

IEEE

CITS
2026

**2026 International Conference on
Computer, Information and Telecommunication Systems**

Piraeus, Greece
July 22-24, 2026

Technical Sponsors:





CITS 2026 GENERAL CHAIRS' MESSAGE

Welcome to the 2026 International Conference on Computer, Information, and Telecommunication Systems (CITS 2026). This year's conference marks the 15th anniversary of CITS, which is being held on an annual basis.

CITS 2026 offers a unique forum for researchers and practitioners from academia, industry, business, and government to share their expertise, results, and research findings in all areas of Computer, Information, and Telecommunication Systems.

This year's conference includes an outstanding technical program and several distinguished keynote speakers. The conference will be held in Piraeus-Athens, Greece.

CITS 2026 technical program consists of several technical tracks. Each track consists of several sessions of top-quality papers. The topics covered in the program include, Artificial Intelligence (AI), machine learning, data analytics/science, cybersecurity, computer networks, wireless networks, wireless sensor networks, IoT, telecommunications, information security, cell network systems, parallel and distributed computing, real-time systems, modeling and simulation, performance evaluation, digital signal processing, image processing, pattern recognition, multimedia systems and video processing, neural networks, deep learning, security and information assurance, and E-Systems, among others.

This year, we received a large number of quality papers. Only very high-quality papers have been accepted. The acceptance ratio is about 49,5%. This is indicative of the diligent work of the senior program chair, program committee chairs, technical program committee members, and reviewers. The accepted papers come from all over the World with representation from academia, industry, business, and government. Moreover, accepted papers will appear in IEEE Xplore and SCOPUS.

Many individuals have contributed to the success of this high-caliber international conference. Our sincere appreciation goes to all authors, including those whose papers were not included in the program. Many thanks are also due to our distinguished keynote speakers and tutorial instructors for their valuable contribution to the conference.

Special thanks are also due to the senior program chair, Prof. Petros Nicopolitidis, for his outstanding role in leading the technical program efforts. Thanks are also due to the other program chairs, especially Chi Lin and Mohammad Wazid. Many thanks also go to the technical program committee members and reviewers for their timely work and efforts.

Special thanks go to the publication chairs and the assistant general chair, Dr. Yu Guo, for his wonderful work and dedication. Thanks to our dedicated Webmaster, Prof. Antonio Bueno, for his great and reliable work. Special thanks go to the international publicity committee members and international liaisons for their excellent work.

Special thanks are due to the international steering committee of the CITS. Thanks to the leaders, faculty, staff, and students of the University of Piraeus for hosting the Conference and for putting the resources of the University at the disposal of the Conference.

We also like to thank the IEEE Communications Society for the technical co-sponsorship of the conference.

Finally, on behalf of the 2026 IEEE International Conference on Computer, Information and Telecommunication Systems (CITS 2026), we invite all of you to enjoy the program and your stay in the beautiful city of Piraeus-Athens.



Mohammad S. Obaidat, General Chair, Fellow of IEEE, Fellow of SCS, Past President of the Society for Modeling & Simulation International (SCS), Founding Editor-in-Chief, Wiley Security and Privacy Journal, Editor-in-Chief, International Journal of Communication Systems, Editor-in-Chief, Journal of the International Academy of Artificial Intelligence Science, Advisory Editor, Communications and Intelligent Networked Computing, Recipient of the SCS Hall of Fame Award, Recipient of the Technical Achievement Award from IEEE ComSoc-Technical Committee on Communication Software Ranked recently by ScholarGPS as the top Lifetime scholar in the World in Telecommunications Systems Management and the top scholar in telecommunications in the World in the prior 5 Years.

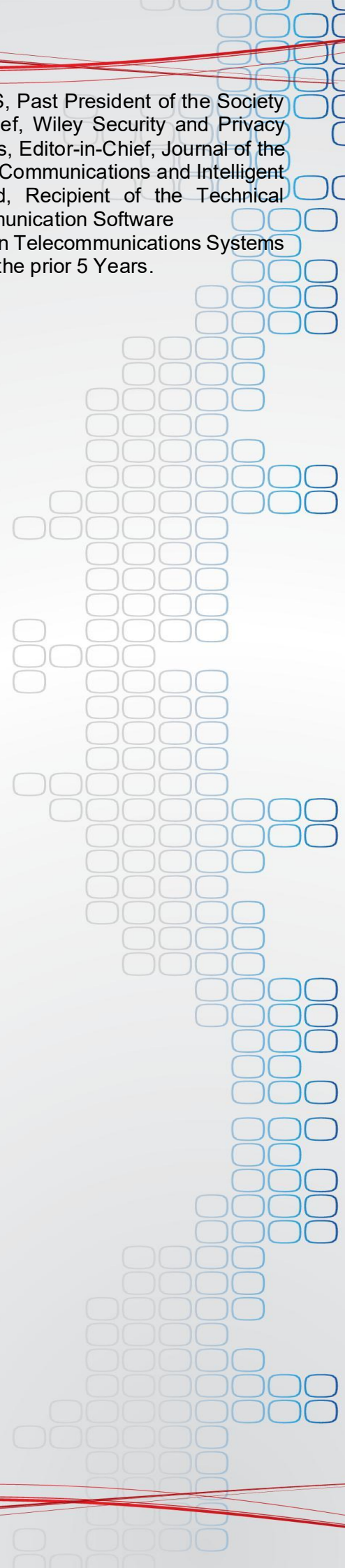
George A Tsihrintzis
Senior Member, IEEE

