



## JOB DESCRIPTION

### **Research Associate (Mechanical Engineer)**

The Visual Optics and Biophotonics Laboratory (Institute of Optics, CSIC, Madrid), a leading laboratory in the fields of ocular imaging and developing of new vision correction alternatives at national and International levels, is seeking a Research Associate with an expertise in mechanical engineering for applications in crystalline/intraocular lens modeling, in the context of recently awarded ERC Advanced Grant.

#### **Job role**

The role as a Research Assistant in Biology/Ophthalmology will be:

- (1) Develop Finite Element Models of the crystalline lens and intraocular lenses
- (2) Interact with optical engineers, clinicians, biomaterial scientists and visual scientists to incorporate biological, optical and clinical data into the modeling
- (3) Design of Mechanical modeling of biocompatible implantable elements
- (4) Engineering of biomaterial-based intraocular lens prototypes
- (5) Development and set up of mechanical devices for biomechanical testing of prototypes.

#### **Qualifications, knowledge & experience:**

- (1) College or University PhD degree in Mechanical Engineering, or Physics, Engineering or Visual Science with demonstrated experience in mechanics and biomechanical modeling.
- (2) High competence in Finite Element Modeling, with professional programs such as ANSYS
- (3) Previous experience in mechanical modeling in the crystalline lens and/or ocular applications will be considered a bonus
- (4) Excellent written and oral communication skills in English (knowledge

of Spanish for interaction with patients will be considered a bonus)

**Personal skills & attributes:**

- (1) Dynamic person with a demonstrated capacity of team work
- (2) Strong communication and organizational skills
- (3) Previous experience in multidisciplinary environments
- (4) Proactive, flexible and problem-solving attitude.
- (5) Strong experimental and analytical skills
- (6) Team Player and ability to work independently.

**Work environment:**

- (1) The successful applicant will join a team of young and dynamic international scientists based in Madrid.
- (2) High international impact in the fields of optics and biophotonics, and multidisciplinary approach to applications in ophthalmology
- (3) Excellent multidisciplinary network of research and innovation, with collaborations with top international centers, clinic and industry.
- (4) Enriching environment with excellent opportunities for career development

**Conditions:**

- (1) Salary will depend on experience. Within CSIC wage 27.000 euros,, social security and institutional benefits.
- (2) Potential starting date: June 2012
- (3) Duration: Initial 1-year contract (or longer, depending on experience and skills), with the possibility of yearly renewal, with possible significant wage increase, based on achievements.

Please submit your application electronically, including cover letter, CV and list of references to: [viobio@io.cfmac.csic.es](mailto:viobio@io.cfmac.csic.es). Please indicate reference: ERC-Manager

More information

Visual Optics and Biophotonics Lab

<http://www.vision.csic.es>

Consejo Superior de Investigaciones Científicas

<http://www.csic.es>