

University of Pavia
Ph.D. School in Electrical and Electronics Engineering and Computer Science
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SEMINAR

Multi-Messenger Optical Microscopy

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Nanoscopy – Istituto Italiano di Tecnologia

16 March 2021, 15:00

Webinar link:

<https://us02web.zoom.us/j/83370765505?pwd=NVIQTUtNSkxJV0NtSUUzRFZNbVNxdz09>

Abstract: Fluorescence optical microscopy gives bioengineering, biophysics, biology and medicine the chance to follow subtle changes in living systems at molecular level during their lifetime under normal or pathological conditions using visible light. Recently, super-resolved fluorescence microscopy and other advanced approaches have been implemented with the aim of deciphering key questions in the life sciences. Correlative nanoscopy coupling atomic force microscopy and optical nanoscopy and label free approaches like second harmonic generation and polarization microscopy enhance the chances of the optical microscopy to study biological events at molecular level. Such an evolution, coupled to the ability of integrating different light-matter interactions to form images, is the starting point for the design and realization of LIQUITOPY®, a “liquid tunable microscope” allowing to “tune” the microscope across a wide, almost unlimited, range of spatial and temporal resolution.

Bio: Alberto Diaspro is a scientist active in advanced optical approaches to study biological systems with major interest in the role of chromatin organization towards transcription and replication processes involved in oncological and neurodegenerative diseases. He designed and developed original approaches taking advantage of his experience in two-photon and super resolution microscopy combined with label free methods based on Mueller matrix microscopy. AD is director of the Italian Nikon Imaging Center, Genoa, Italy. AD published more than 350 papers, 8 books and has more than 12000 citations (H=55). AD is IEEE and OSA senior member and SPIE fellow. He received the Emily M.Gray Award in 2014 and the Prize for Scientific communication in Physics from the Italian Physical Society in 2019. AD is President of the Scientific Council of “Festival of Science”.

Organizers

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Seminar in English

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