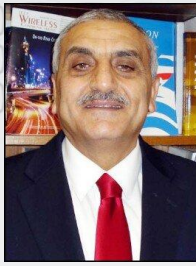
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Web Master and Chair of Local Arrangement Committee
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Dr. Antonio Bueno



Prof. Efthimios Alepis

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Fa Zhu, Nanjing Forestry Univ., China

Program At a Glance

All Times Listed here are Based on Greece Local Time

Wednesday, July 22		Thursday, July 23		Friday, July 24	
9:00-9:15	Opening Session	9:00-10:30	Networking 1	9:00-11:00	Security 2
9:15-10:00	Keynote Speech 1	10:30-12:00	Networking 2	11:00-11:30	Closing Session
10:00-10:45	Keynote Speech 2	12:00-13:30	Information Technology 2		
10:45-11:00	Coffee Break	13:30-14:15	Lunch		
11:00-11:45	Keynote Speech 3	14:15-15:45	Information Technology 3		
11:45-12:30	Keynote Speech 4	15:45-17:15	Information Technology 4		
12:30-13:15	Lunch	17:15-17:30	Coffee Break		
13:15-14:00	Keynote Speech 5	17:30-19:30	Security 1		
		20:30	Dinner		
14:00-14:45	Keynote Speech 6				
14:45-15:00	Coffee Break				
15:00-17:00	Computer Systems				
17:00-18:30	Telecommunication Systems				
18:30-20:00	Information Technology 1				

Schedule

Wednesday, July 22

Daily Program Chair: Iason Dokouzis

9:00 - 9:15

Opening Session

9:15 - 10:00

Keynote Speech 1

Resource Allocation Across the Edge-Cloud Continuum in the Era of Distributed AI

Session Chair: Petros Nicopolitidis



Distinguished Keynote speaker: Emmanouel (Manos) Varvarigos

Artificial intelligence workloads, from distributed training and latency-critical inference to emerging agentic applications, are reshaping the requirements placed on computing and network infrastructures. These workloads are distributed by nature, highly dynamic, and tightly coupled to the network interconnecting edge and cloud resources, so that computation placement and data movement can no longer be optimised in isolation. This talk examines how optimisation and learning can be combined to orchestrate such workloads across the edge-cloud continuum. We present exact and approximate formulations for the joint allocation of computing and network resources, with approximate dynamic programming and multi-agent rollout supporting offline optimisation and online decision making, and learning-based orchestration enabling autonomous adaptation under uncertainty and conflicting objectives. We further discuss market based coordination and congestion management under service-level guarantees, and the role of reconfigurable optical infrastructures that adapt to AI traffic patterns.

Bio

Emmanouel (Manos) Varvarigos received a Diploma in Electrical and Computer Engineering from the National Technical University of Athens (NTUA) in 1988, and the M.S. and Ph.D. degrees in Electrical Engineering and Computer Science from the Massachusetts Institute of Technology (MIT) in 1990 and 1992, respectively. He is currently the Vice Rector for Research, Innovation, and Extroversion of the National Technical University of Athens. He has held faculty positions at the University of California, Santa Barbara (1992-1998, ECE dept, as an Assistant and later an Associate Professor with tenure), Delft University of Technology, the Netherlands (1998-2000, ECE dept, as an Associate Professor), University of Patras, Greece (2000-June 2015, CEID, as a Professor), and National Technical University of Athens (June 2015-now, ECE dept, as a Professor). During Jan 2017 - Dec 2018 he was also a Professor and Head of the Electrical and Computer Systems Engineering Department at Monash University, on leave of absence from NTUA. He has served as the Director of the Hardware, Communications and Networking Division of CEID at the University of Patras and the Director of the Communications, Electronics, Information Systems and Networking Division of ECE at the National Technical University of Athens. From 2003-2017, he was also the Scientific Director of the Greek School Network and Network Technologies Division of the Computer Technology Institute "Diophantus" (CTI), which through its involvement in pioneering research and development projects, has a major role in the development of network technologies and telematic services in Greece, and is responsible for development and operation of the Greek School Network, the largest public Network in Greece.

Professor Varvarigos has served in the organizing and program committees of over 150 international conferences and in national committees. He has participated in over 40 USA, Australian, and EU-funded research projects and in many national research projects, and has

served as the consortium coordinator in several of them. He has also worked as a researcher at Bell Communications Research, and has consulted with several companies in the US and in Europe. He has over 480 publications in international journals and conferences. His research activities are in the areas of optical networking, edge and cloud computing, network algorithms and protocols, optical interconnects for Data Centers, smart energy grids, 5G networks, Machine Learning, and network services.

