Data scientist position

If you are a data scientist, programmer, or engineer, with a keen interest in helping to understand the brain, consider joining our team Neuronal Circuits & Brain Dynamics at the Paris Brain Institute (ICM).

We study the principles of neuronal circuit organization and brain dynamics. Our work focuses on unraveling the fascinating mysteries of how the brain generates internal states and how neuromodulators, such as dopamine and serotonin, influence neuronal activity and communication between brain regions during behavior.

To achieve our goals, we perform large-scale recordings from thousands of neurons simultaneously using multimodal recordings, including electrophysiological or optical imaging approaches. We employ state-of-the-art techniques, including behavioral, optogenetic, imaging, electrophysiological, and genetic approaches in mice to record and manipulate the brain activity during behavior.

Using this unprecedented data, we will be able to understand information flow in the brain in ways that would be unimaginable only a few years ago. However, the scale and complexity of this data provide major challenges and unique opportunities.

We are looking for computationally-orientated researchers to join our team as temporary or permanent staff members, to help us develop methods to interact and analyze our multi-dimensional neurophysiological and behavioral data, and to develop innovative analysis approaches and efficient processing pipelines, to accelerate the progress of our research on our path to understanding the brain.

As a data analyst in our group, you will interact closely with experimentalists and contribute crucially to the research.

Our team values diversity and welcomes researchers from all backgrounds and profiles. If your profile aligns with our research needs, we encourage you to get in touch with us.

Profile

- Outstanding analytical and quantitative skills
- Interest in neuronal dynamics and computation, behavior, and neural circuits
- Ability to analyze multi-dimensional and multi-modal data
- PhD or MSc in neuroscience, data science, computer science, applied mathematics, physics, or equivalent combination of degree and experience
- Experience with computational statistics, data modeling and analysis, signal processing, and modern machine-learning methods
- Solid programming skills and ability to write high-quality, reusable code in Python or Matlab
- Experience with software development (e.g., version control, unit testing, databases) is preferable

Main responsibilities

- Organize data management pipeline
- Analyze neurophysiological and behavioral data
- Develop analysis methods and software tools to facilitate the analysis of multi-modal and multi-dimensional neurophysiological data
- Implement cutting-edge data science approaches (statistical, computational, and ML) for complex neuroscience problems
- Create robust and efficient data pipelines to extract, transform, and visualize data
- Develop, test, and implement scientific software (e.g., for reproducible analysis pipelines and data storage)
- Interact with experimentalists to design experiments and implement analyses
- Analyze current technologies, algorithms, models, and methods
- As part of your role, you will have the opportunity to collaborate with other teams, attend trainings, mentor students, have independent projects, and present at major relevant conferences (Cosyne, NeurIPS).

We offer competitive compensation and benefits within an interactive, interdisciplinary working environment, where cutting-edge science thrives and a dynamic, international research community awaits.

If you would like to know more, visit our website: neuronaldynamics.eu and read about our team's mission and values.

Why join our team

- We are a young and vibrant group of scientists, fueled by curiosity and passion for understanding the brain. We work as a team and use or invent cutting-edge neurotechnologies to answer fundamental questions in neuroscience.
- Our team is committed to the training, mentorship, and career development of the next generation of neuroscientists. To achieve that, we foster an inclusive and supportive environment, where we can learn and advance science while having fun in the process.
- Our work is multi-disciplinary, and so is our team. Irrespective of your background and project, our research environment will expose you to a diverse range of experimental and computational aspects of systems and circuits neuroscience. We thus encourage everyone to apply, especially those from underrepresented minorities.
- Working in our team will provide you with invaluable experience across all stages of research, as well as publishing and communicating research results.
- Our team is affiliated with Inserm and is located in the Paris Brain Institute (ICM).
- Our vibrant community at the ICM and throughout Paris promotes broad collaboration and learning opportunities.

How to apply

If you are eager to join our vibrant research community and contribute to groundbreaking discoveries, we warmly welcome your application. The position is available immediately, with the potential for a permanent contract based on performance.

Please send a statement of your past work and future research interests, your CV, and contact information for 1-3 references to the address: contact@neuronaldynamics.eu