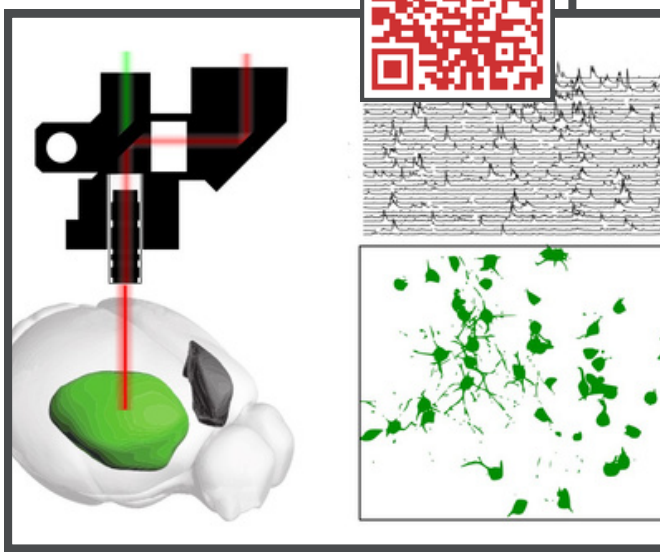
Latest advances in imaging neural activity in freely moving animals

Inserm Workshop 284

Brice BATHELLIER (Institut de l'Audition, Paris), **Nicolas GERVASI** (CIRB, Paris) & **Cathie VENTALON** (IBENS, Paris)

The workshop will review methodological and technological advances, including miniaturized microscopes, data analysis, and computational neuroscience, balancing theoretical and technical aspects of neural activity imaging in freely moving animals.

Deadline : **June 27, 2025**



PHASE I THEORETICAL

October 7-9, 2025

Montpellier

FIBER PHOTOMETRY & BIOSENSEURS INGINEERING
François ST-PIERRE (Baylor College, USA), Thomas AKAM (University of Oxford, GBR) & Anna BEYELER (Neurocentre Magendie, FRA)

BRAIN IMAGING USING SINGLE PHOTON EXCITATION
Daniel AHARONI (UCLA, USA), Cathie VENTALON (ENS, FRA) & Ana João RODRIGUES (Life and Health Sciences Research Institute, PRT)

BRAIN IMAGING USING MULTIPHOTON EXCITATION
Weijian ZONG (Kavli Institut, NOR), Jason KERR (Max Planck Institute, DEU) & Nicolò ACCANTO (Institute for Bioengineering of Catalonia, ESP)

PRE-PROCESSING AND ANALYSIS OF IMAGING DATA
Arthur PELLEGRINO (University College London, GBR), Demian BATTAGLIA (University of Strasbourg, FRA) & Kenneth HARRIS (University College London, GBR)

PHASE II PRACTICAL

3 days in November 2025

Paris

The practical phase will be divided into three independent workshops focused on data acquisition, conducted over two days:

1. **Fiber photometry**
2. **One-photon imaging**
3. **Multiphoton imaging in behaving animals**

Following these two days, all participants will come together for a joint session dedicated to data preprocessing (filtering, motion correction, registration, etc.) and analysis.

SELECTION: 4 trainees will be selected for each technical among Phase I participants.

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Insermateliers