10:00 - 10:45

Keynote Speech 2

Adaptive Reinforcement Learning for UAV Autonomous Decision-Making in Complex Environments

Session Chair: Petros Nicopolitidis



Distinguished Keynote speaker: Bo Li

Autonomous decision-making is a key capability for unmanned aerial vehicles (UAVs) operating in complex, uncertain, and dynamic environments. However, conventional deep reinforcement learning methods often suffer from sparse feedback, long-horizon credit assignment, reward bias, and unstable control behaviors when facing moving obstacles or partial observations. This keynote will introduce an adaptive reinforcement learning framework for UAV autonomous decision-making from two complementary perspectives: causal cognition and behavioral adaptation. First, a causal hindsight anchoring mechanism is presented

to reconstruct long-horizon credit from sparse terminal feedback by reviewing complete trajectories and estimating the causal contribution of critical actions. This improves learning efficiency, generalization, and resistance to reward hacking. Second, an asymmetric residual adaptation strategy is introduced to decouple stable navigation from transient dynamic obstacle avoidance. By using environment dynamic entropy as a continuous gating signal, the method enables smooth residual correction and avoids abrupt mode switching. Simulation and real-world experiments demonstrate improved success rate, sample efficiency, control smoothness, and deployment potential. The talk will also discuss future directions including online causal reasoning, six-degree-of-freedom UAV dynamics, and multi-UAV collaborative intelligence.

Bio

Bo Li (Member, IEEE) received the B.E. degree in electronic information technology and the M.E. and Ph.D. degrees in systems engineering from Northwestern Polytechnical University, Xi'an, China in 2000, 2002 and 2008, and he was a visitor scholar in London South Bank University, London, UK from 2014 to 2015. He is currently an Professor with the School of Electronics and Information, Northwestern Polytechnical University. His current research interests include Image Processing, intelligent decision and control, deep reinforcement learning and uncertain information processing. He is the member of Professional Committee on Artificial Intelligence and security of Chinese Association for Artificial Intelligence, member of Professional Committee on hybrid intelligence of Chinese Association of Automation, member of Professional Committee on Swarm Intelligence and Cooperative Control of Chinese Institute of Command and Control, Editorial Board Member of Drones. He has published 5 books and around 160 papers in journals and conferences.

10:45 - 11:00

Coffee Break

Keynote Speech 3

Artificial Intelligence Enabling the Nuclear Maritime Revolution: Challenges and Opportunities**Session Chair:** George Tsihrintzis**Distinguished Keynote speaker:** Miltos Alamaniotis

Decarbonization is one of the defining challenges of our time, demanding transformative solutions across all sectors of the global economy. As the backbone of international trade, the maritime industry has a critical role to play in reducing greenhouse gas emissions and enabling a sustainable energy transition. Among the available pathways, nuclear energy emerges as a compelling option for maritime propulsion, offering reliable, large-scale, zero-emission power generation. Despite its promise, the deployment of nuclear technologies in maritime applications faces substantial challenges, including economic feasibility, operational safety, cybersecurity, regulatory compliance, and public acceptance. Artificial Intelligence (AI) is expected to play a pivotal role in addressing many of these challenges. AI-driven technologies can improve operational efficiency, enhance reactor monitoring and autonomous decision-making, strengthen cybersecurity and privacy protection, and support safeguards and nonproliferation measures. At the same time, the convergence of AI and nuclear systems introduces new technical, ethical, and governance concerns that must be carefully managed to ensure safe and responsible deployment. This talk explores the emerging synergy between AI and nuclear maritime technologies, examining both the opportunities and the challenges associated with their integration. The discussion will highlight how advanced AI capabilities can support the realization of safe, secure, and economically viable nuclear-powered shipping, contributing to the broader vision of a sustainable and zero-emission maritime future.

Bio

Miltos Alamaniotis is a Professor and the Lutchter Brown Endowed Fellow in the Department of Electrical Engineering at the The University of Texas at San Antonio. Prior to joining UT San Antonio, he served as a researcher at Purdue University. He earned his B.S. degree in Electrical and Computer Engineering from the University of Thessaly, and his M.S. and Ph.D. degrees in Nuclear Engineering, with an emphasis on Applied Artificial Intelligence, from Purdue University.

His interdisciplinary research spans Artificial Intelligence, nuclear power systems, nuclear security, smart energy systems, and nuclear maritime applications. Dr. Alamaniotis has authored more than 300 publications in scientific journals, books, and international conference proceedings. He currently serves as Associate Editor for IEEE Transactions on Nuclear Science, Internet of Things, and Scientific Reports, and as Co-Editor-in-Chief of the International Journal on Artificial Intelligence Tools. He also served as Program Chair and General Chair of the IEEE International Conference on Tools with Artificial Intelligence and as Assistant Program Chair of the American Nuclear Society Annual Conference.

Dr. Alamaniotis has collaborated with several leading national laboratories and research institutions, including Argonne National Laboratory and Oak Ridge National Laboratory, where he was a visiting researcher in the Energy and Power Systems Group. He was also a member of the first academic team granted access to the Nevada National Security Site for radiation measurement activities.

His distinctions include the Distinguished Alumnus Award from the Department of Electrical and Computer Engineering at the University of Thessaly, the Presidential Award for Distinguished Research Achievements at UT San Antonio in 2022, and selection by the National Academy of Engineering as one of the "Top 100 Early Career Engineers in the United States" for the 2023 Frontiers of Engineering Symposium. He was also included in Stanford University's list of the top 2% most-cited scientists worldwide in 2025.

