



PHOTONIC MICROSCOPY ENGINEER AT THE BIOIMAGING AND PATHOLOGIES LABORATORY (LBP)

The Bio-Imaging and Pathologies Laboratory (LBP) is recruiting a 12-month research engineer (IE) who will join the Biophotonics of Molecular and Cellular Interactions (BIMC) team. BIMC sits at the interface of biophysics, biology and chemistry and brings together ~30 scientists dedicated to deciphering biomolecular interactions in solution and in cells. The group predominantly exploits fluorescence-based techniques to investigate proteins, nucleic acids and lipids that play key roles in viral and microbial infections, as well as in epigenetic regulation. The BIMC team has established a state-of-the-art technological environment for biophysical spectroscopy techniques, including cutting-edge microscopy techniques, which are now part of the PIQ-QuEST platform.

The successful candidate will be responsible for implementing Transient-State (TRAST) spectroscopy, a method that records the time-averaged fluorescence intensity under a modulated excitation to monitor the dark-state dynamics of fluorophores. Once validated, the TRAST method will be integrated into the PIQ-QuEST platform (CoRTecS, IBiSA-certified, Alsace node of France BioImaging) and made available to academic and industrial users.

MAIN RESPONSABILITIES

- Instrumental development - Assembly and align a complete laser based set-up (laser sources, AOM, beam delivery optics, and sCMOS camera detector).
- Instrument Validation – Demonstrate performance with a benchmark chromophore that populates dark states (e.g., the photo isomerisation dynamics of the pentamethine cyanine Cy5).
- Data analysis pipeline – Implement, test and document software tools for real time acquisition and quantitative analysis of TRAST data.

REQUIERED KNOWLEDGES

- Hands-on experience with photonic spectroscopy hardware (lasers, modulators, detectors).
- Solid understanding of optical alignment and beam propagation principles.
- Proficiency in at least one programming environment: MATLAB, Python, LabVIEW or Arduino.
- Familiarity with fluorescence microscopy data processing.
- Basic knowledge of (bio)molecular systems and their photophysics.
- English proficiency at B2 level (or higher).



DESIRED SKILLS and PERSONAL QUALITIES

- Precision and rigor in experimental work; strong troubleshooting mindset.
- Ability to write clear user protocols and to contribute to scientific publications.
- Good visual and oral presentation skills.
- Proven team spirit and ability to collaborate effectively within a multidisciplinary group.

WHAT WE OFFER

- A vibrant research environment in a renowned laboratory (LBP, UMR 7021).
- Access to state of the art photonic and imaging equipment.
- Opportunities for co-authorship on publications and integration into international collaborative networks.

APPLICATION

If you are interested in this position, or if you have any questions, please contact either :

Dr. habil. Elisa Bombarda (elisa.bombarda@unistra.fr) –Project coordinator

Dr. Ludovic Richert (ludovic.richert@unistra.fr) – Facility head of PIQ-QuEst.

The application should include the following documents:

1. Curriculum Vitae (including a list of publications, if any).
2. Cover letter describing your relevant experience and motivation for the position.
3. Names and contact details of two academic/professional references.

Deadline for submission: **30.09.2026**

The Laboratory of Bio Imaging and Pathologies is an equal opportunity employer. All qualified applicants will receive consideration without regard to race, gender, disability, or any other protected characteristic.