

## EUROPHOTONICS

### Doctorate Program in Photonics Engineering, Nanophotonics and Biophotonics

**Duration:** 3 years

**Programme description:**

The Joint Doctorate Program on Photonics Engineering, Nanophotonics and Biophotonics is dedicated to address recent challenges of one of the most expanding fields in physics and material sciences. This doctorate program is based on a consortium of excellence research institutes and universities in the field : Paul Cézanne Aix Marseille III University / Institut Fresnel (France), Universität Karlsruhe (TH) / Karlsruhe School of Optics & Photonics (Germany), Universitat Politecnica de Catalunya, ICFO (Institut de Ciències Fotoniques) (Spain), and Università degli Studi di Firenze / LENS (European Laboratory for Non-Linear Spectroscopy) (Italy). The goal of the program is to involve doctorate students in cutting-edge research projects profiting from the complementarity between the five partners, and from a wide range of research training and teaching plans that includes fundamental and general sciences, technology, languages and communication, research and industrial management, technology transfer, career exploratory support, international meetings, workshops and conference participation. Several key issues will be implemented to bring to the students a complete and valuable training : co-supervision, exchanges within the local and the international research environment, training in working methods in technical, scientific and management issues, communication and regular scientific presentations at local and international scales.

This program is dedicated to students with a masters in Physics, Engineering, Biology, Biotechnologies, selected based on their scientific level and the identified project proposed within the consortium. The students will work under a co-tutelle supervision in at least two collaborative laboratories among the partners. At least one semester will be spent in each of the co-supervising institutions. The students will have to demonstrate excellent research and follow two weeks of training units per semester to obtain a doctorate multiple diploma after their thesis defense.

The doctorate projects will focus on advanced research in Photonics and interdisciplinary applications. PhD students will be able to pursue a career on today's new challenges in either academic or applied research : monitoring and controlling matter and optical phenomena at the ultimate nanometric scale, providing new imaging tools for fundamental understanding of biological processes and clinical applications, bringing original tools in line with future optical devices.

**Website:** [www.europhtonics.org](http://www.europhtonics.org)

**Partners:**

UNIVERSITY AIX-MARSEILLE III PAUL CEZANNE, France (Co-ordinating institution)  
EUROPEAN LABORATORY FOR NON-LINEAR SPECTROSCOPY, Italy  
TECHNICAL UNIVERSITY OF CATALONIA, Spain  
UNIVERSITY OF KARLSRUHE, Germany  
INSTITUTE FOR PHOTOTONIC SCIENCES, Spain

**Contact:**

Sophie Brasselet  
Institut Fresnel, Domaine universitaire St.-Jerome  
13397 MARSEILLE - France  
[sophie.brasselet@fresnel.fr](mailto:sophie.brasselet@fresnel.fr)