Keynote Speech 4

AI-Native 6G: Are We Building Networks We Cannot Control?

Session Chair: Carlo Vitucci

**Distinguished Keynote speaker: Engin Zeydan**

As communication networks evolve toward fully AI-native and autonomous systems, a fundamental question emerges: are we designing infrastructures that are becoming too complex to control, trust, and operate?

The transition to 6G introduces a paradigm where intelligence is deeply embedded across all layers of the network, from Open RAN control loops and multi-domain orchestration to semantic communication and non-terrestrial integration. While these advancements promise unprecedented flexibility and efficiency, they also create new challenges, including conflicting AI-driven decisions, opaque model

behavior, fragmented orchestration across domains, and limited mechanisms for accountability and trust. This keynote critically examines these challenges through the lens of the UNITY-6G project architecture, which proposes a unified framework combining hierarchical orchestration (IDMO/DMO), AI-driven traffic engineering and probabilistic forecasting, semantic communication for TN-NTN integration, and conflict-aware control across xApps and rApps. In addition, the talk explores the role of DLT-based trust frameworks for enabling transparent and verifiable interactions across distributed network components. Beyond architectural innovations, the keynote addresses a central tension in 6G design: the trade-off between automation and control. Can we ensure stability, interpretability, and regulatory compliance, particularly under frameworks such as the AI Act, while increasing reliance on autonomous decision-making? By bridging system design, early prototyping insights, and emerging regulatory considerations, this keynote aims to spark discussion on whether current approaches to AI-native networking are sustainable, and what must change to ensure that future 6G systems remain controllable, trustworthy, and deployable at scale.

Bio

Engin Zeydan is a Senior Researcher in the Services as networks (SaS) at Centre Tecnologic de Telecomunicacions de Catalunya (CTTC) in Barcelona, Spain. He received his PhD degree from the Department of Electrical and Computer Engineering at Stevens Institute of Technology, Hoboken, NJ, USA in 2011 and M.S. and B.S. degrees from the Department of Electrical and Electronics Engineering at Middle East Technical University, Ankara, Turkey, in 2006 and 2004, respectively.

Before joining CTTC in 2018, he worked as an R&D Engineer for Avea (a Turkish mobile operator) between 2011 and 2016, as Senior R&D Engineer in Turk Telekomunikasyon A.S between 2016 and 2018 and a part-time instruction at Electrical and Electronics Engineering department of Ozyegin University between January 2015 and June 2018. Dr. Zeydan has been primarily responsible for carrying out European Commission and nationally funded research activities at CTTC, Türk Telekomunikasyon, Avea.

He is currently the Project Coordinator of the *Horizon Europe UNITY-6G European Project (January 2025-December 2027)*. He was the Project Coordinator of the *Horizon 2020 MonB5G European Project (November 2021-April 2023)*. He has also been involved in other European level projects such as *H2020 projects 5Growth (2019-2022)* and *Clear5G (as WP leader, 2017-2018)*, *FP7 projects MOTO (as WP leader, 2012-2015)* and *CROWD (2014-2015)* in collaborations with various industries and universities. He is co-author of over 200+ papers in international journals and conferences, 12 patents (11 granted in Turkish Patent Institute and 1 granted under European Patent Office). In addition, he has delivered 28+ tutorials on data engineering for networking as well as on quantum-secure 6G at various events/conferences such as *IEEE CCNC 2025, ACM SIGAPP 2025, NoF (2025, 2024, 2022), IEEE ICMLCN (2025, 2024), IEEE MeditCom 2024, ACM HPDC 2024, IEEE WF-IoT 2023, IEEE HPSR 2023, COST CA20120 INTERACT, IEEE/IFIP NOMS (2023, 2016), CNSM 2022, IEEE SM 2024 and CITS 2024*. He is a member of the editorial board of the *Wiley Security and Privacy journal*. He has also served Guest Editor in *IEEE Communications Standards Magazine*. His research interests are in the areas of telecommunications, data engineering/science and network security.

12:30 - 13:15

Lunch

13:15 - 14:00

Keynote Speech 5

Building Smart and Sustainable Cities: The Athens Paradigm

Session Chair: George Tsihrintzis



Distinguished Keynote speaker: Vangelis Marinakis

This keynote explores how cities can accelerate their transition toward sustainability and climate resilience, using Athens as a living case study of integrated urban transformation. The presentation highlights how strategic planning, digital tools, energy efficiency policies, renewable energy deployment and climate adaptation measures can be combined into a coherent urban model. Drawing on concrete examples, including smart energy management in municipal buildings, large-scale urban tree planting and micro-climate interventions, energy community initiatives, sustainable mobility actions, and data-informed decision-support platforms, the talk

illustrates how Athens is addressing heat stress, energy vulnerability and infrastructure pressures in a dense Mediterranean context.

Beyond technology, the keynote emphasizes governance, institutional coordination and citizen engagement as key drivers of sustainable urban change. It reflects on how local authorities can align climate neutrality, resilience and social equity objectives within a unified strategy, while leveraging European frameworks and partnerships to scale impact. The central message is that smart cities are not defined by digitalization alone, but by their capacity to integrate environmental ambition, policy innovation and human-centered design into a resilient urban ecosystem.

