ICCSPA'24

The 6th International Conference on Communications, Signal Processing, and their Applications

July 8-11, 2024, Istanbul, Türkiye

Call for Papers

IEEE Xplore® Digital Library

The sixth International Conference on Communications, Signal Processing, and their Applications (ICCSPA'24) https://iccspa.org/ will provide a forum for scientists, engineers and academics engaged in research and development to convene and present their latest scholarly work in communications, networking, and signal processing. It will be held in Istanbul, Türkiye, between July 8 and 11, 2024. The event will feature diverse activities, including keynote speeches by distinguished speakers, panel discussions, industry professionals talks, tutorials and student poster sessions. Furthermore, the program will include social events.

IMPORTANT DATES

Regular Paper Submission
March 17, 2024

Tutorial Proposals
November 19, 2023

Notification of Acceptance
April 7, 2024

Camera-Ready
May 13, 2024

Author Registration
May 13, 2024

KEYNOTE SPEAKERS

Dr. Mohamed-Slim Alouini (Professor, FIEEE, KAUST, Saudi Arabia)
Dr. Halim Yanikomeroglu (Professor, FIEEE, Carleton Univ., Canada)
Dr. Vehbi Çağrı Güngör (CTO, Turkcell, Türkiye)

Panel Chair

Dr. Hossam Hassanein (Professor, FIEEE, Queen's Univ., Canada)
Dr. Marwan Krunz (Regents Professor, FIEEE, University of Arizona, USA)

ORGANIZING COMMITTEE

Dr. Mohamed El-Tarhuni, Interim Provost, American University in Sharjah (AUS), UAE, **Advisory Chair**

General Conference Chairs

Dr. Hüseyin Arslan, Istanbul Medipol University, Türkiye	**Dr. Aboelmagd Noureldin**, RMC/Queen's University, Canada	**Dr. Mohamed Hassan**, American University in Sharjah (AUS), UAE

Technical Program Committee Chairs

Dr. Gunes Karabulut-Kurt, Polytechnique Montreal, Canada, **TPC Chair**.	**Dr. Hakan Çırpan**, Istanbul Technical University, Türkiye, **Executive Vice Chair.**
Dr. Tamer ElBatt, AUC, Egypt, **Executive Vice Chair.**	**Dr. Khalid Elgazzar**, Ontario Tech University, Canada, **Executive Vice Chair.**
Dr. Ning Lu, Queen's University, Canada, **Executive Vice Chair.**	**Dr. Jihwan Choi,** KAIST, South Korea, **Executive Vice Chair.**

PAPER SUBMISSION

Prospective authors are invited to submit their full papers in PDF format on EDAS (https://edas.info/N31403) following the IEEE template, written in English with a length of up to 6 pages (font size 10, double column). Submitted papers will be peer-reviewed. Accepted and presented papers will be indexed in IEEE Xplore and Scopus.

CONFERENCE TRACKS

TRACK 1 – ARTIFICIAL INTELLIGENCE, MACHINE LEARNING AND OPTIMIZATION FOR COMMUNICATIONS, NETWORKS AND SIGNAL PROCESSING	• Deep, distributed, reinforcement, end-to-end communication-inspired machine learning (ML), Bayesian optimization and performance analysis and scalability of ML techniques for 5G onwards to 6G wireless communications networks & systems. • Implementation of AI/ML algorithms for modelling and optimization of wireless networking architecture for load balancing and cell/band association and data-driven networks & wireless systems. • Convex and non-convex optimization, unsupervised and generative models, semantic and goal-oriented and game-theoretic approaches for wireless communications. • Emerging Topics in consumer communications & networking, cloud & fog/edge computing and networking, edge intelligence, software-defined networking, and network function virtualization. • Networking solutions for emerging industrial and social applications.
TRACK 2 – ADVANCES OF WIRELESS COMMUNICATION THEORY, PROTOCOLS, AND SECURITY	• Reconfigurable intelligent surfaces for future wireless communications and physical layer & cyber security, privacy and blockchains security. • Medium access control issues, including mobility management, interference mitigation, multi-user access, resource allocation, duplexing techniques, and coexistence with RF wireless technologies. • Spectrum access, sensing, sharing and scheduling & resource management techniques, cross-layer optimization, cognitive radio, cooperative communication, and networking. • Protocols for next-generation wireless systems. • Localizations and sensing, energy efficiency, energy harvesting, privacy, and security. • Next-generation communication and WiFi systems, cognitive radio systems & networks, software-defined radio and networks, and machine intelligence for mmWave communication and networking. • Information theory, feedback & two-way communication and channel capacity, Millimeter-wave & Terahertz systems and next generation MIMO and massive MIMO systems.
TRACK 3 - WIRELESS SENSING, POSITIONING AND MULTI-SENSOR NAVIGATION	• Wireless sensing in spatially distributed autonomous devices. • Advanced methods for high-precision Satellite based wireless positioning. • Wireless high-precision positioning based on mmWave cellular systems for challenging indoor and urban areas. • Ultra-wideband (UWB) and low Earth orbit (LEO) communication satellites technologies as navigation aids. • Advances of the emerging LEO-based satellite for positioning and timing services. • Fusion with onboard sensors for uninterrupted, robust guidance and navigation for safety-critical applications such as autonomous vehicles, intelligent transportation systems and mapping.
TRACK 4 – EMERGING TECHNOLOGIES, IOT AND INDUSTRY APPLICATIONS	• Visible light and optical communications, free-space optical communications, LiFi fundamentals, concepts, and new approaches. • Satellite and space communications, Quantum communications, molecular and nano communications. • Network and radio resource management, V2X technologies for connected and automated vehicles, UAVs and Non-terrestrial Networks. • Smart cities and IoT enabling technologies and services, computational intelligence, and big data analytics for reliable IoT, IoT Security/Cyber Security for connected and autonomous vehicles, blockchain and cryptography. • Mobile edge computing and cloud computing applications. • Biomedical applications including E-health and mobile health, emerging implanted sensors and wearable devices, and virtual and augmented reality. • Prototype results, testbeds, and new applications. • Industry verticals (transportation/aviation/healthcare/telecom etc.).
TRACK 5 – NON-TERRESTRIAL NETWORKS (NTN) TOWARDS 6G	• Channel modelling and measurements for NTNs. • Integrations of NTNs with terrestrial communications in future heterogeneous networks. • High-altitude platform stations and LEO mega-constellations. • Network architecture and protocols for NTNs. • AI/ML applications for NTNs. • Radio resource management and optimization, cross-layer design for NTN. • Safety, security and sustainability of NTNs.