afnan Alsaleh, Nesreen Alotaibi and Shahad Alaskar (Al Yamamah University, Saudi Arabia); Kashif Saleem (King Saud University, Saudi Arabia); Mourad Benmalek and Kamel Haouam (Al Yamamah University, Saudi Arabia)

### **1571252391 Governance Framework for Resilient Critical Infrastructure**

Taiwo Peter Akinremi and Jacques Bou Abdo (University of Cincinnati, USA); Jacques Demerjian (Lebanese University, Lebanon)