



IEEE Global Communications
Conference
9-13 December 2018
Abu Dhabi, UAE
Gateway to a Connected World



Call For Papers

Signal Processing For Communications Symposium

IEEE Globecom 2018, Abu-Dhabi, UAE

Symposium Co-chairs

Arafat Al-Dweik, Khalifa University, UAE
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Scope and Motivation

Signal processing is an integral part of the development of most of the modern communication technologies. Advanced signal processing algorithms are designed and modules are developed to provide innovative solutions to contemporary and emerging communication systems. Considering the diverse and fast-growing nature of research in this field, the Signal Processing for Communications symposium welcomes original contributions in all pertinent aspects of signal processing for communications, including design, analysis, implementation, and application.

Main Topics of Interest

The issues covered in the Signal Processing for Communications Symposium are broad, spanning from traditional transceiver design to state-of-the-art signal processing methodologies in contemporary and emerging communication systems, and the application to new frontiers including cognitive radios and smart grids. Our intention is to provide a comprehensive coverage of signal processing methodologies, theories and practices in prevalent and next-generation communication systems and networks. Topics of interest to the Signal Processing for Communications symposium include, but are not limited to:

- Signal processing techniques in 5G
- Spatial transmission and distributed transmission techniques
- Multi-antenna (SIMO, MISO, MIMO, Massive MIMO), multi-user, centralized/distributed multi-node systems
- Signal processing techniques for full-duplex communications
- Interference cancellation techniques in communications systems including NOMA
- Decentralized and cooperative signal processing in networked systems
- Signal processing for single-carrier, OFDM / OFDMA, multicarrier systems including new waveforms
- Signal processing for green communications, energy harvesting and wireless power transmission



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- Signal processing for security enhancement particularly physical layer security
- Channel estimation and equalization
- Signal transmission, detection and synchronization
- Spectrum sensing, shaping, and management techniques
- Novel architectures for signal demodulation and decoding
- Compressive sensing algorithms
- Signal processing techniques for commercial/standardized and emerging systems
- Signal processing for sensor networks and IoT applications
- Signal processing for software defined and cognitive radio
- Adaptive antennas and beamforming
- Signal processing for optical communications
- Signal processing for millimeter and Tera-Hz communication systems
- Signal processing for smart grid and powerline communications
- Localization, positioning and tracking techniques
- Signal processing for data analytics and machine learning