



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



Call for Papers

Optical Networks and Systems Symposium

Symposium Co-Chairs:

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Scope and Motivation:

Current networks are immersed in a continuous evolution scenario led by the needs imposed by the unstoppable increment of devices (either static or on the move) to be connected at the edge of the network, the rapid acceptance of novel and highly demanding services (AR/VR, multi-player on-line gaming, video chat services) also considering smart scenarios (transportation, cities, manufacturing, health), and the deployment of new computing paradigms (cloud, fog). This evolution is impacting network technologies on all network segments from the edge (access) up to the core (backbone), demanding substantial advances in optical communications.

Optical communications then, must evolve to support the challenges identified in the different network segments while making benefit from current efforts such as Software Defined Networking, Network Function Virtualization, Fog/Edge computing or emerging wireless optical technologies. For example, from the efforts done in the backhaul to efficiently distribute the RF spectrum, or in considering centralized RAN (radio access networks) architectures to improve RAN performance, or the latest contributions in the area of Fog RAN to better support mobility, to the efforts in the datacenter to reduce latency or in the core network inferring ideas from the SDN concept to also facilitate network programmability, or deploying advances in new fiber technologies intended to largely extend the transmission area with no need for highly costly signal regeneration processes, it is paramount to issue innovative ideas notably contributing to the state-of-art technologies.

IEEE Globecom 2018 Optical Network and System Symposium solicits original papers related to the latest research, development, and applications in these and other relevant areas of optical communication systems and networks.

Main Topics of Interest:

The Optical Networks and Systems Symposium intends to showcase the latest developments in all research areas related to optical networks and systems. The Symposium cordially invites original contributions in, but not limited to, the following:

- Capacity of optical systems
- Coding, modulation, and signal processing for optical systems
- Content delivery optical networks
- Multi-layer and Multi-domain optical network design and operations
- Data analytics for self-organizing optical networks
- Elastic and flexible grid optical networks



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- Energy efficient optical networks
- Free space optical communications and networking
- Future PON architectures,
- Impairment mitigation techniques
- In-home optical networking applications
- Innovations in optical X-haul networks and fixed-mobile convergence
- Inter- and intra- data center optical networks
- Lighting constrained visible light communications and networks
- Multi-band optical spectrum utilization and optimization
- Network Functions Virtualization in optical and multi-layer networks
- Network infrastructure programmability
- Network optimization, planning and planning tools
- OFDM and MIMO for optical systems
- Optical channel characterization
- Optical network architectures, design, and performance evaluation
- Optical network control and management
- Optical networks security concerns
- Optical network testbeds and experiments
- Optical networks and systems for IoT and smart grids
- Optical networks and systems for big data and cloud applications
- Optical switching technologies, devices, and architectures
- Optical wireless access networks
- Routing and spectrum assignment for optical networks
- Software defined optical networks
- Standardization issues in optical networks
- Ultraviolet communications and networks
- Underwater optical communications
- Virtualization in optical networks