

**Call for papers for  
*Optical and Network Systems Symposium (ONS)***

**Symposium Track Co-Chairs**

George N. Rouskas      North Carolina State University, USA  
Grzegorz Danilewicz      Poznan University of Technology, Poland

**Submissions must be done through EDAS at: <https://edas.info/newPaper.php?c=22639&track=81054>  
The paper submission deadline is **October 14, 2016**.**

**Scope and Motivation**

Optical networks and systems are often invisible to end users, whether they use wired or wireless devices, but are at the core of technologies that transport data to enable end-to-end communication. Increasingly, we are talking about the wireless transmission of optical access networks in particular in the home networks. As user demands for network speed, quality and security of the transmission, and instantaneous and efficient access to information and processing resources are growing, operators of telecommunication networks and services strive to meet these requirements by deploying advanced optical transmission and networking technologies. In the access area, we are witnessing advances beyond fiber-based wireless backhaul to optical wireless and visible light communications meant to alleviate the RF spectrum crunch. In the data center area, where information is stored and processed, optical components and interconnection structures promise to alleviate bandwidth bottlenecks and reduce latency. In the core area, data centers connect with each other via high-speed fiber-optic networks employing a wide range of transmission techniques; these networks can be software defined. Optical signals must be switched quickly and efficiently between the fibers in the nodes of a network by optical switching fabrics. Importantly, optical transmission and switching functions must continue to improve in terms of energy consumption per bit while also addressing security and privacy concerns. These and many other issues related to optical network and systems are considered in current research activities. We invite all interested parties to present their research results within the Optical Network and Systems Symposium during ICC 2017.

**Main Topics of Interest**

The Optical Networks and Systems Symposium intends to showcase the latest developments in all research areas related to optical networks and enabling systems. The Symposium cordially invites original contributions in, but not limited to, the following topical areas:

- Capacity of optical systems
- Coding, modulation, and signal processing for optical systems
- Content delivery optical networks
- Cross-layer design of optical networks
- Elastic optical networks
- Energy efficient optical networks
- Fiber access networks and wireless backhaul
- Flexible rate and flexi-grid transmission
- Free space optical communications and networking
- Inter- and intra- data center networks
- Impairment mitigation techniques
- Lighting constrained visible light communications and networks
- Multi-band optical spectrum utilization and optimization
- Multi-layer and multi-domain survivability
- OFDM and MIMO for optical systems
- Optical channel characterization

- Optical data center networking
- Optical interconnects for high performance computing
- Optical network architectures, design, and performance evaluation
- Optical network control and management
- Optical network security and privacy
- Optical network testbeds and experiments
- Optical switching technologies, devices, and architectures
- Optical translucent networks
- Optical vehicular networks
- Optical wireless access networks
- Radio-over-fiber
- Routing and spectrum assignment for optical networks
- Software defined optical networks
- Space division multiplexing
- Standardization issues in optical networks
- Techno-economic issues in optical networks
- Ultraviolet communications and networks
- Underwater optical communications
- Virtualization in optical networks
- Visible light positioning and navigation

## Biographies

**George N. Rouskas** is the Director of Graduate Programs and a Professor of Computer Science at North Carolina State University. He received the Ph.D. and M. S. degrees in Computer Science from the College of Computing, Georgia Institute of Technology, Atlanta, GA, and his undergraduate degree in Computer Engineering from the National Technical University of Athens (NTUA), Athens, Greece. During the 2000-2001 academic year he spent a sabbatical term at Vitesse Semiconductor, Morrisville, NC, and he has been an Invited Professor at Paris VI University and the University of Evry, France.

Dr. Rouskas received the 2004 ALCOA Foundation Engineering Research Achievement Award, and the 2003 NCSU Alumni Outstanding Research Award. He is a recipient of a 2007 IBM Faculty Award, a 1997 NSF Faculty Early Career Development (CAREER) Award and the 1994 Graduate Research Assistant Award from the College of Computing, Georgia Tech. Dr. Rouskas is especially proud of his teaching awards, including his induction in the NCSU Academy of Outstanding Teachers in 2004, and the Outstanding New Teacher Award he received from the Department of Computer Science in 1995.

Dr. Rouskas is a Fellow of the IEEE. He serves as the Chair of the IEEE Optical Networking Technical Committee (ONTC) in 2016-17; previously, he served as Vice-Chair (2014-15) and Secretary (2013-14) of ONTC. He also serves two-year terms as Chair of the Comsoc Distinguished Lecturer Selection Committee and Vice-Chair of the Comsoc Technical and Educational Activities Council. In 2010-11, he carried out four tours as an IEEE Distinguished Lecturer for Comsoc. He founded and serves as co-editor-in-chief of Optical Switching and Networking (OSN), an Elsevier journal. He has served on the editorial boards of the IEEE/OSA Journal of Optical Communications and Networking, the IEEE/ACM Transactions on Networking, Computer Networks, and Optical Networks. He was a co-guest editor for the IEEE Journal on Selected Areas in Communications, Special Issue on Protocols and Architectures for Next Generation Optical WDM Networks, published in October, 2000, and for the Journal of Communications Special Issue on Advances in Communications and Networking, published in December 2011. He has served as general co-chair of IEEE ICNP 2014, general chair of ICCCN 2013, program co-chair of ICCCN 2011, program co-chair of the Optical Networks and Systems (ONS) Symposium of the IEEE GLOBECOM 2010 conference, general co-chair for BROADNETS 2007, general co-chair of the IEEE LANMAN 2005 workshop, program chair of the IEEE LANMAN 2004 workshop, and technical program co-chair of the Networking 2004 conference.

**Grzegorz Danilewicz** is an Associate Professor at Poznan University of Technology (PUT), Poland. He received the M.Sc., Ph.D. (with honor), and Doctor Habilitus degrees in telecommunications from the PUT in 1993, 2001, and 2009, respectively. Since 1993, he has been working in the Institute of Electronics, PUT, and now he is with Chair of Communication and Computer Networks at PUT. He is the coauthor of two books, and over 70 papers. His scientific interests cover optical broadband switching systems with special regard to the realization of multicast connections in such systems. He served as a reviewer for the IEEE TRANSACTIONS ON COMMUNICATIONS, IEEE COMMUNICATIONS LETTERS, IEEE Globecom, and the IEEE International Conference on Communications, etc. He is a member of the technical program committees of international conferences including symposia of the IEEE International Conference on Communications and IEEE Globecom. He is a member of the IEEE Communication Society and was Chair of the IEEE Poznan Communications Chapter. Since 2012 he is Vice-Dean of the Faculty of Electronics and Telecommunications at PUT.