

About CPFR Researchers in this Workshop

Dr. Chang-qing Xu:

Professor, Dept. Of Eng. Physics, McMaster University, Ontario Photonics Consortium

Dr. Xu received his PhD degree from the University of Tokyo (Japan) in 1991. From 1991 till 1994 he was a Research Leader with Oki Electric Industry Co., Ltd. (Japan). From 2000 to 2001 he was Associate Professor at the School of Electrical and Electronic Engineering, Nanyang Technological University in Singapore. Dr. Xu has worked on nonlinear optic materials and devices, semiconductor laser diodes and amplifiers, waveguide devices such as wavelength converters, optical filters and switches. He has authored or co-authored over 160 publications in refereed journals and conference proceedings, and has over 40 patents on photonic devices and applications. His current research interests include optoelectronics, passive and active optical devices, and optical sensors for telecommunication and biomedical applications.

Dr. Peter Mascher:

Professor and William Sinclair Chair in Optoelectronics, Dept of Eng Physics, McMaster University

Dr. Mascher received his Master's of Engineering and Ph.D. Degrees from the Technical University of Graz, Austria, and spent four years as a postdoctoral fellow and research associate at the University of Winnipeg. In 2001, he was appointed as the inaugural holder of the William Sinclair Chair in Optoelectronics. Since 2003, he has been the program director of the Ontario Photonics Consortium (OPC), a McMaster-led multi-university initiative co-funded by Ontario ORDCF fund and industrial partners. In 2006, he was appointed as a member of the Advisory Group on Nanotechnology of the Ontario Ministry of Research and Innovation. Dr. Mascher is currently serving as the associate dean (Research and External Relations) of the Faculty of Engineering. He supervised more than 30 Ph.D. and master's degree students, authored or coauthored more than 160 publications in refereed journals and conference proceedings, and has presented many invited lectures at international conferences and workshops. Dr. Mascher is a professional engineer and is a member of McMaster's Brockhouse Institute for Materials Research and the Centre for Emerging Device Technologies, as well as a number of international physics and materials research societies. His research interests include study of defect spectroscopy in electronic materials and plasma deposition of oxide and nitride thin films.

Ms. Jing Li:

Ph.D. Student, Dept of Eng Physics, McMaster University

Jing Li was born in Beijing, China, in 1980. She received the B.Eng and M.Eng. degrees in Materials Science and Engineering from Tsinghua University, China, in 2002 and 2005. She is now a graduate student in the Department of Engineering Physics at McMaster University, Hamilton, On, Canada, pursuing her M.A.Sc. Degree. She is working on a project supported by CPFR, CIPI, and OPC and is engaged in the fabrication and characterization of rare-earth-doped silicon oxide structures, and optimization of rare-earth related emission.

Dr. Pierre Berini:

Professor, SITE, University of Ottawa

Dr. Berini received both his Ph.D. and M.A.Sc. Degrees in Electrical Engineering from École Polytechnique de Montréal, his B.E.Sc. and B.Sc. Degrees in Electrical Engineering and Computer Science, respectively, from the University of Western Ontario. He received the 1999 URSI Young Scientist Award from the Union Radio-Scientifique Internationale. He received the University of Ottawa Young Researcher of the Year Award and the Premier of Ontario Research Excellence Award (PREA) in 2001. Dr. Berini is a Canada Foundation for Innovation researcher and is an Associate Editor of Optics Express. His research interests are currently focused in the area of plasmonics and related device applications. Dr. Berini is the Founder and Chief Executive Officer of Spectalis Corporation.

***Dr. Len MacEachern:
Associate Professor, Dept. of Electronics, Carleton University***

Dr. MacEachern received the B.Sc. and CAS Degrees in 1990 from Acadia University, Nova Scotia as well as the B.Eng. and M.A.Sc. Degrees (in 1993 and 1996 respectively) from the Technical University of Nova Scotia. He received his Ph.D. Degree from the University of Waterloo in 2002. Dr. MacEachern is a registered P.Eng. with the Association of Professional Engineers of Nova Scotia and an IEEE Member involved with the Solid State Circuits Society and the Circuits and Systems Society. He has one US Patent, and one pending. Dr. MacEachern received various awards and distinctions, including, Dean's List Scholar (Acadia), The Ralph B. Mounce Medal in Engineering (Acadia), The Fred C. Manning Scholarship (Acadia), the Dr. Barry H. Burgess Scholarship (Acadia), the Nova Scotia Power Centennial Scholarship (Acadia/NSP), the Frederic E. Sexton Scholarship (Acadia/TUNS), the Positron Engineering Scholarship (TUNS/Positron Engineering), Sexton Scholar Designation (TUNS), Graduation with Distinction (TUNS), University Gold Medal (TUNS), the Bruce and Dorothy Rosetti Engineering Research Scholarship (TUNS), the NSERC Ph.D. Research Award (NSERC), the Canadian Space Agency Scholarship (CSA), and several graduate scholarships from the University of Waterloo. His research interests are focused on microelectronics and optoelectronics areas involving radio frequency integrated circuits, CMOS image sensors, ultra-wideband and mixed-signal circuits.

***Mr. Oleksandr Tkachenko
M.A.Sc. Student, Department of Electronics, Carleton University***

Mr. Tkachenko obtained B.Sc. Degree in Electrical Engineering from Carleton University in 2006. His graduate research is focused on design of an enhanced performance CMOS Imager Pixels. He joined Nortel Networks In 2008 to work on design of CDMA Digital Radio hardware.

***Mr. Igor Miletic
Ph.D. Student, Department of Electronics, Carleton University***

Mr. Miletic obtained his M.A.Sc. Degree in Electronics from Carleton University in 2005. After graduating he joined Skyworks Inc. for a year which he spent designing mixed signal circuits. Most of his design work was PLL. His graduate research topics are focused on converters and image sensors.

Dr. Trevor J. Hall:

Canada Research Chair in Photonic Network Technology, SITE and Director of the Centre for Research in Photonics, University of Ottawa.

Dr. Hall obtained his BA and MA Degrees in Electrical Engineering from Christ's College, Cambridge University, UK in 1977 and 1981 respectively and his Ph.D. Degree in fiber optics from University College London in 1980. In 1979 he joined Cambridge Consultants Ltd as an optical physicist and in 1980 joined Queen Elizabeth College London as a lecturer in Physics; moving to King's College London in 1984 where he became Reader in Physics in 1990. In 1993 was appointed Head of the Physical Electronics Research Group at King's College, London, and was subsequently promoted to Professor of Optoelectronics in 1994. He spent the year 1997-98 on sabbatical leave as a visiting professor at Cambridge University Engineering Department where he initiated his research into photonic packet switches. The desire to refocus his career into a research-intensive mode motivated his decision to take up a position of full professor at the University of Ottawa from August 2002. Dr. Hall's research interests include photonic networks and switches; material, device and component technologies; dynamics and control of complex systems; and photonic science.

Dr. Karin Hinzer:

Canada Research Chair in Photonic Nanostructures and Integrated Devices, SITE, University of Ottawa

Dr. Karin Hinzer is a Tier II Canada Research Chair in Photonic Nanostructures and Integrated Devices and Associate Professor at the School of Information Technology and Engineering at the University of Ottawa. She has made pioneering contributions to the experimental physics of quantum dots marked by two landmark papers in Science. She gained extensive experience in the design and fabrication of group III-V semiconductor devices while at the National Research Council Canada, Nortel Networks and then Bookham. Cost reduction strategies and liaison with remote fabrication facilities strongly feature in her industry experience. In 2006, she brought to new product introduction a high performance 10 Gb/s uncooled 1310 nm directly modulated laser for Bookham. As a new Canada Research Chair, Dr. Hinzer is now turning her skills toward new challenges: Photonic integration and the development of clean, economical, and emission-free high efficiency solar cells as ubiquitous energy sources.

Dr. Robert Gauthier:

Associate Professor, Dept. of Electronics, Carleton University

Dr. Gauthier obtained his B.Sc. Degree from Laurentian University and his M.Sc. and Ph.D. Degrees from Dalhousie University. Dr. Gauthier research interests include photonic crystals and photonic bandgap materials; laser trapping; manipulation, orientation and ablation of micron size objects; fiber optical sensors for monitoring physiological parameters; software development for modeling experimental optical systems; and development of optical facilities for fabrication, testing of photonic crystal and photonic bandgap materials. Laser trapping has been applied to the activation of micro-mechanical-machines, cell sorting and periodic material assembly.

