

IEEE International Conference on Communications  
IEEE ICC 2014  
*Communications: The Centrepiece of the Digital Economy*  
10-14 June 2014, Sydney, Australia

**Optical Networks and Systems Symposium**

Symposium Co-Chairs

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The 2014 IEEE International Conference on Communications (ICC) will be held in the beautiful city of Sydney, Australia between 10 and 14 June 2014. The theme of this flagship conference of IEEE Communications Society for 2014 is "*Communications: The Centrepiece of the Digital Economy*." The conference will feature a comprehensive technical program including twelve Symposia and a number of Tutorials and Workshops. IEEE ICC 2014 will also include an attractive expo program including keynote speakers, and Industry Forum & Exhibitions (IF&E). We invite you to submit your original technical papers, industry forum, workshop, and tutorial proposals to this event. Accepted and presented papers will be published in the IEEE ICC 2014 Conference Proceedings and in IEEE Xplore®. Full details of submission procedures are available at <http://www.ieee-icc.org/2014>.

**Scope and Topics of Interest**

The Optical Networks and Systems Symposium will focus on new exploratory research results as well as on practical solutions in the area of optical networking and enabling systems. Optical technology is expected to continue to expand in the communication networks in order to meet the yet increasing traffic demand. There are various new solutions to extend the capacity and the reach of networks on the one hand, while improving network flexibility, operability, energy efficiency and quality on the other hand, while the operational and capital per bit expenditures are to be reduced.

To ensure complete coverage of the advances in this field, the Optical Networks and Systems Symposium solicits original contributions in, but not limited to, the following topical areas:

- Wavelength-, time-, frequency- and code-division multiplexing systems
- Coding, modulation, and signal processing in optical networks
- Optical translucent networks
- Optical switches, cross connects, and add drop multiplexers
- Next-generation passive optical networks
- Optical network architectures, design and performance evaluation
- Multi-layer, multi-domain, and multi-technology
- Optical network control and dynamic traffic management
- Traffic grooming, multicasting, and traffic engineering

- Optical packet, burst, multi-granularity, and flow switching
- Packet optical transport networks and optical Ethernet
- Regeneration, dispersion and nonlinearity management
- Performance, monitoring, and failure localization
- Resilience operation: impairment mitigation, protection and restoration
- Visible light communications
- Free space optics and optical wireless networking
- Optical MIMO
- Optical and fiber-wireless broadband access networks
- Fixed and mobile convergence including mobility support
- Terrestrial and submarine optical networks
- Optical Quantum Communications
- Optical network security
- Optical virtual private networks
- Optical network standardization activities
- Emerging applications on the optical Internet backbone
- Optical networks in support of Grid, Cloud Computing and Storage
- Energy efficient/green optical networks and systems

### **Submission Guidelines**

Prospective authors are invited to submit original technical papers by the deadline 15 September 2013 for publication in the IEEE ICC 2014 Conference Proceedings and for oral or poster presentation(s). All submissions should be written in English with a maximum paper length of Six (6) printed pages (10- point font) including figures without incurring additional page charges (maximum 1 additional page with over length page charge if accepted).

**Standard IEEE Transactions templates for Microsoft Word or LaTeX formats found at**

<http://www.ieee.org/portal/pages/pubs/transactions/stylesheets.html>

**Alternatively you can follow the sample instructions in template.pdf at**

<http://www.comsoc.org/confs/globecom/2008/downloads/template.pdf>

**Only PDF files will be accepted for the review process and all submissions must be done through EDAS at**

<http://edas.info/>

**Arun K. Somani [F'99]** is currently Anson Marston Distinguished Professor of Electrical and Computer Engineering at Iowa State University. He earned his MSEE and PhD degrees in electrical engineering from the McGill University, Montreal, Canada, in 1983 and 1985, respectively. He has worked as faculty member at the University of Washington, Seattle, WA and Scientific Officer for Govt. of India, New Delhi. Professor Somani's research interests are in the area of dependable and high performance computing and networking system, WDM-based optical networking architecture, algorithm, and protocols, and application of sensor networks. He has published more than 300 technical papers, several book chapters, one book on Survivability and Traffic Grooming in WDM Optical Networks, and has supervised more than 35 PhD and 70 students. He is the chief architects of an anti-submarine warfare system for Indian navy, Meshkin fault-tolerant computer system architecture for the Boeing Company, Proteus multi-computer cluster-based system for US Coastal Navy, and HIMAP design tool for the

Boeing Commercial Company. He has served on several program committees of various conferences in various capacities, served as IEEE distinguished visitor and IEEE distinguished tutorial speaker, and delivered several key note speeches, tutorials and distinguished and invited talks all over the world. He received commonwealth fellowship for his postgraduate work from Canada during 1982-85, awarded Distinguished Engineer member of ACM, was elected a Fellow of IEEE for his contributions to “theory and applications of computer networks,” a fellow of AAAS for his contributions in the field.

**Nathan J. Gomes** [M’92 - SM’06] received the BSc degree from the University of Sussex, UK, in 1984 and the PhD degree from University College London in 1988, both in electronic engineering. From 1988 to 1989 he held a Royal Society European Exchange Fellowship at ENST, Paris. He has been with the University of Kent since late 1989, where he is now a Reader in Broadband Communications, leading the radio over fiber activities. His present research interests include radio over fiber systems and networks, wireless/mobile and fixed optical access convergence, the photonic generation and transport of millimetre-wave signals, and photoreceivers for such applications. He has led significant work packages in the EU Framework Programme Network of Excellence FUTON and Integrated Project FUTON, and has led the University contributions in a number of other EU projects such as NEFERTITI, ROSETTE, and EXTRACTT. He has published over 170 refereed journal and conference papers. Dr Gomes is a Senior Member of IEEE Comsoc, MTT and Photonics societies. He has presented invited talks at a number of conferences, including a keynote at the DAS workshop at GLOBECOM 2011, has been a guest editor for JSAC, is the workshop co-chair at IEEE WCNC 2013, and will be the technical program co-chair for MWP2014 and ICC 2015.

**Philippe A. Perrier** is current serving as Xtera Communications’ Senior Vice President of Product Line Management for Long-Haul Optical Transport. He has held a number of positions since joining the company in 2000, including Director of the Photonics group and Vice President of Engineering, responsible for the design, development, and transfer to manufacturing of all-Raman-based optical transport systems.

Prior to joining Xtera Communications, he was with Alcatel where he served in many capacities in R&D, both in France and in the USA. His research activities focused on advanced optical technologies, in particular, photonic switching, OADMs, Optical Cross-Connects, and optical packet switching.

Dr. Perrier received his Master of Science and Ph.D. degrees in Electrical Engineering from Columbia University (New York City, NY) in 1985 and 1989, respectively. His thesis was in the field of optical networks and optical processing. After completion of his post-graduate studies, he held a Research Assistant position at Princeton University (Princeton, NJ) pursuing his research activities in high-speed optical networks and lectured an undergraduate course on Communication Theory.

He is the author/co-author of 75+ refereed papers and conference contributions in the fields of optical networking, transmission, and switching, holds two dozen patents, and has served on the Technical Program Committees of several conferences.