



Centre de Desenvolupament de Sensors, Instrumentació i Sistemes
UNIVERSITAT POLITÈCNICA DE CATALUNYA

Optical Engineer position at CD6 (UPC)

The **Center for Sensors, Instruments and Systems Development (CD6)** (<https://www.cd6.upc.edu/>) is a research and innovation center of the Universitat Politècnica de Catalunya (UPC) that operates in the field of Optical and Photonics Engineering.

CD6 is currently offering an **optical engineer** position, to work in an R+D project focused on the development of an innovative compact **near-eye display optical system for augmented and virtual reality glasses**. We are looking for enthusiastic and motivated candidates holding a BSc and/or MSc in Physics, Engineering or related disciplines, with solid background in optics.

Project description:

Augmented reality (AR) and virtual reality (VR) are technologies with great potential, which could represent an even more disruptive change than the appearance of smartphones. However, despite the enormous technological advances in the recent years, it has not yet been possible to design compact portable smart glasses to be adopted as an everyday solution. The main limitation is imposed by the currently available technology in near-eye display optical systems (NED), i.e. an image projection system integrated with the glasses lens, which are the key element in charge of showing the virtual content to the user. Nowadays, there is a lack of compact NEDs offering a wide field of view and a comfortable and quality visual experience.

The objective of this project is the development of a new compact NED optical system for AR/VR glasses that solves the limitations that current systems present (bulky, limited field of view, vergence-accommodation conflict, among others). To achieve this goal, the tasks to be carried out will include the research on novel optical design strategies for this type of devices, their simulation and optimization, and the implementation and validation of a prototype based on the design outcomes.

Position description:

- Full-time contract.
- Duration: initially 2 years (possibility of extension).
- Estimated start date: 15/02/2023

Requirements:

- BSc and/or MSc in Physics, Engineering or related disciplines.
- Solid background in optics.
- Experience in optical design. Use of design and simulation software (Zemax OpticStudio, ...).
- Fluent spoken and written English.

Also valued:

- PhD in Optical Engineering or related disciplines.
- Experience in laboratory work in optical engineering (especially, in holography).
- Experience in the integration of optomechanical and electronic systems.
- Programming skills in C++, Matlab, Python, ...

Contact: Send CV and motivation letter to Fernando Díaz Doutón: fernando.diaz-douton@upc.edu

Deadline for the reception of candidatures: 15/01/2023