Call for Papers

IEEE GLOBECOM 2012

The Optical Networks and Systems (ONS) Symposium

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Rapid developments in optical technologies have resulted in increasing deployment of photonics in access, metro, core, and grid networks. This progress, in turn, leads to numerous research and development challenges. In the core, time has come to provide efficient and reliable network design that exploits the latest advances in both optical transmission and optical switching technologies, while relying on an architecture that optimizes the utilization of all available resources. Traffic grooming needs to adopt a multi-layer approaches, and will no longer be restricted to traditional SONET/SDH methods. In the access area, research in optical broadband access, in particular Wavelength Division Multiplexed (WDM) Optical Passive Networks (PONs), is a focal point of ongoing research, development, and standardization. Evolving grid applications, on the other hand, poses a series of challenges which can only be met with dynamic reconfigurable optical networks.

Today, optical technologies, components, and systems are deployed in ROADMs, Ethernet switches, IP routers, and low-latency interconnects for large-scale data centers. Optical switching research continues to advance and it is anticipated that optical-switching fabrics will play a critical role in next-generation networks.

This symposium seeks to showcase the latest research developments in all areas of optical networks and systems. Areas of interest include, but are not limited to:

- Optical Technologies and Devices for Telecommunication Applications
- Optical Modulation and Signal Processing
- Next-Generation Optical Transmission Systems (incl. and Performance Monitoring)
- Optical Switching Technologies, Devices, and Architectures
- Optical Wavelength-Division, Time-Division, and Code-Division Multiplexing (WDM, OTDM, OCDM)
- Optical Cross-Connects (OXCs)
- Optical Add/Drop Multiplexers (OADMs)
- Optical Packet Switching (OPS) and Optical Burst Switching (OBS)
- Multi-granularity Switching
- Optical Access Networks (PONs, AONs, and other FTTx architectures)
- Free Space Optical Communication and Networks
- Optical Networking for Grids and Emerging Research & Education (R&E) Networks
- Optical Virtual Private Networks
- Optical Network Demonstrations, Test-beds and Field Trials
- Impact of Physical-layer Impairments on Optical Network Design and Engineering
- Routing and Wavelength Assignment (RWA)
- Traffic Grooming and Engineering for Optical Networks
- Multi-casting in Optical Networks
- Single-layer and Multi-layer Protection and Restoration
- Optical Networks Security Issues
- Signaling in Optical Networks
- Optical Network Management
- Green Optical Networking
- Standardization Issues