

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

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91405 ORSAY Cedex- France

Master program coordinator

Pr. Sabir Jacquir
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TEACHING AND RESEARCH TEAM

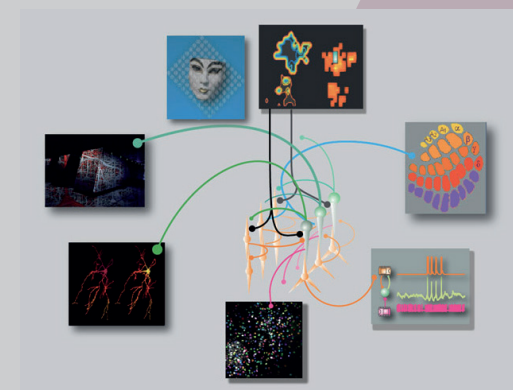
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FACULTÉ
DES SCIENCES
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MASTER COMPUTATIONAL NEUROSCIENCE & NEUROENGINEERING



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

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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

