

Communication Theory Symposium

Symposium Co-Chairs

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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 communication theory from both industry and academia are encouraged.

Topics of Interest

The Communication Theory Symposium seeks original contributions in the following topical areas, plus others that are not explicitly listed but are closely related:

- Age of Information and Fundamentals of Low-Latency Communications
- Channel Estimation and Synchronization
- Coding Theory and Techniques, Adaptive Modulation and Coding
- Communication Theory Aspects of Ad Hoc and Sensor Networks
- Communication Theory Aspects of MIMO and Massive MIMO
- Communication Theory for Cross-Layer Design

- Detection and Estimation Theory
- Distributed Coding and Computing, Distributed Processing, Estimation and Learning
- Diversity and Fading Countermeasures
- Feedback in Communication Systems
- Fundamentals of Cache-Aided Communication
- Fundamentals of Heterogeneous and Small-Cell Networks
- Fundamentals of Random Access and Grant-Free Massive Multiple Access
- Interference Management, Cancellation, Alignment, and Avoidance
- Information Theory, Finite-Blocklength Information Theory, and Network Information Theory
- Iterative Techniques for Detection and Decoding
- Joint Sensing and Communications
- Millimeter Wave, Terahertz, and Ultra-Wideband Communication Theory
- Network Coding
- 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
- Source Coding and Joint Source/Channel Coding
- Space-time Coding and Processing
- Sparse Signal Processing Theory for Communications
- Stochastic Geometry and its Application to System Analysis and Design
- Theoretical Aspects of Blockchain Networks
- Theoretical Aspects of Cognitive Radio
- Theoretical Aspects of Cooperative Communications
- Theoretical Aspects of Device-to-Device and Machine-to-Machine communications
- Theoretical Aspects of Fiber Optical and Free-Space Optical Communications
- Theoretical Aspects of Machine Learning in Communications
- Theoretical Aspects of Powerline, Underwater, and Visible Light Communications
- Theoretical Aspects of Wireless Communications Powered by Energy Harvesting

Important Dates

Paper Submission: 15 April 2022 Notification: 25 July 2022 Camera Ready and Registration: 1 September 2022

How to Submit a Paper

All papers for technical symposia should be submitted via EDAS. Full instructions on how to submit papers are provided on the IEEE Globecom 2022 website: <u>https://globecom2022.ieee-globecom.org/</u>