Optical Networks and Systems (ONS) Symposium

Co-Chairs:
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Scope

Rapid advances in optical communications, systems, and networks have been the driver behind their deployment beyond the network core to grid, storage, and access systems. The emergence of a new generation of photonic devices that are intelligent, self-aware, and programmable under software control opens up new possibilities in optical network design. Hence, new optical networks architectures are conceivable that go beyond simply providing raw transmission capacity to higher transport layers, to capturing the full potential of an optical substrate populated with a multitude of elements performing a variety of monitoring, sensing, impairment compensation, reconfiguration, switching, signal splitting and multiplexing functions natively in the optical domain. To realize these novel network architectures, new challenges arise in designing and engineering multiple layers in an integrated manner, in facilitating explicitly cross-layer interactions, in integrating control plane policy and strategy, and in coordinating standardization efforts.

The Symposium will continue its established practice of focusing on cutting-edge, state-of-the-art research in optical networks and systems and newly emerging areas. Submissions of papers that relate the topics of optical networks and systems to other research areas and disciplines, including the integration of optical and wireless networks, emergent service paradigms for new applications, and the role of optics in the future Internet design, are highly encouraged.

This Symposium aims to bring together researchers from academia and industry to address recent advances in the design, modeling, prototyping, implementation, standardization, and deployment of optical networks.

Topics include but are not limited to:

Optical technologies and devices for telecommunication applications
Optical modulation and signal processing
Optical wavelength-division, time-division, and code-division multiplexing (WDM, OTDM, OCDM)
Optical integrated circuits and novel transmission methods
Measurement, monitoring and supervision techniques
Optical switching technologies, devices, and architectures
Optical cross-connects (OXC)s
Optical add/drop multiplexers (OADM)s
Optical packet switching (OPS)
Optical burst switching (OBS)
Multi-granularity switching
Optical access networks (PONs, AONs, and other FTTx architectures)
Optical Ethernet and new service paradigms
Free space optical networks
Optical metropolitan and regional networks
Optical networking for storage, Grid, and research & education (R&E) networks
Optical virtual private networks
Multi-domain optical communications
Optical network demonstrations, test-beds and field trials
Impact of physical-layer impairments on optical network design and engineering
Cross-layer design and software defined optics
Routing and wavelength assignment (RWA)
Traffic grooming and engineering for optical networks
Optical network performance modeling
Optical network control and management
Multipoint communication in optical networks
Single-layer and multi-layer protection and restoration
Security and privacy in optical networks
Traffic engineering for next-generation SONET/SDH
Standardization issues
Inter-working between optical and wireless networks
Energy efficiency in optical networks
Economic and regulatory issues and migration studies
Optical networks for future Internet design

Author guidelines

All submissions should be written in English with a maximum paper length of Five (5) printed pages (10-point font) including figures without incurring additional page charges (maximum 1 additional page with overlength page charge if accepted).

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