## **Distinguished Lecture on Photonics**

Nell'ambito del corso di Optoelectronics della Laurea Magistrale in Ingegneria Elettronica e del Dottorato in Information and Communication Technology con la collaborazione dell'IEEE Photonics Society - Italy Chapter, il Prof. Eli Kapon della Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland terrà un seminario dal titolo:

## Integrated Quantum Photonics: Exploiting ordered systems of quantum nanostructures

Il seminario, aperto a studenti e docenti interessati, avrà luogo il giorno 20 ottobre 2017 alle ore 12:00 nella sala lettura del II piano del DIET presso la sede di Ingegneria di San Pietro in Vincoli in via Eudossiana, 18.

ABSTRACT. Preparation and processing of single photons and other quantum states of light is a prerequisite for an important class of quantum science and technology platforms. Integration of sources of quantum light with various photonic elements would allow the realization of compact, inexpensive and efficient photonic chips for generating, processing and detecting single photons and their combinations. Prospects for such integrated quantum photonics are discussed, focusing on semiconductor quantum dots (QDs) as useful sources of quantum light. Approaches for producing ordered systems of QDs and their integration with integrated photonic elements are described. In particular, growth of QD systems with controlled position, emission spectrum and polarization state using organometallic vapor phase epitaxy and their integration with photonic crystal cavities and waveguides are presented.



BIOGRAPHY. Eli Kapon received his Ph.D. in physics from Tel Aviv University, Israel in 1982. He then spent two years at the California Institute of Technology, Pasadena, as a Chaim Weizmann Research Fellow, and then nine years at Bellcore, New Jersey, as member of technical staff and District Manager. Since October 1993 he has been Professor of Physics of Nanostructures at the Ecole Polytechnique Fédérale de Lausanne (EPFL) in Switzerland, where he heads the Laboratory of Physics of Nanostructures. In 1999-2000 he was a Sackler Scholar at the Mortimer and Raymond Sackler Institute of Advanced Studies in Tel Aviv University, Israel. During that period he helped establishing the Tel Aviv University Center for Nanoscience and Nanotechnology and served as its first Director from 2000 to 2002. In 2001 he founded the start up BeamExpress, serving as its Chief Scientist. His research interests include quantum- and nano-photonics, low-dimensional semiconductors, and vertical cavity semiconductor lasers. Prof. Kapon is Fellow of the Optical Society of America, the Institute of Electrical and Electronics Engineers, and the American Physical Society of America, a recipient of a 2007 Humboldt Research Award, and a Photonics Society Distinguished Lecturer for 2105-2017.



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