

CALL FOR PAPERS

The IEEE Wireless Communications and Networking Conference (WCNC) is one of the premier annual events of IEEE in the wireless research arena bringing together researchers, academics, and industry professionals. The 2021 edition of this important event will be held in Nanjing, China. WCNC 2021 will include technical sessions, tutorials, workshops, and technology and business panels. You are invited to submit papers, and proposals for panels, tutorials, and workshops, in all areas of wireless communications, networks, services, and applications. The proposals for panels, tutorials, and workshops should be sent to the Chairs listed below. The submissions of technical papers should be made on EDAS. Potential topics include, but are not limited to:

Track 1: Fundamentals and PHY

- Channel modeling, characterization and estimation
- Modulation, coding, diversity, equalization, synchronization
- Multi-carrier modulation, waveform design
- Wireless Communications through Reconfigurable Intelligent Surfaces
- AI, machine learning and data analytics for wireless communications
- Interference modeling, management, cancellation and alignment
- PHY strategies for low-rate, sporadic and asynchronous communications
- MIMO, massive MIMO and cloud-RAN
- Cooperative, device-to-device and multi-hop communication
- Cognitive radio, spectrum sensing
- Content caching and storage in wireless networks
- PHY layer design for cellular, wireless LAN, ad hoc and sensor networks
- Energy efficient and energy harvesting PHY layer design
- Joint information and energy transmission
- PHY layer security and privacy
- Ultra-wideband, mmWave and sub-THz communication
- Information-theoretic aspects of wireless communications
- Signal processing for wireless communications
- Molecular and nano communications
- Beyond 5G and 6G
- Full duplexing

Track 3: Wireless Networks

- Software-defined mobile/wireless networks
- Wireless network functions virtualization
- Virtual network management and orchestration
- AI, machine learning and data analytics for wireless networks
- Mobile cloud
- Fog computing and networking
- Mobile edge computing
- Mesh, relay, sensor and ad hoc networks
- Routing and congestion control in wireless networks
- Cognitive radio and networking
- Resource management and optimization
- Mobile big data and network data analytics
- Wireless network security and privacy
- Mobile social networks
- Wireless network measurements and characterization
- Wireless networking for autonomous vehicles
- Wireless networking for smart X (energy, factory, city, etc.)
- IoT wireless networking

Track 2: MAC and Cross-Layer Design

- Wireless MAC protocols for beyond 5G: design, analysis, and optimization
- AI, machine learning and data analytics for MAC and cross-layer design
- Cognitive and cooperative MAC
- MAC for mesh, ad hoc, relay and sensor networks
- Scheduling and radio resource management
- Cross-layer MAC design
- MAC design for Non-Terrestrial Networks and Aerial Networks
- Software defined radio, RFID MAC
- QoS support and energy efficient MAC
- MAC protocol for energy harvesting wireless networks
- MAC design for multiter cellular/small cell networks
- Multiple access in machine-to-machine communication
- MAC for cloud-RAN
- MAC protocols for molecular and nano networks
- MAC protocols for mmWave networks
- Full-duplex MAC design
- Cross-layer design for massive MIMO and multiuser MIMO networks

Track 4: Emerging Technologies, Architectures and Services

- Wireless networks empowered by reconfigurable intelligent surfaces
- Age of Information in Real-time Systems and Networks
- Mobile/Wireless network support for vertical industries
- Adaptive content distribution in on-demand services
- Context and location-aware wireless services and applications
- User-centric networks and adaptive services
- Wireless body area networks and e-health services
- Intelligent transportation systems
- Dynamic sensor networks for urban applications
- Wireless emergency and security systems
- Ultra-reliable communication
- Enabling regulations, standards, spectrum management
- Hybrid licensed/unlicensed spectrum access schemes
- Technologies, architectures and enabling business models for rural communications
- Satellite-based mobile access and backhaul
- Non-terrestrial, Aerial and hybrid satellite-terrestrial networks
- Testbed and prototype implementation of wireless services

IMPORTANT DATES

Full Paper Submission: 2 October 2020

Notification of Acceptance: 28 December 2020

Final Manuscript: 15 January 2021

Workshop Proposals: 31 July 2020

Tutorial Proposals: 18 September 2020

Panel Proposals: 18 September 2020

Full details of submission procedures

available at <https://wcnc2021.ieee-wcnc.org/>

General Chair

Hikmet Sari (NJUPT, China)

Technical Program Chairs

Mohamad Assaad (CentraleSupélec, France)

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Guan Gui, NJUPT, China

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Workshops Chairs

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