



RECRUITMENT OF AN ENGINEER IN IMAGE ANALYSIS

Host laboratory

Institut Pasteur & CNRS UMR3738

Dept. of Developmental and Stem Cell Biology, Dir. Laure Bally-Cuif

Paris, France

<https://research.pasteur.fr/en/departement/developmental-stem-cell-biology/>

Description of the available position

Title: Research Engineer in biological data analysis

Specifics: Engineer in image analysis

Employer: The position is funded by the CNRS (Research Engineer, IR)

Mission

The engineer in image analysis will develop pipelines to process and analyze digital images obtained using photonic microscopy by the different research teams of the Department. He/she will participate in the quantitative analysis of these images, within the frame of scientific projects conducted by these research teams in the fields of developmental and stem cell biology.

Activities

Main activities:

- Process and analyze digital data (fluorescence microscopy images) through the development of scripts of automated analysis pipelines (segmentation and tracking of 3D and 4D objects)
- Perform the statistical analysis of the results in collaboration with the students/scientists of the research team
- Provide advice to the students/scientists of the Department
- Train the students/scientists of the Department to the principles and use of data analysis methods
- Communicate results as technical notes, publications and/or oral presentations (within the research teams or the Department)

Additional activities:

- Contribute to the network and counseling activities of the Image Analysis Hub of Institut Pasteur (participation in the weekly "open desks" open to the whole campus)

Expertise and competence needed

Technical:

- required: established proficiency in MATLAB / Python, Java and / or R programming
- required: established proficiency in statistics
- preferred: expertise in machine/deep learning

- preferred: expertise in image analysis with ImageJ / Fiji / Icy
- preferred: expertise in photonic microscopy (methods of data acquisition)
- required: basic knowledge in biology

General:

- knowledge of deontology, ethics and regulations in the relevant research field
- excellent command of the English language (min level B2 on European official scale)
- capacity to work collectively
- capacity to communicate his/her knowledge and expertise

Context

The Department of Developmental and Stem Cell Biology / CNRS UMR3738 is located on the Institut Pasteur campus, 25-28 rue du Docteur Roux, Paris (75015). This Department, and more generally Institut Pasteur, is offering an exceptional, dynamic and international working environment. The Department comprises around 150 scientists/students/engineers/technicians organized in 14 research teams, and is pursuing state-of-the-art research on stem cell biology, regenerative medicine and fundamental mechanisms of embryonic development, as described at: <https://research.pasteur.fr/en/department/developmental-stem-cell-biology/>

One strategic research axis of the Department is the development of quantitative approaches in developmental biology, and a number of projects already rely on the automated analysis of x,y,z,t,c photonic images acquired on departmental microscopes (laser-scanning confocal, spinning-disk, biphoton and light-sheet microscopes).

The engineer will work in direct interaction with the students/scientists on a restricted number of ambitious projects. He/she will be administratively affiliated with the team of F. Schweisguth (<https://research.pasteur.fr/en/team/drosophila-developmental-genetics/>) (8 persons, 1 administrative assistant), and will work on projects of this and other teams (L. Bally-Cuif, T. Gregor, J. Gros, R. Levayer...). He/she will also work in close interaction with the Image Analysis Hub of Institut Pasteur (<https://research.pasteur.fr/en/team/image-analysis-hub/>).

How to apply

The official announcement will be published on May 31st, 2021, by the CNRS. Applications will be expected between June 1st and 30th, 2021.