

First IEEE International Conference on Communications in China

Optical Networks and Systems (ONS) Symposium

<http://www.ieee-iccc.org>

Call for Papers

Important dates:

Technical Paper Submission: 10 April 2012

Acceptance Notification: 10 June 2012

Camera-Ready Paper: 30 June 2012

Symposium Co-Chairs:

Wen-De Zhong (Nanyang Technological Univ.)

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We have seen fast advances of optical networking technology in all the segments ranging from core, metro, to access networks. High reliability, efficiency, and intelligence are the major trend of today's optical networks. In the core, spectrum and energy-efficiency have become major research topics in recent years, for which various networking technologies such as gridless (or flexi-grid) optical networks and green optical networks are extensively investigated. In the access, long distance and fast transmission speed are two major research lines, for which a range of topics such as WDM-PONs and long-reach PONs are under exploration. In addition, we see the convergence trend of network segments, which for example includes the convergence of metro and access networks through long-reach PONs and the integration fiber and wireless (FiWi) access technologies. In the aspect of intelligence, in addition to the traditional GMPLS and ASON network control technologies, the traditional "dumb" optical components and subsystems are growing to be more intelligent or "softer." Different modulation formats and levels of FEC depths allow optical transceivers to be more flexible and adaptive to transmit different data rates. Meanwhile, the flexible spectrum switching capability of the new-generation wavelength-selective switching (WSS) technology makes gridless ROADMs possible, which fundamentally overturns the traditional optical network's spectrum operational mode that is based on the ITU-T fixed frequency grids.

The ONS symposium is jointly held with five other symposia under the umbrella conference - IEEE International Conference on Communication in China (ICCC 2012, <http://www.ieee-iccc.org>). Thus, attendance in the ONS symposium will give you exposure and connections with many participants in other related fields of communications. This symposium seeks to showcase the latest developments in all areas of optical networks and systems research. Areas of interest include, but are not limited to, the following:

1. Optical Networking Technologies

- Optical network planning, design and modeling
- Optical access/metro networks
- IP over optical networks

Network protection/restoration
Generalized multi-protocol label switching (GMPLS)
Planning and design tools for optical networks
QoS issues in optical networks
Multiple access technique and fairness control in optical LANs and MANs
Spectrum and energy-efficient optical networking
Fiber and wireless (FiWi) integration technology
Convergence of metro and access networks
Impact of physical-layer impairments on optical network design and engineering
Routing and wavelength assignment (RWA) and routing and spectrum assignment (RSA)
Traffic grooming and engineering for optical networks
Multicasting in optical networks
Optical networks security issues
Free space optical communication and networks
Optical network demonstrations, testbeds and field trials

2. Optical Switching and Network Elements

Photonic switching system architectures
Optical cross-connects and add-drop multiplexers
Gridless and/or flexi-grid ROADMs
Optical IP routers
Photonic packet switching
Network signaling and monitoring techniques
Optical signal processing
Wavelength conversion techniques
Optical interfaces and terminals
Multi-granularity switching

3. Optical Transmission Technologies

WDM transmission systems
Transmission subsystems
Transmission impairments mitigation
Advanced modulation formats
Optical regeneration
Radio over fiber systems
Optical interconnections