INSTITUT DE LA VISION
PARIS

Research-Engineer Position

Advanced optical methods for multi-scale optical probing and manipulation of visual circuits

A two-years (renewable) research-engineer position funded by the French National Research Agency (ANR) is opened at the *Wavefront engineering microscopy* group (Photonics Department, The Vision Institute). The project involves the implementation (hardware design and software development) of a new microscope with multiple modalities, including multiphoton imaging and 3D holographic light patterning for optogenetics stimulation. The microscope will be used for multi-scale optical probing and manipulation of visual circuits in conjunction with the neurophysiologists of the group and in collaborative projects with the other teams of the Vision Institute.

The *Wavefront engineering microscopy* group, is an interdisciplinary group which comprises outstanding young and dynamic researchers with complementary background ranging from non-linear optics, wavefront engineering, optical microscopy and neurophysiology. It also covers expertise in complementary experimental approaches comprising cutting edge optical microscopy and electrophysiological recordings. The team has pioneered the use of wavefront engineering for neuroscience. In particular, we have demonstrated a number of new techniques for efficient photoactivation of caged compounds and optogenetics molecules, techniques based on computer generated holography, generalized phase contrast and temporal focusing.

The group currently at Paris Descartes University, will join the Vision Institute in April 2018.

The candidate should have good experience in designing and building complex optical systems, particularly for microscopy.

Interested applicants should send their CV, cover letter and references to

Valentina Emiliani valentina.emiliani@parisdescartes.fr
and Eirini Papagiakoumou eirini.papagiakoumou@parisdescartes.fr .