Bio

Vangelis Marinakis is an Associate Professor in the School of Electrical and Computer Engineering (ECE) of the National Technical University of Athens (NTUA), Greece. He is an Electrical and Computer Engineer of NTUA and holds a PhD in the research domain of decision support systems for sustainable energy planning (ECE, NTUA). His research focuses on the design and development of advanced methodologies and decision support systems that leverage cutting-edge information and communication technologies, including IoT, Artificial Intelligence, Big Data, and Data Spaces, to enable intelligent energy management across multiple scales (smart buildings, districts, cities and micro-grids). His work also addresses energy efficiency, renewable energy integration and climate resilience pathways for urban and regional systems. Dr. Marinakis has 20 years of professional experience in these fields and has been involved as Project Coordinator or Project Manager in more than 45 European and nationally funded research and innovation projects. Since January 2024, he has been President of key development organizations of the City of Athens, including DAEM S.A. and Develop Athens S.A. He is Co-Editor-in-Chief of the international journal 'Energy Sources, Part B: Economics, Planning and Policy' and co-author of more than 100 peer-reviewed scientific publications. He has authored several books, including 'Energy Management and Environmental Policy' and 'Artificial Intelligence for Energy Systems: Driving Intelligent, Flexible and Optimal Energy Management', along with numerous book chapters and conference papers.

Keynote Speech 6

From Connectivity to Intelligence: The Next Evolution of Healthcare

Session Chair: Ayman Mansour



Distinguished Keynote speaker: Chiara Garibotto

The digital transformation of healthcare has progressed from the adoption of Electronic Health Records and hospital information systems to the emergence of telemedicine and remote care services. While these technologies have significantly improved accessibility and continuity of care, current healthcare ecosystems remain largely data-rich but intelligence-poor, often relying on reactive approaches to diagnosis, monitoring, and intervention.

This keynote examines the transition toward a new paradigm of intelligent healthcare, enabled by the convergence of Artificial Intelligence, Large Language Models, advanced sensing technologies, and next-generation communication infrastructures. Particular attention is devoted to the role of AI-driven analytics and AI-native communication systems in supporting continuous, personalized, and context-aware healthcare services. The presentation discusses how emerging technological enablers (including wearable and ambient sensing, integrated communication and sensing, edge intelligence, and future 6G networks) are redefining the way health-related data are acquired, processed, and translated into actionable clinical insights.

Bio

Chiara Garibotto [was born in Chiavari, Italy, in 1985. She received the Bachelor's degree in Telecommunication Engineering in 2012, the Master's degree in Multimedia Signal Processing and Telecommunication Networks in 2015, and the Ph.D. degree in Science and Technology for Electronic and Telecommunication Engineering in 2019, from the University of Genoa, Italy. She is currently Assistant Professor and member of the Digital Signal Processing (DSP) Laboratory at the University of Genoa, Italy. She is Associate Editor of the IEEE Internet of Things Journal (IoTJ), the IEEE Internet of Things Magazine, the IEEE Networking Letters, the Digital Communications and Networks Journal (DCN, Elsevier), the International Journal of Communications Systems (IJCS, Wiley), the IECE Journal of Computational Intelligence in Biomedicine, and the journal Frontiers in the Internet of Things. She is the current Vice Chair of the IEEE Communication Society eHealth Technical Working Group. Her main research activities concern Multimedia Signal Processing, Context Awareness, Intelligent Sensing and Machine Learning, especially applied to the framework of Internet of Things (IoT), e-Health and Telemedicine, Smart Environments and Safety & Security Applications.

Coffee Break

Computer Systems

Session Chair: Fouad Trad

Reverse Engineering Compliance: A Dual-Graph Verification Framework for Auditing Legacy IT Security Concepts

Lea Roxanne Muth and Marian Margraf (Freie Universität Berlin, Germany)

A User-level SSD Cache Framework

Yung-Tung Chou, Hsung-Pin Chang and Wei-Shuo Chen (National Chung Hsing University, Taiwan)

Trust Analyser for Secure Collaborative Manufacturing Ecosystem

Pasindu Manisha Kuruppuarachchi (MTU, Ireland); Jens Kuhr (Nokia, Germany); Alan McGibney (Nimbus Research Centre, Ireland); Bernd Ludwig Wenning (Munster Technological University, Ireland)

Embedding-Space Anonymization for Privacy-Preserving AI Systems

Dimitrios Panagoulas (University of Piraeus, Greece); Evangelia-Aikaterini Tsihrintzi (Noetiv, Greece); Evangelos Sakkopoulos (University of Piraeus, Greece)

AI-Augmented Pipeline Architecture for Continuous Integration and Continuous Deployment

Venkata Seetarama Raju Dantuluri (Capital One, USA); Sanjay Bajaj (Owens-minor, USA); Anil Kolhe (Www.yodlee.com, USA); Devendra Rajput (Accenture, USA)

Joint Scheduling of Pipeline Workflows and Real-Time Jobs with Varying Laxity Constraints

Helen Karatza (Aristotle University of Thessaloniki, Greece)

17:00 - 18:30

Telecommunication Systems

Session Chair: Sharan Deepak

A Network-Aware Multi-Agent System for Intelligent ADR Detection Using PageRank-Based Agent Ranking

Ayman Mansour (TTU, Jordan)

