Felipe **Cybis Pereira**

BSc in Brazil - MSc in France - PhD candidate

(+33) 6 02 17 62 62 felipe.cybispereira@gmail.com felipecybis.github.io

Research Experience

Physics for Medicine Paris, Inserm, ESPCI Paris, PSL, CNRS — Paris, France

PhD candidate — September 2021- Present

Research Intern — February 2021- July 2021

- Adviser: Sophie Pezet, PI, and Mickaël Tanter, PI.
- Focus: Spatial navigation in rats using functional ultrasound imaging.
- Techniques: **Functional Ultrasound imaging - Spatial navigation - Rodent's brain imaging - Animal behavior and cognition - Python - 3D design conception (CAD) - Ultrafast Ultrasound**

Harvard University, Rogulja Lab at Harvard Medical School — Boston, USA

Research Intern — May 2019- August 2019

- Adviser: Alexandra Vaccaro, PhD, and Dragana Rogulja, PI.
- Focus: Insights in sleep deprivation in *Drosophila melanogaster*.
- Techniques: ***Drosophila melanogaster* rearing - Immunostaining - Confocal microscopy - Ethological analysis - Survival and Dietary assays - Drosophila Activity Monitoring (DAM) system**

ICONEUS, Real-time portable functional ultrasound small animal neuroimaging — Paris, France

R&D Intern — July 2018- December 2018

- Adviser: Bruno Osmanski, PhD, and Mickaël Tanter, PI.
- Focus: : Code optimization for transcranial multiplane wave ultrasound imaging.
- Techniques: **Plane wave and Multiplane wave ultrasound imaging - Power Doppler imaging - Brain connectivity - MATLAB - Small animal brain imaging**

Teaching experience

ESPCI Paris - PSL University — Paris, France

Teacher assistant in the Physiology practical work for the 2nd year students — 2022-2023 and 2023-2024

Professor: Thierry Gallopin, PhD.

- Neuroscience-focused practical work: **(1) human EEG (2) pose-estimation and animal tracking (3) human sleep**.

NeuroPSI - Paris-Saclay Institute of Neuroscience — Saclay, France

Teacher assistant in the Masters 2 for Computational Neurosciences and Neuroengineering — 2023 and 2024

Couse unit: Methods for measuring and actuating neuronal activity.

Professor: Isabelle Ferezou, PhD.

- Principles on Ultrafast Ultrasound, functional Ultrasound imaging and Ultrasound Localization Microscopy.

Education background

BioMedical Engineering Master — Paris, France

Master's Degree in Bioengineering and Neurosciences — September 2020- August 2021

- Scholarship student for the PSL Graduate Program in Life Sciences.

ESPCI Paris - PSL University — Paris, France

Master's Degree in Engineering focused in Biotechnology — September 2016- August 2019

- *Michelin Excellency* scholarship student in a double degree program with UFSC University in Brazil.

Universidade Federal de Santa Catarina (UFSC) — Florianópolis, Brazil

Bachelor's Degree in Chemical Engineering — March 2014- March 2020

Skills

Programming

- **Scientific Python**: Neuroimaging (Nipy suite, BrainGlobe), Machine learning (scikit-learn), Visualization (VTK, PyVista).
- **General Python Packaging**: Documentation and examples, unit testing, linting and formatting, pre-commit hooks.
- **Version control**: Intermediate to advanced usage of Git and GitHub as VCS.
- **Prototyping**: Intermediate knowledge in **Arduino** and **Raspberry Pi**.
- Intermediate knowledge on text editing softwares such as LaTeX and **Typst**.
- Rudimentary knowledge on **shell scripting**, **JavaScript**, **Rust** and **Lua**.

Spoken languages: **Portuguese (Native), English, French**, Spanish

Hobbies

I like playing **Tennis** (I played a lot while kid/teen), programming and tweaking my own dotfiles.