

## The University of Franche-Comté is hiring:

### Tenure Track Professor Position in Photonics

Keywords: Photonic neural networks / Nonlinear photonics / Ultrafast photonics / Quantum photonics / Artificial intelligence in photonics / Micro-nanophotonics and applications

**Research activities:** The candidate will carry out research within one of the three research groups of the [Optics Department of FEMTO-ST Institute](#).

Advanced photonics technologies provide new functionalities in nonlinear optics, non-conventional imaging, computing hardware and information processing, but also in ultrafast photonic sciences and nanophotonics. The development of new expertise and concepts within FEMTO-ST's photonics roadmap is based on the design of new sources, sensors as well as reconfigurable or even self-adapting systems, including nanophotonic systems and/or systems augmented by machine learning.

The candidate will develop top-level research activities in a theme related to one or several of the following fields: artificial intelligence in photonics, photonic neural networks, nonlinear photonics, ultrafast photonics, quantum technologies in photonics, micro- and nano-photonics or computational imaging. Ideally, the resulting disruptive approaches should be positioned at the crossroads of several fields, including, for instance, artificial intelligence, photonic nanotechnologies, or quantum physics. As an example, a research project could involve the development of innovative, low-power photonic devices or systems with the ability to process space-time signals over a wide spectral range. Research projects will aim at the emergence of applications in key areas such as communication, computing, microscopy, transport, health, environment, industry 5.0 or security with a reduced energy footprint.

A strong commitment to the setting-up, monitoring, implementation and steering of national and international partnership projects (ANR, Horizon Europe, ERC) is expected. Previous success in working on such projects or obtaining comparable grants will be very positively evaluated. Motivation towards an involvement in management responsibilities on the university and institute level will be particularly appreciated.

The University of Franche-Comté has obtained the European HRS4R label. As such, it implements the European human resources strategy for researchers.

**Teaching activities:** This Tenure Track position is associated with both undergraduate and graduate programs that are strongly supported and/or coordinated by the FEMTO-ST Optics Department: Bachelor in Physics/CMI PICS and Master e-Phot of the Graduate School EIPHI. The Master programs are taught in English. These programs aim to develop experimentation-based training to be implemented in the FEMTO-ST Openlab platform. This involves project-based learning through work-immersion in the Optics Department working with CNRS researchers, and in the SMARTLIGHT platform (Equipex+) working with research engineers. Training programs also involve working on projects and internships with the research teams, as well as international exchanges with partner universities in Europe and elsewhere.

**Modalities:** 4 years contract – starting date: September 1st 2024 - Salary ~45k€/year - Teaching load of only 64 h/year during tenure track - 80 k€ starting budget for small equipment / consumables & 36 months PhD funding include. In case of positive evaluation at the end of the tenure track contract (4 years), the position will be converted into a permanent position of Full Professor at University of Franche-Comté.

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For more details about the novel scheme of French Professor Tenure Tracks (Chaire de Professeur Junior):  
[https://www.galaxie.enseignementsup-recherche.gouv.fr/ensup/cand\\_CPI.htm](https://www.galaxie.enseignementsup-recherche.gouv.fr/ensup/cand_CPI.htm)