

# 12<sup>th</sup> Wireless Days Conference

## WD 2021

June 30 – July 2, 2021

# Call for Papers

Paper Submission: May 2, 2021 (Firm)

Acceptance Notification: May 31, 2021

Camera Ready due: June 14, 2021

Venue : Virtual Conference



Welcome to the Annual Wireless Days Conference in its 12th edition, taking place for the second time in Paris. WD is firmly establishing itself as a serious venue for the dissemination of leading-edge state of art knowledge and technologies pertaining to Wireless Communications. Since its inception, it has been offering a stimulating, live environment for discussing new research paths, discoveries, and results among professionals from both Academia and Industry and it has been nurturing fruitful exchange of ideas and positive critics among Wireless Communication and Networking experts.

After the successful editions of 2008 in Dubai, UAE (44% acceptance ratio), 2009 in Paris, France (38% acceptance ratio), 2010 in Venice, Italy (33% acceptance ratio), 2011 in Niagara Falls, Canada (35% acceptance ratio), 2012 in Dublin, Ireland (35% acceptance ratio), 2013 in Valencia, Spain (34% acceptance ratio), 2014 in Rio de Janeiro, Brazil, 2016 in Toulouse, France (35% acceptance ratio), 2017 in Porto, Portugal, 2018 in Dubai, UAE (32% acceptance ratio), and the last edition, 2019 in Manchester, UK (34% acceptance ratio), the 12th edition of Wireless Days will be held online, on June 30 – July 2, 2021.

## The 2021 Wireless Days conference program will be split into the following tracks:

### Track 1: Ad hoc and Sensor Networking

- Low-power routing protocols
- MAC protocols and scheduling mechanisms
- Machine-to-Machine (M2M) communications and applications
- Adaptive radio resource management in wireless networks
- Autonomous optimization techniques for QoS support
- Self-organization, management and network reconfiguration
- Security, privacy and trust
- Modelling, simulation, implementation, testbeds and prototypes MANET and WSN
- WSN for healthcare, ecology, emergency, military, agriculture, etc. applications
- Wireless mesh networks
- Vehicular ad-hoc networks
- Underwater and air sensor networks
- Flying ad-hoc networks (FANETS)
- Cognitive Ad Hoc Networks
- MANET with energy harvesting
- Green Network Techniques applied to MANET
- Transport protocol in WSN and MANET
- Cross layering techniques applied in MANET and WSN
- Multimedia in MANET and WSN

### Track 2: Connected & Autonomous Vehicles in Land, Water, and Sky

- Communication technologies in the air (WLAN, C-V2X, V-VLC, and beyond)
- Communication technologies under water
- Medium access and spectrum sharing
- Novel networking concepts
- Use cases and applications
- Multi-radio, Multi-technology, Multi-system Vehicular Communications
- Service provision

### Track 3: IoT and smart X: Networking, Cloudification, and Services

- IoT paradigms, architectures, applications and technologies
- IoT for semantic web and personalization
- Methodologies and tools for developing IoT applications
- Blogging, Podcasting, Tagging and Social networking through the IoT
- Cloud vs distributed computing for the IoT
- IoT system architectures, including peer-based architectures, Edge/Fog computing
- Reconfigurable computing for IoT
- Security and privacy for IoT systems and devices
- IoT data models and update protocols
- Adaptive IoT systems and services
- IoT applications, use cases and deployments

### Track 4: Wireless and Mobile Communications: 5G, 6G, Wifi-ng, and beyond

- Antennas, smart antennas, and space-time processing
- Device-to-device and machine-to-machine communications
- Distributed, relay assisted, and cooperative communications
- Energy efficient PHY layer design, energy harvesting
- Heterogeneous and small-cell networks
- Hybrid communication systems (e.g. satellite/terrestrial/wireline hybrids)
- Information-theoretic aspects of wireless communications
- Interference modelling, management, cancellation, and alignment
- MIMO, multi-user MIMO, and massive MIMO
- Modulation, coding, diversity, equalization, synchronization
- Multiple access techniques and air interfaces (CDMA, TDMA, FDMA, OFDMA)

- Next generation and beyond multiple access techniques (NOMA, SCMA, MUST, etc.)
- OFDM and multi-carrier systems
- Physical-layer network coding
- Signal processing for wireless communications
- Ultra-wideband, mmWave, and sub-THz communications
- Underwater communications
- Wireless network coding
- Visible Light communication
- Emerging Wireless Protocols and Applications
- QoS and QoE Provisioning over Wireless Multimedia Networks
- Energy Efficiency for Wireless Multimedia Networks
- Cross-layer Optimization for Multimedia Service Support
- Multimedia Streaming Adaptation Techniques
- Green Communications and Networking
- Mobility and Portability in Future Mobile Networks
- Optimizations in Centralized-RAN and Cloud-RAN Architectures
- Content-Centric Networking: caching, naming, distribution, load balancing, resiliency
- Radio Resource Allocation and Scheduling
- Mobility, Handoff, and Location Management Network Virtualisation
- Experimental Test-beds and Performance Evaluation
- Low Power Local and Wide Area Networking

### Track 5: Wireless Models and Simulations

- Performance evaluation of wireless systems through modeling and simulation
- Formal methods for the analysis of wireless systems
- Analytical models of wireless systems
- Wireless network optimization
- Characterization of communication channels
- Simulation of wireless networks
- Verifiability and reproducibility of wireless network simulations
- Design and evaluation of wireless protocols and algorithms
- Mobility management in wireless systems
- Analysis of capacity, coverage, connectivity and efficiency in wireless systems
- Load balancing of wireless systems
- Scalability and manageability of network architectures
- Measurements and experiments in wireless systems

### Track 6: AI for Wireless and Mobile Networks

### Track 7: Wireless and mobile networking technologies for fighting pandemics (Special Track)

- Sensing solutions for Healthcare automation systems
- contact tracing, tracking and monitoring
- Communications technologies virtual education and conferencing
- Industry and supply chain automation
- Communications technologies for Telemedicine
- Remote healthcare systems
- Security, Privacy, and Trust
- Pervasive Connectivity

Authors are invited to submit original contributions that have not been published or submitted for publication elsewhere. Papers should be prepared using the IEEE 2-column conference style and are limited to 8 pages (full papers) or 4 pages (short papers). They must be submitted electronically in PDF format through EDAS at: <https://edas.info/N27994> For more information, please check <https://wd2021.dnac.org/call-for-papers/>

### Technical Program Co-Chairs:

Yassine Hadjadj-Aoul (University of Rennes 1, France)  
Celimuge Wu (University of Electro-Communications, Japan)  
Floriano De Rango (Universita della Calabria, Italy)

### General Co-Chairs:

Yacine Ghamri-Doudane (University of La Rochelle, France)  
Nadjib Achir (University of Paris 13, France)