



OPEN POSITION FOR PHD STUDENT FOR 3 YEARS AVAILABLE! ITN MARIE CURIE

The Instituto de Microcirugía Ocular (IMO), Barcelona (Spain) has an open position for an **Early Stage Researcher (ESR)** to pursue a **PhD degree**, funded for a period of **36 months**.

The project entitled Advanced BioMedical OPTICAL Imaging and Data Analysis (BE OPTICAL)

provides a unique and structured training programme to 14 ESRs in a wide range of optical imaging technologies and signal processing tools, including fluorescence spectroscopy and microscopy, optical coherence tomography, optogenetics, engineered nanomaterials and signal processing tools.

Comprising 7 leading academic groups and 2 non-academic partners in 5 European countries, the project **BE OPTICAL** brings together an interdisciplinary team of physicists, engineers and medical doctors, with complementary expertise in optical imaging, nanotechnology, computer science, complex systems and data analysis. The non-academic partners are a leading company in fluorescence instrumentation and an internationally recognised ophthalmology clinic, with the most advanced technology and expertise in ocular diseases.

The training programme will provide the ESRs with a broad understanding of how a wide range of optical imaging technologies and data processing tools work, and will open for them a wide range of job opportunities. The ESRs will apply this knowledge to advance the early diagnosis of highly significant diseases. The ESRs will also gain insight into clinical studies of novel imaging technologies and the commercialization process, which will further improve their employability.

Place of Work

The Early Stage Researcher will be registered as a PhD student at **Universitat Politècnica de Catalunya** (<http://www.upc.edu>) and employed at **IMO** (<http://www.imo.es/en/>) with full employee benefits. The ESR will be supervised by **Dr J. L. Güell** and **Dr. J. Pujol**. He/she will work closely with other BE-OPTICAL researchers at Nicolaus Copernicus University (NCU), Toruń, Poland and Universitat politècnica de Catalunya (UPC), Spain, with secondment visits to these partners.

The ESR hosted by IMO will develop an **OCT system to be integrated in an instrument for visual performance diagnosis by using fully autonomous and automatic registers**.

The starting point will be a prototype already built by the UPC which includes an eye-tracker or eye-gazing and a Head Mounted Display (HMD) based system that provides the examination of visual functions/diagnostics and therapy procedures. The measures and diagnostic is made through an automatic and autonomous process meanwhile the patient watch a 3D videogame. A new compact and cheap OCT system that can be incorporated to this device will be developed. It should allow retinal and anterior segment assessment and use adaptive optics. The system will be tested in a clinical setting. New methods for diagnosis of the visual function and visual therapy, much faster and cheaper than those used at present, will be implemented.

Requirements

The applicant is required to satisfy the eligibility criteria for ITN-ETN - Training Networks Early Stage Researchers, i.e.:

- must be within the first four years (full-time equivalent) of their research career and not have a doctoral degree;
- must not have resided or carried out their main activity (work, studies, etc.) in Spain for more than 12 months in the three years immediately prior to the recruitment.

The applicant will also be expected to have a MSc (or equivalent) undergraduate degree in physics, optics, photonics, electrical engineering or a related discipline.

Applications should include: 1) a CV (publication record is advantageous), 2) scanned copy of Master's degree certificate (or equivalent), 3) a statement of the candidate's research interests, experience and skills, and 4) contact information for at least two references. All materials should be submitted via email to:

Jaume Pujol: pujol@oo.upc.edu

Do not miss the opportunity! Join us!!