



## **Summer Lecture PABLO LOZA 'Ultrashort pulses in biology: from high resolution images to neuron repair'**

August 13, 2007

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Monday, August 13th, 15:00. Seminar Room

**Prof. PABLO LOZA**

**Ultrafast imaging and nonlinear microscopy group**

**ICFO-The Institute of Photonic Sciences**

**SPAIN**

In this talk I will show the different approaches currently undertaken in our group to perform interdisciplinary research between photonics and biology. Emphasis will be placed in studying some of the interactions involved between ultrashort pulses and living cells or organisms. I will start by reviewing the general principles of nonlinear microscopy and then

outline our approach to improve such tool. I will then describe our studies on the different cellular dynamics in living organisms such as the fruit fly (*Drosophila Melanogaster*), and the soil worm (*Caenorhabditis elegans*).

Finally, I will focus on the ultrashort pulse-neuron interaction. Here I will describe our recent results on axonal guiding and outline the far reaching consequences into biomedicine.

Monday, 13th of August, 15:00h. Conference Room