

**Tenure Eligible Investigator**  
**Vision and Artificial Intelligence**  
**Job number: JF-1-2017-01**

The University Bourgogne Franche-Comté (UBFC) is recruiting a tenure eligible investigator in the field of Vision and Artificial Intelligence, specifically in the laboratory Le2i/Vision for Robotics (<http://le2i.cnrs.fr>) located in Le Creusot (France). This position is supported by the French “Investissements d’Avenir” program, project ISITE-BFC.

We encourage applications of outstanding scientists investigating this field of research owning a PhD degree, featuring at least three years of postdoctoral experience; a substantive record of publications and the potential to develop an independent research program.

The successful applicant will be provided a 450 k€ grant (including her/his salary and research budget) for a period of three years. The salary will be negotiated on the basis of education and experience. It integrates a benefit package including retirement, health insurance, annual and sick leave.

UBFC ([www.ubfc.fr](http://www.ubfc.fr)) is a research university federating six organizations. The tenure eligible position will be provided by Université de Bourgogne, member of the UBFC federation, during the tenure probation period. During the same period, the successful candidate will be committed to apply for an European Research Council (ERC) grant.

UBFC and Université de Bourgogne are equal opportunity employers.

**Job description:**

***About the hosting research team***

The candidate will integrate the Vision for Robotics team (VIBOT). This team intends to answer the questions that traditionally arose in mobile robotics, such as 3D reconstruction, localization, mapping, trajectory estimation, object recognition and obstacle detection, scene understanding. The team deals with the new scientific and technical challenges that will emerge from the immersion of robots in complex environments:

- the need to acquire relevant information to improve the perception of the environment thanks to non-conventional, hybrid or multi-modal sensors;

- the need to consider complex dynamic environments by taking into account the moving objects in the observed scene and the intrinsically multi-focal/multi-modal nature of the sensors we used (different kind of moving cameras in a strongly dynamic scene);
- the development of tools and methods for image processing, computer vision and optimization adapted to these problems.

All these developments are directly applied to Industry, Intelligent Vehicle, Agriculture in order to provide an enriched geometric and photometric representation of the environment to serve targeted applications.

### ***Targeted profile***

The Junior Fellowship will focus his/her research activities on the above-mentioned challenges and will reinforce the skills of the VIBOT team on the fundamental and applied aspects of artificial intelligence and computer vision.

He/She will have to master the tools and methods of multi-view vision and/or machine learning and thus demonstrate his/her ability to apply them to one (at least) of the research areas of the VIBOT Team: pattern recognition; image analysis, 3D reconstruction; pose estimation; robot localization; visual servoing; visual tracking; non-conventional vision; scene understanding.... Strong knowledge in the canonical disciplines that shapes our community (signal, image, vision, mathematics) will also be appreciated.

As our research is strongly related to our two international Masters, it could be possible (but not mandatory) to give some lectures in these training programs: VIBOT Masters (Vision & roBOTics, <http://www.vibot.org>) jointly organized with the Universitat de Girona (Spain) and Heriot-Watt University (Scotland), and the MAIA Masters (Medical Imaging and Applications, <http://maiamaster.udg.edu>) jointly organized with the Universitat de Girona (Spain) and the University of Cassino (Italy). The first Master focuses on a course program dedicated to computer vision and its applications in mobile robotics, and the second one on the applications of medical imaging. Both programs aim to foster excellence in many aspects and attract outstanding students worldwide.

### **Instructions to apply:**

Please follow this link [application form International Junior Fellowship](#) to download the application form to be filled and returned by email to [isite@ubfc.fr](mailto:isite@ubfc.fr), before **December 8<sup>th</sup> 2017**.