



ERASMUS MUNDUS



Education and Culture DG



## **PHOTONICS - EUROPHOTONICS MASTER COURSE**

### **MASTER THESIS PROPOSAL**

**Course 2014 –2015**

**Laboratory : Mitchell Group (quantum optics with cold atoms and nonclassical light)  
City, Country : Barcelona, Spain**

**Title of the master thesis : To be discussed**

**Name and affiliation of the tutor of the master thesis : Morgan W. Mitchell**

Institution: ICFO – Institute of Photonic Sciences

Mail address :

Av. Carl Friedrich Gauss, 3

08860 Castelldefels

Barcelona - SPAIN

Email address : [morgan.mitchell@icfo.es](mailto:morgan.mitchell@icfo.es)

Phone number : +34 93 553 4017

#### **Summary of the subject (maximum 1 page):**

Our group works in several areas: quantum-enhanced sensing, also known as “quantum metrology,” quantum optics using atom-resonant photons, experimental quantum information, and quantum condensed matter (Bose-Einstein condensation). We have space for one or possibly two students, on projects related to these topics. The exact topics will be discussed based on the abilities, background, and interests of the Master students.

<http://mitchellgroup.icfo.es>  
[www.icfo.eu/research/publications\\_groups.php?id=20](http://www.icfo.eu/research/publications_groups.php?id=20)

**Keywords : Quantum Optics, Atomic Physics, Quantum Metrology, Quantum Information.**

#### **Additional information :**

\* Amount of the monthly allowance (if it is the case):

\* Required skills:

\* Miscellaneous: