

THE SCIENCE PROGRAM PRESENTS

Guiding Light for Future Technologies

Professor Yuri S. Kivshar, Australian National University

Thursday, January 29
12 p.m. – 1 p.m.
Lecture Hall 143 | First Floor

The present on-going revolution in photonics will lead to all-optical photonic technologies and devices, where light controls and manipulates light. We will describe several recent developments in the light-induced control and switching in photonics. One of the basic concepts is associated with the physics of photonic crystals, an analogue of semiconductors for light waves. Photonic crystals are composite periodic dielectric materials that provide novel ways to control light, and they are useful in developing all-optical technologies which are expected to revolutionize the information and telecommunication industry. We will also mention the recent concepts and developments in the fields of plasmonics and metamaterials.

Professor Yuri S. Kivshar is Head of Nonlinear Physics Centre, Research School of Physics and Engineering at the Australian National University. He is the recipient of many Academic Awards and distinctions such as: Medal and First Prize in Physics of the National Academy of the Ukraine; Pnevmatikos International Award for Research in Nonlinear Phenomena; Pawsey Medal of the Australian Academy of Science; Fellowships of the Optical Society of America and the American Physical Society; Fellowship of the Australian Academy of Science; Federation Fellowship of the Australian Research Council; Boas Medal of the Australian Institute of Physics; Zeiss Professorship of the University of Jena and the Zeiss Foundation; Lyle Medal of the Australian Academy of Science. His publications number over 500 papers in scientific peer-reviewed journals, including more than 15 book chapters and review articles, and 2 books published in 2003 by Academic Press and 2004 by Springer-Verlag (both translated to Russian). His papers have been cited more than 12,000 times. The publication H-factor is 54



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