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2025 IEEE Wireless Communications and Networking Conference 6G Horizons: Bridging Beyond Wireless

24-27 March 2025 // Milan, Italy

Call for Papers

The IEEE Wireless Communications and Networking Conference (WCNC) is a top-ranked, flagship conference of the IEEE Communications Society, bringing together researchers from academia, industry, and government. IEEE WCNC 2025 will be hosted in the vibrant city of Milan, Italy and will be conducted in person, allowing attendees to fully benefit from the conference atmosphere and experience.

Prospective authors are invited to submit their works in the form of research papers describing significant and innovative contributions to the field of wireless communications and networking, in accordance with the four technical tracks listed below. Accepted and presented papers will be published in the IEEE WCNC 2025 Conference Proceedings and submitted to IEEE Xplore.

Proposals for half- or full-day tutorials and workshops are also invited in all communication and networking topics.

Visit Our Website

To learn more about WCNC 2025 in Milan, and how to submit your paper, please visit:

https://wcnc2025.ieee-wcnc.org/

Important Dates:

Paper Submissions Deadline: 2 September 2024 Notification of Acceptance: 20 December 2024 Camera-Ready Papers: 24 January 2025



CALL FOR PAPERS

TRACK 1: PHYSICAL LAYER AND COMMUNICATION THEORY

Track Chairs: Alexandre Graell i Amat, Chalmers University of Technology, Sweden; Kaibin Huang, University of Hong Kong, China; Erik Perrins, University of Kansas, USA

Antennas and RF

Channel Modeling and Estimation Coding Theory Energy Harvesting and Low Energy Communication Feedback and Two-Way Communication Free Space Optical Communication Fundamentals of Age of Information Holographic Surfaces and MIMO Information Theory and Channel Capacity Integrated Sensing and Communications Iterative Techniques, Detection, and Decoding Low Resolution Communication Millimeter-Wave and Terahertz Next Generation MIMO and Massive MIMO **Physical Layer Security** Propagation and Interference Modeling Relaying and Self-Backhauling Short Packet and Finite Block Length Communications Stochastic Geometry Waveforms and Modulation Wireless Power and Information Transfer

TRACK 2: MEDIUM ACCESS CONTROL AND NETWORKING

Track Chairs: Francesca Cuomo, University of Roma "La Sapienza", Italy; Shiwen Mao, Auburn University, USA; Pablo Serrano, Universidad Carlos III de Madrid, Spain

Age and Value of Information for Networks AI based support in network functions programmability **Backscatter Communications** Cognitive Radio and Networking **Cooperative Communications and Networking** Edge Computing, Edge Intelligence and Fog Networks **Energy-Efficient and Green Networking** IoT networks and protocols Low Power Wireless Networks Multihop Networks Emerging Medium Access Schemes in the 5G and Beyond **Network Economics** Network Slicing ORAN programmability of MAC and network functions **RAN Data Collection and Storage Enhancement Resource Management Routing and Congestion Control** Scheduling and Opportunistic Communications SDN/NFV Semantic Communications Spectrum Sensing, Access, and Sharing Unlicensed Spectrum and Licensed/Unlicensed Inter-Networking URLLC, Time Sensitive, and Deterministic Networking Wireless Network Security and Privacy

TRACK 3: RESOURCE ALLOCATION AND MACHINE LEARNING

Track Chairs: Santiago Mazuelas, Basque Center for Applied Mathematics, Spain; Lingyang Song, Peking University, China; Eirini Eleni Tsiropoulou, University of New Mexico, USA

Bayesian Optimization for Wireless Communications Communication-inspired Machine Learning Convex and Non-Convex Optimization for Wireless Communications **Cross-Layer Optimization** Data-driven Network Modelling and Optimization Datasets for Wireless Systems and Channels Deep Learning for Wireless Communications Deep Unfolding for Wireless Communications and Networks **Distributed Learning for Wireless Communications** Distributed Optimization & Resource Allocation for Wireless Communications End-to-end Machine Learning over Wireless Channels Game-Theoretic Approaches to Wireless Communications Implementation of Machine Learning Algorithms for Wireless Load Balancing and Cell/Band Association Machine Learning Methods for Wireless Localization Model-Aided Machine Learning for Wireless Communications Networking Architectures for Artificial Intelligence Online Learning for Wireless Networks Performance Analysis of Machine Learning Techniques for Wireless Communications **Reinforcement Learning for Wireless Communications** Resource Allocation for Wireless Communications and Networks Resource Management in Public Safety Networks Resource Orchestration for Positioning, Navigation, and Timing Systems Scalability of ML for Wireless Communications Semantic and Goal-Oriented Communications Transfer Learning for Wireless Communications and Networks Unsupervised and Generative Models

TRACK 4: EMERGING TECHNOLOGIES, NETWORK ARCHITECTURES, AND APPLICATIONS

Track Chairs: Chunxiao Jiang, Tsinghua University, China; Hina Tabassum, York University, Canada; Andreas Kassler, Karlstads Universitet, Karlstad, Sweden

5G NR and 6G Standardization 802.11 and Next-Generation Wi-Fi Blockchain and Cryptography **Connected Vehicles** E-health and Mobile Health Experiments, Prototypes, and Testbeds Fluid Antenna Communications **Full-Duplex Communication Networks** Innovative Implanted and Wearable Devices Intelligent Beamforming Relays IoT and Machine Type Communications Joint Radar and Communications Molecular and Nano Communications Networking support for virtual and augmented reality O-RAN Quantum Communications Reconfigurable Intelligent Surfaces Satellite and Deep Space Communications Sensing and Localization Software Defined Radio and Networks Surface Wave Communications UAVs and Non-Terrestrial Networks Visible Light and Optical Communication

https://wcnc2025.ieee-wcnc.org/