

Intitulé du poste :

Ingénieur de recherche CDD 12 Mois

12 Months Contract Research Engineer

Mission/Activities :

The unit of technology and services Photonic BioImaging (UtechS PBI directed by S. Shorte and N. Aulner) is an imaging facility dedicated to the study of infectious, systemic and tumoral diseases. The platform activities encompass imaging consulting, user training as well as multidisciplinary and collaborative research and development activities. The facility has a wide range of state-of-the-art microscope systems suited to adapt to most needs of the scientific community within the Institut Pasteur and beyond. They are maintained by a team comprising seven specialist engineers dedicated to user interaction and quality insurance.

The Imaging and Modeling unit directed by C. Zimmer has developed an open-source 3D super resolution technique based on single molecule localization microscopy (SMLM) method that allows exploring fixed samples at high tissue depth enabled by key optical elements located in the detection path. This technique improves conventional resolution by an order of magnitude in all directions and has already produced encouraging results. Financial support from Region Ile de France (program DIM ELICIT) has opened the opportunity to provision access through the UtechS-PBI, requiring the reliability of the system be demonstrated through meticulous characterization and performance assessment in an ISO 9001 environment. As part of this technological implementation the UtechS PBI team are seeking to recruit another research engineer expedite the work program under the supervision of the Instrumentation R&D lead engineer (E.Esposito). The successful candidate will assure the following activities:

- Characterization of the SMLM based super-resolution optical system performance in 3 dimensions (X,Y,Z) depending on specific optical elements introduced.
- Measurement of instrument drift during experimental condition
- Ensure measurement repeatability and instrument reliability in ISO 9001 certified environment.
- Redact an acquisition procedure to be used by PBI users wishing to benefit from such a system

Profile :

We are looking for a highly motivated Master level Biomedical engineer with interest in Optical instrumentation and physical measurement seeking a first experience in an exciting multidisciplinary environment. The successful candidate would show interest in open source technology and a hands-on approach to problem solving.

Skills required:

- Good knowledge of biomedical instrument, in particular microscope systems
- Rigorous in instrumental measurement taking and result presentation
- Good oral and written skills
- Fluent written and spoken English essential; basic French highly desirable