Economic security risks in telco technology: A comparative study of Legacy, Hybrid and Cloud-Native architecture

Liam Mcphee, Sajjad Bagheri Baba Ahmadi and Keshav Dahal (University of the West of Scotland, United Kingdom (Great Britain))

Predictive Handover Control with Mobility and Future Signal Quality Awareness for 5G Vehicular Networks

Heriansyah (Johannes Kepler University of Linz, Austria); Gabriele Kotsis (Johannes Kepler University Linz, Austria)

On the Physical Plausibility and Distribution Alignment for Sim-to-Real RF Positioning

Ararat Saribekyan, Armen Manukyan and Hrant Khachatrian (Yerevan State University, Armenia); Theofanis P Raptis (IIT-CNR, Italy)

18:30 - 20:00

Information Technology 1

Session Chair: Venkata Seetarama

An Empirical Evaluation of Object-Relational Mapping Frameworks on the Performance of .NET Applications

Hasan A Dibas (University of Jordan, Jordan); Khair Eddin Sabri (The University of Jordan, Jordan); Mahmoud M. Hammad (Ajman University of Science & Technology, United Arab Emirates)

ORACLE-REMEDiate: Context-Aware, Safety-Verified LLM Remediation for CIS Benchmark Compliance on Oracle Multitenant Databases



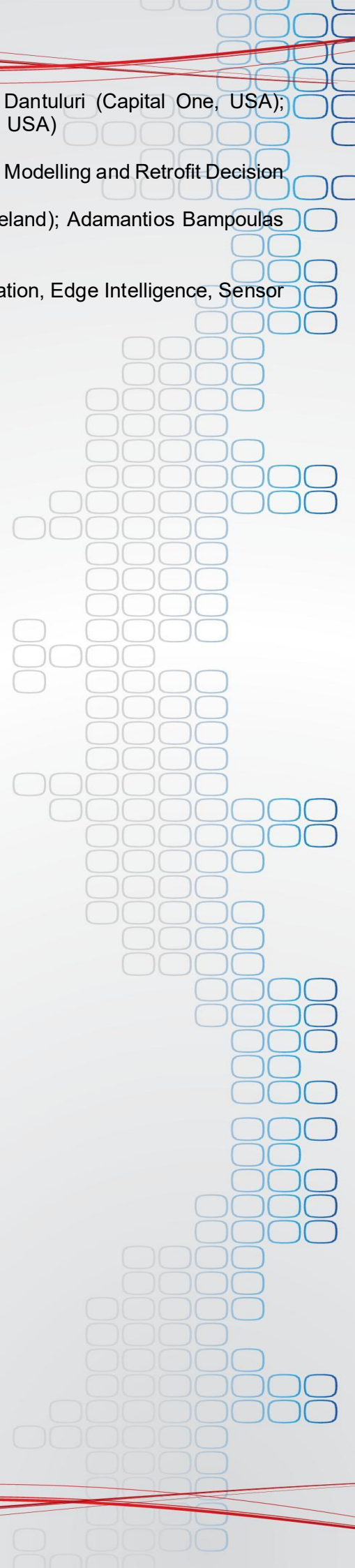
Devendra Rajput (Accenture, USA); Venkata Seetarama Raju Dantuluri (Capital One, USA);
Sanjay Bajaj (Owens-minor, USA); Anil Kolhe (Www.yodlee.com, USA)

A Generative AI-Based Virtual Consultant for Residential Building Energy Modelling and Retrofit Decision Support

Mohammad Saffari and Timothy Ivare (Dublin City University, Ireland); Adamantios Bampoulas and Eleni Mangina (University College Dublin, Ireland)

Connected Agricultural Field Robotics: A Survey of Sensing, Communication, Edge Intelligence, Sensor Fusion, and Decision Support

Rashmi Priya Sharma (University of Missouri, Columbia, USA)



Thursday, July 23

Daily Program Chair: Iason Dokouzis

9:00 - 10:30

Networking 1

Session Chair: Aya Ahmed

Methods for Path Set Attribute Calculation in Network Systems

Giovanni Fiaschi (Ericsson AB, Sweden); Carlo Vitucci (Ericsson, Sweden); Thomas Westerback (Mälardalen University, Sweden); Daniel Sundmark (MDU, Sweden); Thomas Nolte (MRTC, Sweden)

Improving the Detection Probability of Phase Correlation-Based Spectrum Sensing through RIS Deployment

Murilo Pereira dos Reis (National Institute of Telecommunications (Inatel), Brazil); Pedro Marcio Raposo Pereira (National Institute of Telecommunications, Brazil); André Antônio Anjos (Universidade Federal de Uberlândia - Campus Patos de Minas, Brazil); Felipe Augusto Pereira de Figueiredo (INATEL, Brazil); Rausley Adriano Amaral de Souza (National Institute of Telecommunications (Inatel), Brazil)

Graph-Centric Deep Q-Learning for Interference-Aware Resource Allocation in RSMA-Enabled 5G Slicing

Aya Khalid Ahmed (Brunel University of London, United Kingdom (Great Britain)); Nadia Al-Aboody (Southern Technical University, Iraq & Brunel University London, United Kingdom (Great Britain)); Hamed Saffa Al-Raweshidy (University of Brunel, United Kingdom (Great Britain))

