



**Announcement of an *IEEE/OSA*
Journal of Lightwave Technology Special Issue on:
Photonic Networks and Devices**

Submission Deadline: 29 October 2018
Publication: April 2019

The special issue addresses the challenges and enabling technologies for high-performance future optical networks. This encompasses ultra-high capacity transmission systems, flexible and scalable data center architecture and networking solutions, advanced fiber- and free-space optical network infrastructure, and cutting edge network management paradigms leveraging on SDN/NFV.

The scope includes:

- **Network control and management**
 - Software-defined networks and network function virtualization (SDN/NFV)
 - Machine learning approaches for advanced network management
 - Network control and orchestration
 - Network performance monitoring and analytics
 - Optical white box systems for deeply programmable networks
- **Technologies, components, systems and interconnects for Data Centers and High Performance Computing**
 - Optical networks to support inter data center communication and cloud applications
 - Disaggregated Data Center and HPC architectures, algorithms and protocols
 - Resource provisioning schemes for intra- and inter-datacenter communication
 - Cost effective and energy efficient devices for on-chip and chip-to-chip interconnects
- **Network design and operations**
 - Optical network architectures and protocols for metro, access and backbone networks
 - Optical routers and switches, including ROADM, WSS, cross-connects and optical packet/burst switching
 - Energy efficient and sustainable optical networks
 - Resilience and security of optical networks
 - Techno-economic studies
- **Advanced high-capacity transmission systems and enabling technologies**
 - Transmission systems with record capacity
 - Methods to achieve multi-terabit capacity networking
 - Point-point transmission or shared bus/tree topologies, burst transmission
 - 5G transport networks and convergence applications
 - Advanced optical modulation formats
- **Future networks**
 - SDM-based network applications, network elements and unique applications using the spatial dimension
 - Free-space optics for short- and long-reach applications including balloon and drone-aided communications
 - Devices and systems enabling quantum networking

This will be an open call for papers, in addition to paper solicitation at the OSA Photonic Networks and Devices (NETWORKS'18) meeting, part of the Advanced Photonics Congress to be held at ETH Zurich, Switzerland, 2-5 July 2018. The meeting will include workshops on hot topics in this area.

On behalf of the Guest Editors and the Editor-in-Chief, we encourage you to submit your paper to the journal. Typically, these papers 18 pages for the tutorial reviews, 10 pages for invited papers, and 7 pages for the regular papers. Mandatory page charges of \$260USD per page are enforced in excess of 7 pages. This paper would appear in an upcoming JLT special issue titled "Optical Networks Supporting White Boxes and Inter-operability" Target 2018 May issue with accepted papers posted online within 1 week of author final file upload.

Guest Editors: **Nicolas Fontaine** (Nokia Bell Labs), **Marija Furdek** (KTH Royal Institute of Technology, Sweden), **Werner Klaus** (NiCT, Japan), **Nick Parsons** (Hubert+Suhner Polatis, United Kingdom) and **Domenico Siracusa** (Fondazione Bruno Kessler, Italy)

Submissions by website only: <http://mc.manuscriptcentral.com/jlt-ieee>

Manuscript Type: "Networks"

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