

OPEN POSITION Research Engineer (Ingénieur de Recherche)

All-optical investigation of brain circuits with optogenetics and wave front shaping

The Wavefront engineering microscopy group at the Vision Institute in Paris (<http://www.institut-vision.org/fr/wavefront-engineering-microscopy.html>) has an open position for a 2 years research engineer

In the past years, the *Wave front engineering microscopy* group has pioneered the use of wave front shaping approaches (computer generated holography, generalized phase contrast, temporal focusing) to deliver patterned light into brain tissue thus enabling simultaneous activation of multiple neurons and independently controlling the strength and timing of light targeted to each cell. Today, the group disposes of several state of the art in vitro and in vivo optical microscopes which use wave front shaping for *in vitro* and *in vivo* two-photon imaging and photostimulation. Recently, the group has started to set up a common facility for 2P-optogenetics in collaboration with the company 3i and of a new microscope combining conventional 2P imaging with endoscopy.

These system are currently used in a large number of collaborative projects for the investigation of neuronal circuits in optically and physiologically different models including mice retina, mammalian cortex and brainstem respiratory circuits, Zebra fish and Drosophila larvae.

Job profile

The candidate will be in charge of

- setting-up of the new microscopes and of the maintenance of the existing ones;
- coordinate and perform experiments with different collaborators;
- manage the platform (planning of access to the platform; adaptation of the microscope to users' needs);
- support and follow-up of technology transfer to academic partners.

Requirements:

We are seeking a motivated candidate with a PhD in Physics, with a demonstrated experience in imaging and optical microscopy willing to join an interdisciplinary environment involving strong interactions between biologists and physicists. Transversal know-how: presentation of data at international conferences, knowledge of the English language; ability to synthesize and write scientific documents.

Contract duration:

2-years, renewable. Earlier starting date is January 1st, 2021.

Salary

Depending on candidate experience

How to apply

Application must be sent to: valentina.emiliani@inserm.fr

Please include the following information:

- CV
- Brief summary of previous activity
- Contact information of two referees