

## CALL FOR PAPERS

Optical Networks and Systems Symposium

GLOBECOM 2017

URL: <http://www.ieee-globecom.org>

Dec. 4-8, 2017, Singapore

## IMPORTANT DATES

Submission Deadline: Apr. 01, 2017

Notification of Acceptance: Jul. 25, 2017

Camera Ready Papers: Sep. 04, 2017

## SCOPE

Today's optical networks are facing challenges and opportunities. First, from the traffic distribution point of view, today's networks demonstrate an increasing asymmetric trend of traffic flows between node pairs. With the popularity of content delivery and the wide deployment of data centers, we are seeing a huge amount of outbound data from a backbone node attached to a content source (e.g., a huge data center) while the amount of inbound traffic to the node with the content source is subtle. This trend would become even clearer with increasing popularity of bandwidth-intensive video applications (e.g., 4K video). At the same time, more flexible and scalable optical networking technologies are fast evolving at the levels from components to systems. For example, the next-generation wavelength selective switch (WSS) can support even finer spectrum granularities (e.g., 5 GHz) compared to the ITU-T fixed grid standard with  $M \times N$  switching capability. These new features can offer the contentionless capacity for a colorless, directionless, and contentionless (CDC) ROADM in a cost-efficient way. Moreover, carriers start to pay more attention to the new fiber technology with an ultra-low loss and a large effective area, which can significantly enhance the transmission distance of a lightpath before signal regeneration is required. Nonetheless, though the fabrication technique for this type of fibers has become mature, it is still under debate whether or not the vast deployment of this type of fibers should be started due to the high cost. These and many other issues related to optical network and systems are considered in modern research activities. We invite all interested parties to present their latest research results within the Optical Networks and Systems Symposium during GLOBECOM 2017.

## 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 topical areas:

- 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 optical networks
- Energy efficient optical networks
- Flexible rate and flexi-grid optical transmission and networking
- Free space optical communications and networking
- Future PON architectures, including WDM-PON, high rate TDM-PON, TWDM-PON, OFDMA-PON, and Hybrid PON
- 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
- Multi-layer and multi-domain survivability
- Network Functions Virtualization in optical and multi-layer networks
- Network infrastructure programmability
- Network migration/evolution experiences and issues
- Network optimization, planning and planning tools
- OFDM and MIMO for optical systems
- Optical channel characterization
- Optical data center networking
- Optical interconnects for high performance computing
- Optical network architectures, design, and performance evaluation
- Optical network control and management
- Optical network security
- Optical network testbeds and experiments
- Optical switching technologies, devices, and architectures
- Optical translucent networks
- Optical vehicular networks
- Optical wireless access networks
- Radio-over-fiber
- Routing and spectrum assignment for optical networks
- Software defined optical networks
- Space division multiplexed and multi-dimensional optical networks
- Standardization issues in optical networks
- Techno-economics analysis
- Ultraviolet communications and networks
- Underwater optical communications
- Virtualization in optical networks
- Visible light positioning and navigation

#### SYMPOSIUM CO-CHAIRS

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