



Timothé JOST-MOUSSEAU

Né le 19/05/93
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CURRICULUM VITAE

Research Experience

OCT 2018 – 2022 > **PHD** > *NEUROPSI – DIR. ISABELLE FÉRÉZOU & DANIEL SHULZ – SACLAY*

- ▶ Study of the cortical dynamics involved in sensory prediction in freely moving mice.
- ▶ Development of electronic and mechanical devices for coupling fluorescence imaging and animal behaviour.
- ▶ Design and implementation of a framework for data acquisition, management, and control of experimental sessions
- ▶ Software development and analysis for large behavioural and neurophysiological imaging data sets.

2021 > **PATENT DEPOSIT** > *CNRS INNOVATION (PATENT N°2103848)*

« Dispositif et procédé d'imagerie de cibles mobiles »

- ▶ Construction of a functional prototype of an optical device for the coupling of fibre imaging experiments and free behaviour.

2022 > **ARTICLE PRE- SOUMISSION** > *ARTICLE DE METHODOLOGIE – REVUE NEUROIMAGE*

« Imaging the brain in action: a motorized optical rotary joint for wide field fibroscopy in freely moving animals »

- ▶ Quantification of the device's contribution to helping behaviour and locomotion, measurement of optical performance during imaging.

JULY 2020 & JULY 2022 > **FENS FORUM** > *SCIENTIFIC POSTER PRESENTATION*

JANUARY - JUNE 2018 > **M2 INTERNSHIP** > *CLEMENT LENA'S TEAM – ENS – PARIS*

- ▶ Study of a cortico-cerebello-thalamo-cortical loop involved in vibrotactile texture discrimination in mice model.
- ▶ Design of the experimental set up. Use of chemo-genetics (DREADDs). Video analysis done with MATLAB.

AVRIL - JUIN 2017 > **M1 INTERNSHIP** > *DANIEL SHULZ'S TEAM – NEUROPSI – GIF SUR YVETTE*

- ▶ Manufacture of 10 tetrode implants with individual "micro drives". Chronic electrophysiology. High frequency imaging of the whiskers.

Formations

2022 > Multiscale optical technologies for deep and large volume brain imaging > (1/2 a day) *FENS FORUM*

2021 > Introduction to computer numerical control of machine tools > (1 week) *AFORP, Tremblay-en-France*

2020 > Laser cutting machines initiation > (1/2 a day) *FABLAB DIGISCOPE, Saclay*

2019 > Design of scientific experiments, welfare monitoring and surgical interventions in the mouse model

> (1 week) *CNRS, Paris* + (1 week) *CNRS, Marseille*

2018 > Research integrity in scientific professions > (2 days) *MOOC, Bordeaux University*

Parcours académique

2016 – 2018 > **MASTER IN INTEGRATIVE BIOLOGY AND PHYSIOLOGY** > *SORBONNE UNIVERSITY*

- ▶ Overview of the main techniques for reading neuronal activity. Introduction to systems neuroscience.

UEs: 4B006, 5BN04, 5BN05

2012 – 2016 > **LICENCE IN LIFE SCIENCES** > *UNIVERSITÉ PIERRE ET MARIE CURIE*

- ▶ Training in programming, analysis, and modelling of biological phenomena. Languages: Python, MATLAB, C.

UEs: LV229 – LV231 – 3V686 – 4B030

Savoirs et compétences

EXPERIMENTATION >

- Image and signal analysis and processing
- Epifluorescence imaging & electrophysiology in vivo
- Chemo-genetics (DREADDs)
- Operant conditioning rodents

PROGRAMMATION >

- Advanced*
 - Python
 - MATLAB
 - C/C++
 - MySQL
 - Git & GitHub
- Bases*
 - LabVIEW
 - R
 - HTML / CSS / JS

COMPÉTENCES TECHNIQUES >

- Domain*
 - 3D modelling
 - Technical drawings & mechanical parts CAM
 - Design, prototyping & CAM of PCBs
 - Use & maintenance of 3D printers (FDM SLA)
- Software*
 - SolidWorks, Blender
 - SolidWorks CAM, Python (custom ISO code prod.)
 - Eagle, KiCad (Gerber format output)
 - Cura, Simplify3D, PreForm

LANGUES >

- French*
 - Native language
- English*
 - 2015 - CLES B2 (Sorbonne University)