Special Issue on
Design and Fabrication of All-Optical Communications Network

Hindawi

CALL FOR PAPERS

All optical communications networks have capability to carry multi-Tbps data and support bandwidth hungry applications such as cloud computing, video on demand (VoD), and real-time video communications. Also, optical communication networks have emerged as the backbone of communication technology. Therefore, it is not surprising that optical networks have become potential target for security or eavesdropping attacks. At the same time, optical networks also provide solutions to numerous problems in the domain of homeland security, defense, rural communication, and agriculture. A major issue is the movement and reforming or reconnecting of all optical network with other communication networks.

We invite investigators to contribute their original research articles as well as review articles on the design of elastic and reconfigurable optical communication networks, the development of strategies to treat design issues, and the evaluation of outcomes. We are particularly interested in articles describing new characterization methods of optical networks that operate at high speed and achieve high security, advances in network design, and fabrication as well as new concepts in the mitigation of network impairments.

Potential topics include but are not limited to the following:

- Enabling technologies and their applications in optical network
- Architecture and design of optical fiber communication networks
- Architecture and design of hybrid optical networks
- Survivability, reliability, and security of optical networks
- All-optical networking, switching, and routing
- Transparent optical components and devices
- Photonic integration
- Optical modulation and signal processing
- All-optical wavelength converters
- Optical data center design
- Ultra-short pulse characterization
- WDM optical networks
- Transparency and all-optical network
- Signaling and information models for network control and management
- Architecture, protocols, and algorithms for dynamic optical networks
- Operations support systems for optical networks
- Optical network performance and modeling
- Techniques and algorithms for wavelength routing and assignment and traffic grooming
- Network applications of advanced optoelectronic circuits and optical signal processing

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/ijo/aocn/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

Lead Guest Editor
Surinder Singh, Sant Longowal Institute of Engineering and Technology, Sangrur, India
surinder_sodhi@rediffmail.com

Guest Editors
Tibor Berceli, University of Budapest, Budapest, Hungary
berceli@mht.bme.hu

Quang M. Ngo, Institute of Material Science, Vietnam Academy of Science and Technology, Hanoi, Vietnam
minhnq@ims.vast.ac.vn

Amin Malek Mohammadi, California Polytechnic State University, San Luis Obispo, CA, USA
aminmalek_m@ieee.org

Akram Alomainy, University of Queen Mary, London, UK
a.alomainy@qmul.ac.uk

Submission Deadline
Friday, 10 May 2019

Publication Date
September 2019