

## **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)  
Optical add/drop multiplexers (OADMs)  
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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