

# IEEE GLOBECOM 2023

4-8 December 2023 // Kuala Lumpur, Malaysia

## CALL FOR PAPERS

*Intelligent Communications for Shared Prosperity*

# Communication Theory Symposium

## Co-Chairs

- Kaibin Huang, University of Hong Kong, Hong Kong. <huangkb@eee.hku.hk>
- Melda Yuksel, Middle East Technical University, Ankara, Turkey. <ymelda@metu.edu.tr>
- Yuanwei Liu, Queen Mary University, London, UK. <yuanwei.liu@qmul.ac.uk>

## 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 of Wireless
- Theoretical Aspects of Wireless Communications Powered by Energy Harvesting
- Theoretical Aspects of Reconfigurable Intelligent Surface Assisted Communications
- Semantic Communication Theory

## Biographies of the Co-Chairs

**Kaibin Huang** (Fellow, IEEE) graduated with B.Eng and M.Eng. from National University of Singapore and received his Ph.D. degree from The University of Texas at Austin. He is a Professor in the Department of Electrical & Electronic Engr. at The University of Hong Kong. He is a Highly Cited Researcher by the Clarivate Analytics in 2019-2022. He has received from the IEEE Communication Society several paper awards including 2021 Best Survey Paper, 2019 Best Tutorial Paper, 2019 Asia-Pacific Outstanding Paper, and 2015 Asia-Pacific Best Paper Award. He was a Distinguished Lecturer of both the IEEE Communications Society and the IEEE Vehicular Technology Society. He has been active in organising flagship conferences in telecommunication such as serving as the Lead Chair for the Wireless Communications Symposium of IEEE Globecom 2017 and the Communication Theory Symposium of IEEE GLOBECOM 2014, and the TPC Co-chair for IEEE PIMRC 2017 and IEEE CTW 2023 and 2013. Presently, he is an Executive Editor of IEEE Transactions on Wireless Communications, an Area Editor for IEEE Transactions on Green Communications and Networking and for IEEE Trans. Machine Learning in Communications and Networking.

**Melda Yuksel** (Senior Member, IEEE) is an associate professor at Middle East Technical University, Ankara, Turkey. She received the B.S. degree in electrical and electronics engineering from Middle East Technical University, Ankara, Turkey, in 2001, and the Ph.D. degree in electrical engineering from Polytechnic Institute of New York University, Brooklyn, NY, in August 2007. She worked at TOBB University of Economics and Technology, Ankara, Turkey, from 2007 to 2021. Her research interests are in wireless communications, communication theory and information theory. Dr. Yuksel is the recipient of the best paper award at the Communication Theory Symposium of the 2007 IEEE International Conference on Communications and the 2012 Turkish National Science Foundation CAREER Award. Dr. Yuksel was the treasurer of 2013 IEEE International Symposium of Information Theory. She is currently serving as an editorial board member of PHYCOM, Physical Communication, and an associate editor for Frontiers in Communications and Networks Journal.

**Yuanwei Liu** (Senior Member, IEEE) is a Senior Lecturer (Associate Professor) in School of Electronic Engineering and Computer Science at Queen Mary University of London (QMUL), London, U.K. He is a Web of Science Highly Cited Researcher since 2021, a Distinguished Lecturer of IEEE Communication Society and IEEE Vehicular Technology Society, and the academic Chair for the Next Generation Multiple Access Emerging Technology Initiative. He received IEEE ComSoc Outstanding Young Researcher Award for EMEA in 2020. He received the 2020 IEEE Signal Processing and Computing for Communications (SPCC) Technical Early Achievement Award, IEEE Communication Theory Technical Committee (CTTC) 2021 Early Achievement Award. He received IEEE ComSoc Outstanding Nominee for Best Young Professionals Award in 2021. He is the co-recipient of the Best Student Paper Award in IEEE VTC2022-Fall, the Best Paper Award in ISWCS 2022, and the 2022 IEEE SPCC-TC Best Paper Award. He serves as a Senior Editor of IEEE Communications Letters, an Editor of the IEEE

Transactions on Wireless Communications and the IEEE Transactions on Communications. He serves as the Guest Editor for IEEE JSAC on Next Generation Multiple Access, IEEE JSTSP on Signal Processing Advances for Non-Orthogonal Multiple Access, IEEE Network on Next Generation Multiple Access for 6G.

## **How to Submit a Paper**

All papers for technical symposia should be submitted via EDAS. Full instructions on how to submit papers and important deadlines are posted at <https://globecom2023.ieee-globecom.org/>