

# Chloé Gomez

Postdoctoral researcher in Machine Learning applied to Neuroimaging



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## About me

Postdoctoral researcher in machine learning and neuroimaging with expertise in computational psychiatry, functional brain connectivity, and representation learning. Interested in developing robust, clinically relevant AI methods for mental health applications.

## Expertise

Analysis of high dimensional data  
Machine Learning  
Neuroimaging  
Scientific writing

## Languages

**French** native  
**English** proficient  
**Spanish** proficient

## Technical skills

### Programming

Python SQL

### AI & Data Science

PyTorch Scikit-learn

### Neuroimaging

Nilearn fMRI / sMRI

### Tools

Git/GitHub L<sup>A</sup>T<sub>E</sub>X Linux

GIMP

## Hobbies

### CLIMBING

(ROPE CLIMBING & BOULDERING)

### SWING DANCES

(LINDY HOP, BLUES, WCS)

## PROFESSIONAL EXPERIENCE

2024 – today

### Postdoctoral researcher

NEUROIMAGING & BRAIN NETWORKS LAB · University of Seville 📍

Identify neurobiological signatures distinguishing healthy controls from schizophrenia spectrum disorders (SSD) patients using structural MRI · Developed unsupervised machine learning pipelines for subgroup discovery in SSD using multimodal datasets.



2020 – 2024

### Ph.D. student

UNICOG TEAM · Université Paris-Saclay, Neurospin, CEA Saclay 📍

DeepStim Project. Modeling states of consciousness and their modulation by electrical Deep Brain Stimulation: from experimental data to computational models. - Tools : fMRI · functional connectivity · variational auto-encoders



2021 – 2022

### Tutorials teacher (97h)

INFORMATION TECHNOLOGY DEPARTMENT · IUT d'Orsay, Université Paris-Saclay 📍

Introduction to databases and SQL



2019 – 2020

### Research Engineer (10 month internship)

CENTRO INTERDISCIPLINARIO DE NEUROCIENCIA DE VALPARAÍSO (CINV) · Valparaíso (Chile) 📍

Project: Computationally emulate the responses of different types of retinal neurons to a temporal, spatially invariant stimulus.



## EDUCATION

2016 – 2019

### Engineering school

TÉLÉCOM PHYSIQUE STRASBOURG · Illkirch (France) 📍

Major : Information Technology for Health



2014 – 2016

### Classe préparatoire aux grandes écoles (CPGE)

HIGH-SCHOOL RENÉ CASSIN · Bayonne (France) 📍

Section : Physics-Chemistry



## MISCELLANEOUS EXPERIENCE

2026

Co-organized the conference *Nosotras Investigamos* to highlight gender-related challenges in academic careers

2022 / 2023

Co-supervised MSc students internship on neuroimaging data analysis

## TALKS

Apr. 2023

"Exploration of the Neural Correlates of Consciousness Using Linear Latent Model", at: *2023 IEEE 20th International Symposium on Biomedical Imaging (ISBI)* in Cartagena, Colombia.

## SELECTED PUBLICATIONS

### Journals

2024

C. Gomez, et al., *Deep learning models reveal the link between dynamic brain connectivity patterns and states of consciousness*, Sci. Rep., vol. 14, no 1, p. 31606, déc. 2024, doi: 10.1038/s41598-024-76695-1.

2024

A. Grigis, C. Gomez et al., *Revisiting the standard for modeling functional brain network activity: application to consciousness*, PLOS ONE, vol. 19, no 12, p. e0314598, déc. 2024, doi: 10.1371/journal.pone.0314598.

### Conference Proceedings

2023

C. Gomez, et al., *IEEE 20th International Symposium on Biomedical Imaging - ISBI 2023*

2022

C. Gomez, et al., *Medical Image Computing and Computer Assisted Intervention – MICCAI 2022*

2022

A. Grigis, C. Gomez, et al., *Medical Image Computing and Computer Assisted Intervention – MICCAI 2022*