Radio access protocols enhancement for beyond 5G extended reality services
Eleftherios Stafidas and Fotis Foukalas (University of Thessaly, Greece)

10:30 - 12:00

Networking 2

Session Chair: Aya Ahmed

A Survey on Resource Allocation Technologies in Integrated Access and Backhaul Networks

Ayham Alyosef (National and Kapodistrian University of Athens, Greece & Genova University, Italy); Ramah Juha (University of L'Aquila, Italy); Andrea Marotta (University of L'Aquila, Italy & WEST Aquila SRL, Italy); Roberto Valentini (University of L'Aquila, Italy)

Network Slicing Performance Analysis on an Open-Source-Based 5G Nomadic Node

Elena-Ramona Modroiu (Technische Universität Berlin, Germany); Jianwei Cheng and Damian Atlaß (Technische Universität Berlin, Germany); Sharan Deepak Thakur (Fraunhofer FOKUS, Germany); Thomas Magedanz (Fraunhofer Institute FOKUS / TU Berlin, Germany)

HMCTI: A Hierarchical Multi-Context Threat Intelligence Framework for Proactive Cyberattack Detection in IoT Environments

Sajjad Waqar Ahmed (Saudi Telecom Company (STC), Saudi Arabia); Yaseen Baig (Huawei Partners, Saudi Arabia); Rabi Iqbal Rana (Saudi Telecom Company (STC), Saudi Arabia); Muhammad Rashid Anwar (Telecom Industry, Saudi Arabia)

Anomaly Detection in Imbalanced Cellular Networks via Transfer Learning

Nooruddin Noonari and Mário Antunes (University of Aveiro, Portugal); Daniel Corujo (University of Aveiro, Portugal & Instituto de Telecomunicações, Portugal); Francisco J. Ferrão (Data Machine Elite, Alenquer, Portugal)

12:00 - 13:30

Information Technology 2

Session Chair: Helen Karatza

Autonomous Patrol with Real-Time Transformer-Based Detection and Operator Override for UAV Surveillance

Nikolaos Almalis, Konstantinos Papantoniou Chatzigiosis and Nikolaos Armenakis (Greece); George Tsihrintzis (University of Piraeus, Greece)

XAI and Statistical Analysis for Reliable Intrusion Detection in the UAVIDS-2025 Dataset: From Tree to Hybrid and Tabular DNN Ensembles

Iakovos-Christos Zarkadis (Greece); Christos Douligeris (University of Piraeus, Greece)

Deep Multi-AI Agents-assisted Efficient Telesurgery Framework for Healthcare Communication Systems

Dhiraj Chandel (Nirma University, India); Mohammad S. Obaidat (University of Jordan, USA); Ayush Goyal and Tejas Chandel (Nirma University, India); Bansari Datt (Gujarat Technological University, India); Rajan Datt (Nirma University, India); Rajesh Gupta and Sudeep Tanwar (Marwadi University, India)

A Multimodal Information-Fusion Framework for Long-Horizon Corporate Revenue Forecasting Using Text-Enhanced Temporal Fusion Transformers

Qiping Wu and Abdulsalam Yassine (Lakehead University, Canada)

13:30 - 14:15

Lunch

14:15 - 15:45

Information Technology 3

Session Chair: Sharan Deepak

A Real-Time Middleware Architecture for User-State Tracking and Alert Generation with Tobii Pro Glasses 3 in Interactive Gaming experiments

Loubna Founoun Elaoud, Francisco Luna-Perejón, Luis Muñoz Saavedra and Emilio García-Cabrera (Universidad de Sevilla, Spain); Jose Louis Sevillano (University of Sevilla, Spain); Lourdes Miró-Amarante (Universidad de Sevilla, Spain)

Exploring Domain Transfer of Wearable-Based Physiological Stress Models to a Neonatal-Informed Synthetic Domain

Mario Caburrasi Segundo, Francisco Luna-Perejón, Luis Muñoz Saavedra and Emilio García-Cabrera (Universidad de Sevilla, Spain); Jose Louis Sevillano (University of Sevilla, Spain); Lourdes Miró-Amarante (Universidad de Sevilla, Spain)

A Blockchain-Supported Proof-of-Media-Trust Framework for Decentralised Media Trust Assessment and Disinformation Detection

Sotirios Gyftopoulos (Athena Research Center, Greece); Dimitrios Chatziamanetoglou and Konstantinos Rantos (Democritus University of Thrace, Greece); George Drosatos (Athena Research Center, Greece)

Towards Ethical Video Game Design: Eliciting Requirements through a Multidisciplinary Delphi Study

Emilio García-Cabrera, Luis Muñoz Saavedra and Francisco Luna-Perejón (Universidad de Sevilla, Spain); Jose Louis Sevillano (University of Sevilla, Spain); Lourdes Miró-Amarante (Universidad de Sevilla, Spain)

15:45 - 17:15

Information Technology 4

Session Chair: Carlo Vitucci

A Memory-Augmented Self-Improvement Framework Using Reinforcement Learning and LLM-Generated Educational

Michail Tselepatiotis, Efthimios Alepis and Maria Virvou (University of Piraeus, Greece)

