

# Felipe Cybis Pereira

BSC IN BRAZIL - MSC IN FRANCE

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## Experience 🧪

### Physics for Medicine Paris, Inserm, ESPCI Paris, PSL, CNRS

Paris, France

PHD CANDIDATE  
RESEARCH INTERN

September 2021 - Present  
February 2021 - July 2021

- Adviser: Mickaël Tanter, PI, and Sophie Pezet, PhD.
- 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**

## 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.
- Courses bridging the interface of engineering and neurosciences ranging from Neurophysiology and Drug Design to Sensory and Motor supplementation to Deep learning and Neuroimaging.
- Final rank 4/23 - Grade A (mention Bien).

### 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.
- Final year covering the bioengineering interface with Medical Imaging, Synthetic Biology, Biophysics and Big Data courses.
- Final year rank 27/94 - Grade A+ (mention Très Bien).

### Universidade Federal de Santa Catarina (UFSC)

Florianópolis, Brazil

BACHELOR'S DEGREE IN CHEMICAL ENGINEERING

March 2014 - March 2020

- Initiated a double degree agreement with the French *Grande Ecole* ESPCI Paris.
- Grade 9.15/10.

## Skills 🌐

### Programming

- **Scientific Python**: Neuroimaging packages (Nipy suite, BrainGlobe), Machine learning packages (scikit-learn).
- **General Python**: Sphinx 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** prototyping.
- Intermediate knowledge on text editing softwares such as **LaTeX** and **Typst**.
- Rudimentary knowledge on **shell scripting**, **JavaScript** and **Rust**.

**Spoken Languages** Portuguese (Native), English, French, Spanish

## Extracurricular activities 👤

- Volunteer math teacher in community project involving university preparation courses, 2019.
- **International Students Representative** at ESPCI Student's Union (Bureau des Élèves), 2017-2018.
- **Marketing Director** of the Chemical Engineering Athletics Academic Association (ATEQA), 2015.
- Played **tennis** for almost 10 years while a kid/teen in the biggest international junior championships (Prince Cup, Orange Bowl, Banana Bowl, COSAT circuit).