



# IEEE Global Communications Conference

7-11 December 2021 • Madrid, Spain

*Connecting Cultures around the Globe*

## COMMUNICATION THEORY SYMPOSIUM

### SYMPOSIUM CO-CHAIRS

**Xu (Judy) Zhu**, The University of Liverpool, UK, [xuzhu@liverpool.ac.uk](mailto:xuzhu@liverpool.ac.uk)

**Sofie Pollin**, KU Leuven, Belgium, [sofie.pollin@kuleuven.be](mailto:sofie.pollin@kuleuven.be)

**Syed Jafar**, University of California Irvine, USA, [syed@uci.edu](mailto:syed@uci.edu)

### SCOPE AND MOTIVATION

The Communication Theory Symposium will focus on the **fundamentals and theoretical aspects of communication systems**, with emphasis on wireless and wireline communications. The symposium welcomes original and innovative research work in these general areas, focusing on the physical layer and its interactions with higher layers. High quality papers reporting on applications and validation of communications theory from both industry and academia are encouraged.

### TOPICS OF INTEREST

Topics of interest include, but are not limited to:

- Ad Hoc and Sensor Networks
- Adaptive Modulation and Coding
- Age of Information
- Blockchain Networks
- Cache-Aided Communication
- Channel Estimation and Synchronization
- Coding Theory
- Cognitive Radio
- Cooperative Communications
- Distributed and Edge Computing
- Detection and Estimation Theory
- Device-to-Device and Machine-to-Machine Communications
- Distributed Coding and Processing
- Diversity and Fading Counter measures
- Feedback in Communication Systems
- Fiber Optical and Free-Space Optical Communications
- Finite Block Length Information Theory
- Heterogeneous and Small-Cell Networks
- Low-Latency and Short-Packet Communications
- Information Theory and Channel Capacity
- Interference Management, Cancellation, Alignment, and Avoidance
- Iterative Detection and Decoding
- Joint Radar and Communication
- Machine Learning in Communications
- Massive Connectivity
- MIMO, Massive MIMO and Cell-Free MIMO

Multiple Access, Radio Resource Management, and Scheduling  
Networks and Cross-Layer Design  
Network and Multiuser Information Theory  
Orthogonal and Non-Orthogonal Multiple Access Techniques  
Orthogonal Frequency Division Multiplexing (OFDM) and Multi-Carrier Systems  
Physical Layer Security  
Quantum Communications and Networks  
Radio Resource Management and Scheduling  
Random Access Theory and Techniques  
Source Coding and Data Compression  
Stochastic Geometry and its Application to System Analysis and Design  
Powerline Communications  
Underwater Communications  
Simultaneous Wireless Information and Power Transfer  
Ultra-Wideband, Millimeter Wave and Terahertz Communication Theory  
Unmanned Aerial Vehicle (UAV) Communications  
Validation of Communication Theory  
Wireless Communications Powered by Energy Harvesting

### **IMPORTANT DATES**

Deadline for paper submission: **15 April 2021**

Date for notification: **25 July 2021**

Deadline for final paper submission: **1 September 2021**

### **SUBMISSION INSTRUCTIONS**

All papers for technical symposia should be submitted via EDAS through the IEEE Globecom 2021 link <https://edas.info/newPaper.php?c=27485&track=102687>