

# Distinguished Lecture

Nel quadro delle iniziative scientifiche dell'Italian Chapter dell'IEEE-Photonics Society e nell'ambito dei corsi di Optoelettronica, Sistemi Optoelettronici e Microsistemi Fotonici delle Facoltà di Ingegneria, il Prof. Gaetano Assanto del Dipartimento di Ingegneria Elettronica dell'Università di Roma "Roma Tre" terrà una lezione seminario dal titolo:

## Nematicons: Spatial Optical Solitons in Nematic Liquid Crystals

Il seminario, aperto a studenti e docenti interessati, avrà luogo il giorno 19 Aprile 2010 alle ore 15.30 nella Sala del Consiglio della Facoltà di Ingegneria.

**ABSTRACT.** A comprehensive review of the main properties of Nematicons, spatial optical solitons in nematic liquid crystals with a nonlocal self-focusing reorientational response. These self-guided beams and corresponding self-induced channel waveguides can be curved and readdressed, offering a platform for reconfigurable signal interconnects controlled by extra solitons, applied voltage or external illumination.

**BIOGRAPHY.** Gaetano Assanto (1981 MSc in EE from the University of Palermo and 1987 PhD in ECE) in 1987-1988 was Research Engineer with the Center for Electronic Research in Sicily, from 1988 to 1990 Research Associate with the Optical Sciences Center at the University of Arizona, from 1990 to 1992 Senior Research Scientist with the Center for Research in Electro Optics and Lasers at the University of Central Florida. Since November 1st, 1992 Dr. Assanto is professor of Optoelectronics with the Department of Electronic Engineering of the University of Rome "Roma Tre". His current interests are in nonlinear effects (parametric, Kerr-like, reorientational, thermo-optic) for all-optical signal processing and light localization, as well as Si-Ge heterostructures and optoelectronics for near-infrared detection.



Dr. Assanto is a Fellow of the Optical Society of America (OSA), senior member the IEEE Photonics Society, member of the International Society for Optical Engineering (SPIE), the National Institute for Nuclear Physics (INFN), the European Physical Society, the Executive Committee of the Italian IEEE-LEOS Chapter, the Editorial Board of Laser Physics Review. He is a topical editor for J. of the Optical Society of America B, Hindawi Research Letters in Optics, Photonics Letters of Poland.