CAREER PROSPECTS

- **R&D in Neuroengineering and Computational Neuroscience**
- **Design and development of applications in neuromorphic computing, brain-machine interface, neuro-robotics, neuro-inspired learning and artificial intelligence**
- **Design and development of visual, auditory and sensorimotor prostheses**
- **Development of cognitive and functional stimulation tools**
- **Tools for modeling, analyzing and processing neural signals**

Université Paris-Saclay

- Cutting-edge scientific and technological education
- Pure and applied research of international scope and reputation

Saclay site

- A scientific and technological cluster (Neuro-PSI, Neurospin, CEA, INRIA...)
- R&D centres of major industrial groups
- An environment favourable to innovative start-ups

CONTACTS

U.F.R. Sciences
91405 ORSAY Cedex- France

Master program coordinator
Pr. Sabir Jacquir
sabir.jacquir@u-psud.fr

TEACHING AND RESEARCH TEAM

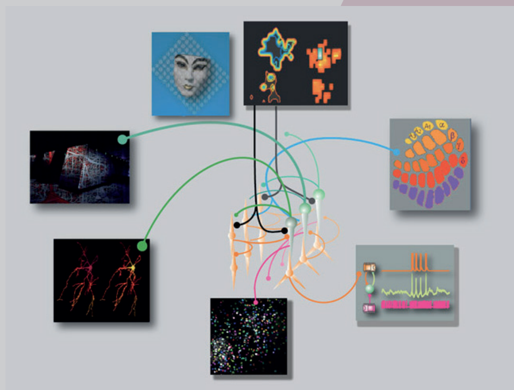
Université Paris-Saclay
Ecole CentraleSupelec
CNRS
INSERM
INRIA

Check the training offer of UP-Saclay
www.universite-paris-saclay.fr

universite PARIS-SACLAY

FACULTÉ DES SCIENCES D'ORSAY

MASTER COMPUTATIONAL NEUROSCIENCE & NEUROENGINEERING



www.universite-paris-saclay.fr

université PARIS-SACLAY

GRADUATE SCHOOL
Life Sciences & Health

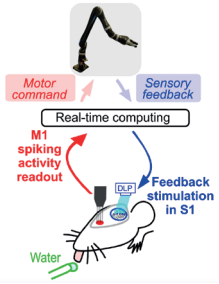
Master Biologie-Santé /
Life Sciences and Health

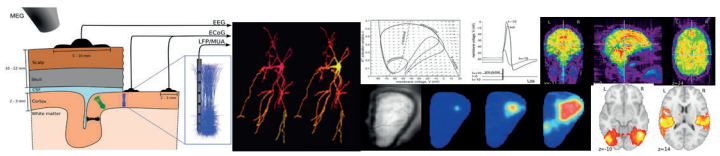
Graduate program in Neurosciences

MASTER COMPUTATIONAL NEUROSCIENCE & NEUROENGINEERING (CNN)

GOALS OF DIPLOMA

- To train experts in computational neuroscience and neuroengineering.
- To address the problems of perception, processing and transmission of information by the brain through experimental, computational and theoretical approaches.
- To acquire advanced skills in order to develop experimental and simulation skills, technological and computational tools in the following areas:
  - Cognitive and functional stimulation
  - Brain-machine interface
  - Neuromorphic computing
  - Neuro-robotics
  - Visual, auditory, sensory-motor perception
  - Modeling and processing of neural signals
  - Modeling and analysis of neural networks
  - Functional Brain Imaging
  - Neuro-inspired learning

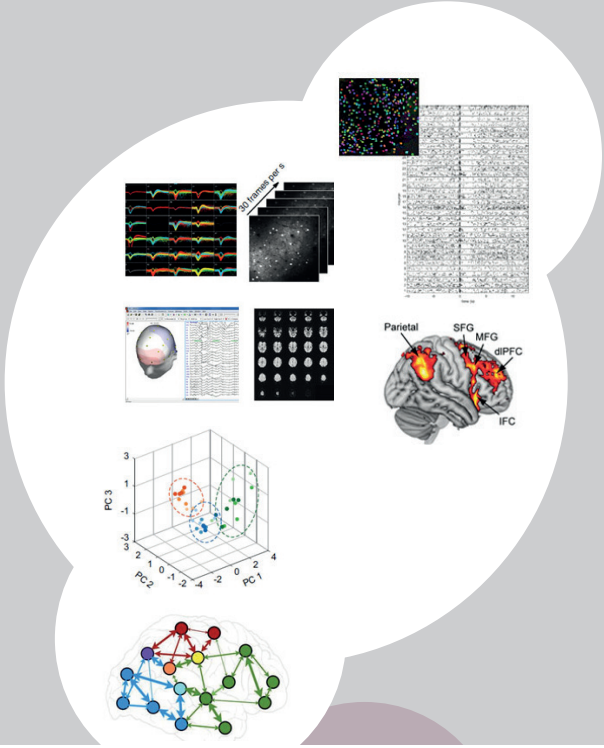




INTAKE PROCESS

- Candidates with a sound academic record and a strong motivation for the Master CNN
- Application platform (March to July)

https://inception.universite-paris-saclay.fr/en/



ACADEMIC PROGRAM

A FIELD AT THE INTERFACE BETWEEN BIOLOGY, NEUROSCIENCE, PHYSICS, MATHEMATICS, COMPUTER SCIENCE, ENGINEERING SCIENCES.

A field of excellence, with high visibility in France and in the world.

- Physiological bases of Neuroscience
- Neural bases of perception
- Dynamical Systems and Computational Neuroscience
- Closed-loop neuroscience
- Experimental Methods for simulating and measuring neuronal activity
- Machine learning
- Research project supervised by experts in the field
- Network of international collaborators for the Master thesis

ORGANISATION

Program entirely taught in English

- **Teaching units** : october to january
- **Master thesis project** : february to august
- **Master thesis defense** : july or september