Human Trust in Hallucinations? Epistemic Risk Zones as Venn-Based Sets for Generated Misalignments in Large Language Models and Overtrust Dynamics

Maria Virvou and George Tsihrintzis (University of Piraeus, Greece)

Exploring Students' Insights on the Trustworthiness of Copilot in the Classroom

Panagiota Ismini Matthe, Maria Virvou and George Tsihrintzis (University of Piraeus, Greece)

Temporal Integrity in Mobile Agricultural Sensing: A Survey of Synchronization, Temporal Alignment, and Spatial Error

Rashmi Priya Sharma (University of Missouri, Columbia, USA); Robert Kallenbach and Stacey Hamilton (University of Missouri, USA)

17:15 - 17:30

Coffee Break

17:30 - 19:30

Security 1

Session Chair: Fouad Trad

A Secure and Efficient Access Control Protocol for IoT-based Smart Agriculture Systems

Akshita Patwal (Graphic Era Deemed to Be University Dehradun, India); Mohammad Wazid (Graphic Era Deemed to be University, India); Devesh Pratap Singh (Graphic Era University, India); Ashok Kumar Das (International Institute of Information Technology, Hyderabad, India)

Quantum-Resistant Security Protocol for Digital Identity Verification Using KYC-as-a-Service in 6G-Enabled Banking Applications

Abhishek Kumar Pandey (International Institute of Information Technology Hyderabad, India); Debnath Ghosh (International Institute of Information Technology, Hyderabad, India); Mohammad S. Obaidat (University of Jordan, USA); Ashok Kumar Das (International Institute of Information Technology, Hyderabad, India); Shantanu Pal (Deakin University, Australia); Ravi Kumar Kappagantu, Srinivas V Katakam and Jitendra Chougala (Lloyds Technology Centre, Hyderabad, India)

AQRB: A Crypto-Agile Quantum-Resilient Authentication Layer for Permissioned IoRT Blockchains

Abdessamed Echikr (ESI, Algeria); Mustapha Bensalah (Ecole Militaire Polytechnique, Algeria)

Simulating Cyber Attacks and Countermeasures in Vehicular Ad-Hoc Networks using Cyber Operations Research Gym (CybORG)

Fasna Nadeera Irumpidamkandiyil Pocker and Farsana Ansari (Halmstad University College, Sweden); Alexandre Dos Santos Roque and Edison Pignaton de Freitas (Halmstad University, Sweden)

SEPIV-IDS: A Structured Evaluation Pipeline for In-Vehicle Intrusion Detection Systems

Lucas Melo Da Silva Alves (Federal University of Rio Grande do Sul - UFRGS, Brazil.); Alexandre Dos Santos Roque and Edison Pignaton de Freitas (Halmstad University, Sweden)

Sequential Reconstruction-Based Models for Continuous Keystroke Dynamics Authentication

Fouad Trad (Lebanese American University, Lebanon)

20:30

Dinner

Friday, July 24

Daily Program Chair: Iason Dokouzis

9:00 - 11:00

Security 2

Session Chair: Petros Nicopolitidis

Security assessment of cross-domain data circulation system based on quantum key distribution

Wei Qi and Yajun Miao (Guoke Quantum Communication Network Co., Ltd., China); Tao Shi (Chongqing Guoke Quantum Technology Co., Ltd., China); Shihui Zheng and Ruolei Li (Beijing University of Posts and Telecommunications, China)

A Hybrid Blockchain-Based Zero-Trust Architecture for Secure and Scalable IoT Systems

Florian Bonelli (Université de Technologie de Troyes, France); Alexandre Dos Santos Roque and Edison Pignaton de Freitas (Halmstad University, Sweden)

Emergence of Post Quantum Cryptography with the support of Blockchain Technology

Akriti Kushwaha (Madhav Institute of Technology & Science, Deemed University (MITS-DU), India); Anshika Pandey (Madhav Institute of Technology & Science, Deemed University (MITS-DU), India); Dwivedi Sanjeev Kumar (Pandit Deendayal Energy University (PDEU) Raisan Gandhinagar Gujarat India, India); Ruhul Amin (IIIT Naya Raipur, India)

DiffuVader: Validity-Constrained Discrete Diffusion for Flow-Level NIDS Red Teaming

Hamed Fard (Freie Universität Berlin, Germany); Ilya Komarov (Bundesdruckerei, Germany); Gerhard Wunder (Freie Universität Berlin & AG Cybersecurity and AI, Germany)

FIDES: A Federated Intelligence and Detection with Quantum Security for Financial Institutions

Param Desai (Nirma University, India); Mahek Desai, Shrey Panwala and Shlok Vaishnav (Nirma University, India); Rajesh Gupta and Sudeep Tanwar (Marwadi University, India); Neha Agrawal (South Asian University, India)

Explainable TinyML-based Energy Efficient Secure Telesurgery Framework for Healthcare With 6G

Krishna Shastri (Nirma University, India); Mohammad S. Obaidat (University of Jordan, USA); Sneha Shah and Heli Shah (Nirma University, India); Lakshin Pathak (Tatvic Digital Analytics, India); Rajesh Gupta and Sudeep Tanwar (Marwadi University, India); Jigna Hathaliya (Nirma University, Ahmedabad, Gujarat, India)

11:00 - 11:30

Closing Session

