



PHOTONICS - EUROPHOTONICS MASTER COURSE

MASTER THESIS PROPOSAL

Course 2014 –2015

Laboratory: ICFO- The institute of Photonic Sciences
City, Country: Barcelona

Title of the master thesis: Novel transparent adaptive optics for 3D microscopy

Name and affiliation of the tutor of the master thesis:

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Summary of the subject (maximum 1 page):

In the current trend towards miniaturization, integrated micro-optical elements play a central role in the development of various applications including high-density data storage and imaging. In these operations, fine alignment and focus adjustment are usually performed mechanically; thus limiting the accuracy, size and speed of devices. To address this limitation we have recently developed a novel transparent adaptive lens with unprecedented time response.

In this experimental project, the candidate will be in charge of applying the ICFO technology to microscopy and in particular to 3D imaging of biological samples. We are seeking for a hands-on and motivated individual who feels comfortable with optics, electronics and programming.

Keywords: Adaptive optics, nano-optics, microscopy

Additional information:

- * Amount of the monthly allowance (if it is the case):
- * Required skills: Experience working with lasers in an optics lab
- * Miscellaneous: