
Timothé JOST-MOUSSEAU

Né le 19/05/93
France

Adresse : 9 rue Archangé
Orsay 91400
Téléphone : 06 24 95 11 27
Mail : timothe.jost-mousseau@cnrs.fr
Site internet : https://josttim.github.io/JostTim/


# 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 PRESENENTATION***

**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)