

IEEE GLOBECOM 2023

4-8 December 2023 // Kuala Lumpur, Malaysia

CALL FOR PAPERS

Intelligent Communications for Shared Prosperity

Signal Processing for Communications Symposium

Co-Chairs

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- Fang Fang, Western University, Canada, fang.fang@uwo.ca
- Fulvio Babich, University of Trieste, Italy, babich@units.it

Scope and Motivation

Signal processing plays a pivotal role in the development of modern communications technologies. Advanced algorithms are designed, and sophisticated modules are developed to provide innovative solutions for contemporary and emerging communications and sensing systems. Considering the diverse and fast-growing nature of research in this wide field, the Signal Processing for Communications Symposium welcomes original contributions in all pertinent aspects of signal processing for wireless and wired systems, including algorithmic design and analysis, implementation of signal processing and learning schemes, as well as communication, localization, and sensing applications. High quality papers from both industry and academia are encouraged.

Topics of Interest

The Signal Processing for Communications Symposium seeks original contributions in the following topical areas, plus others that are not explicitly listed, but are closely related to:

- Adaptive antennas, metamaterials, and beamforming
- Channel estimation, acquisition, and equalization
- Compressive sensing and sparse signal processing algorithms
- Decentralized and cooperative signal processing
- Distributed signal processing for edge learning and computing
- Interference management techniques in communications systems
- Localization, positioning, and tracking techniques
- Novel architectures for signal demodulation and decoding
- Signal processing for integrated communications and sensing
- Signal processing for artificial intelligence, data analytics, machine learning
- Signal processing for green communications, energy harvesting, and wireless power transfer
- Signal processing for millimeter and THz communication systems
- Signal processing for multi-antenna, MIMO, and/or multi-user systems
- Signal processing for optical communications

- Signal processing for security enhancement, particularly physical layer security and privacy
- Signal processing for sensor networks, smart cities, and IoT applications
- Signal processing for single-carrier, OFDM / OFDMA, multicarrier systems including new waveforms
- Signal processing for smart grid and powerline communications
- Signal processing for software defined and cognitive radio
- Signal processing for emerging wireless hardware architectures (e.g., reconfigurable intelligent surfaces, metasurface-based antennas, holographic MIMO)
- Signal processing techniques for commercial/standardized and emerging systems
- Signal processing techniques for full-duplex communications
- Signal processing techniques for physical-layer network slicing
- Signal transmission, detection, and synchronization
- Spatial transmission and distributed transmission techniques
- Spectrum sensing, shaping, and management techniques
- Signal processing for emerging technologies in 6G, e.g., CoMP, OTFS, VLC, UAV, integrated sensing and communication (ISAC) and semantic communications

Biographies of the Co-Chairs

Lingjia Liu received the Ph.D. in electrical and computer engineering from Texas A&M University, College Station, TX, USA. He is currently a Professor in the Bradley Dept. of Electrical and Computer Engineering at Virginia Tech where he is also serving as the Director of Wireless@Virginia Tech. He has been serving on the editorial boards of various journals including IEEE Trans. Wireless Commun., IEEE Trans. Commun., and IEEE Trans. Neural Netw. & Learning Syst. He is currently serving on the Executive Committee of National Spectrum Consortium. Prior to joining academia in 2011, he was a technical leader and a leading 3GPP RAN1 standard delegate from Samsung Research America.

Fang Fang received the Ph.D. degree in electrical engineering from the University of British Columbia (UBC), Canada, in 2017. She is currently an Assistant Professor in the Department of Electrical and Computer Engineering and the Department of Computer Science, Western University, Canada. Prior to joining Western, she was an Assistant Professor in the Department of Engineering at Durham University, UK, from 2020 to 2022. From 2018 to 2020, she was a Research Associate with the Department of Electrical and Electronic Engineering, The University of Manchester, UK. Her current research interests include machine learning for intelligent wireless communications, non-orthogonal multiple access (NOMA), reconfigurable intelligent surface (RIS), multi-access edge computing (MEC), Edge AI and blockchain. Dr. Fang served as a general chair for EAI GameNets 2011 and a technical program committee (TPC) Member for IEEE flagship conferences, e.g., IEEE Globecom, and IEEE ICC. She received the Exemplary Reviewer Certificates of the IEEE Transactions on Communications in 2017 and 2021. Currently, she is an Associate Editor of IEEE Open Journal of the Communications Society.

Fulvio Babich was born in Trieste, Italy. He is Professor of Digital Communications and Wireless Networks at the University of Trieste where is vice director of the PhD school. His current research interests are in the field of wireless networks and personal communications. He is involved in channel modeling, multiple access techniques, error control techniques, multi-packet communications, and 5G/6G systems. He has co-authored. Fulvio Babich serves as reviewer for many international journals and conferences, and he has served as co-chair for the Communication Theory Symposium, ICC 2005, Seoul, for the Wireless Communication Symposium, IC over 180 papers published in international journals and presented in leading international conferences C 2011, Kyoto, for the Wireless Communication Symposium, WCSP 2012, Huangshan, China, for the Communication Theory Symposium, ICC 2014, Sidney, and for the Communication Theory Symposium, ICC 2017, Paris. He has been general chair of IEEE Med-Hoc-Net 2014, Piran, Slovenia. He is Senior Member of IEEE.

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/>