
Computational Postdoctoral Fellow in Predictive Pursuit

Joint position with Jonathan Whitlock at NTNU and Alex Cayco-Gajic at ENS Paris

September 19, 2026

About the position

We are seeking an enthusiastic and highly motivated Postdoctoral Fellow with a quantitative PhD and a background in machine learning, dynamical systems, physics, engineering or related fields for a project investigating the computational principles of predictive pursuit in freely moving rodents. This project is an interdisciplinary collaboration between the labs of Jonathan Whitlock at the Kavli Institute for Systems Neuroscience (NTNU, Trondheim, Norway) and Alex Cayco-Gajic at the Group for Neural Theory at École Normale Supérieure (ENS-PSL, Paris, France). The candidate will be physically based in Trondheim, with extensive opportunities for research visits to Paris.

The position is financed by the Research Council of Norway's Centre of Excellence scheme. Your immediate leader will be Professor Jonathan Whitlock, with continual co-supervision by Alex Cayco-Gajic.

Starting date: Spring 2027

The position is full-time for 4 years.

Read more about the labs at <https://www.whitlocklab.org> and <https://caycogajiclab.github.io/>.

About the project

The project aims to uncover how the brain anticipates and reacts to dynamically fleeing agents, and how internal models are sustained when sensory evidence or expectations fail. We will use the head and body of freely moving rodents as physical readouts of internal planning and confidence, combining high-resolution motion capture with high-density Neuropixels recordings across a range of behavioral conditions in a novel, closed-loop pursuit task. Related work in the lab will investigate geometric decision-making during pursuit.

The successful candidate will lead the data-driven modeling effort, developing state-of-the-art statistical models that combine machine learning and dynamical systems to infer changes in strategy from high-dimensional behavioral data. They will analyze large-scale behavioral and neural datasets to investigate the computational principles underlying predictive pursuit.

The project is highly collaborative. Modeling will be developed in partnership with the lab of Alex Cayco-Gajic in Paris, while the candidate works closely with behavioral neurophysiologists at the Kavli Institute in Trondheim. The position offers an opportunity to connect quantitative models of behavior with neural population activity at the intersection of computation, naturalistic pursuit and systems neuroscience.

Duties of the position

- Develop machine-learning and dynamical-systems approaches for analyzing high-dimensional behavioral data.
- Model postural, movement and performance dynamics to identify behavioral states and pursuit strategies.
- Analyze large-scale behavioral and neural datasets in close collaboration with experimental researchers.
- Carry out high-quality, independent research within the project framework.
- Publish findings in high-impact academic journals and present at international conferences.
- Participate actively in collaborations and in the intellectual life of the research groups and institutes.
- Contribute to the supervision of PhD or Master's students.

Required selection criteria

- A PhD in a quantitative field, such as physics, computational neuroscience, computer science, engineering or a related discipline.
- Strong expertise in machine learning, dynamical systems, computational modeling or quantitative analysis.
- Demonstrated experience analyzing large, high-dimensional datasets, preferably including behavioral, video or neurophysiological data.
- Documented experience with scientific programming, for example Python, MATLAB or related languages.
- A strong academic record and documented research productivity, for example publications, preprints or conference proceedings.
- Excellent oral and written communication skills in English.
- Ability to work both independently and collaboratively in an interdisciplinary research environment.

For detailed information about what the application must contain, see "About the application" below.

If you do not already have educational competence that meets the requirements for a position as associate professor in Norway, NTNU will arrange for you to acquire such competence during the employment period. In such cases, you will also be assigned relevant teaching as part of the career-promoting work.

The appointment will be made in accordance with NTNU's applicable guidelines and regulations for recruitment positions.

Preferred selection criteria

- Experience with statistical models of time series, latent behavioral states or dynamical systems.
- Experience analyzing high-dimensional movement, pose-tracking, video or neural population data.
- Experience or interest in data visualization.
- Passion for using quantitative approaches to understand animal behavior or decision-making.
- Experience developing reproducible analysis workflows and collaborating with experimental researchers.

Personal characteristics

In evaluating the best-qualified candidate, we will emphasize personal suitability, motivation for the position and research potential. We are looking for a candidate with:

- Strong personal initiative, self-motivation and work ethic.
- The ability to work independently and collaboratively within a dynamic, interdisciplinary team across Trondheim and Paris.
- A solution-oriented mindset, positive attitude and strong problem-solving skills.
- Flexibility and openness to adjusting project plans as the research evolves.

We offer

- An exciting and stimulating research project in an international academic environment at the Kavli Institute for Systems Neuroscience.
- Close collaboration with the Group for Neural Theory at ENS-PSL, with extensive opportunities for research visits to Paris.
- Access to high-resolution behavioral data, next-generation Neuropixels recordings and state-of-the-art research infrastructure.
- An open, supportive and inclusive work environment with dedicated colleagues.
- Favorable terms in the Norwegian Public Service Pension Fund.
- Employee benefits and access to NTNU's career guidance and mentorship programs.

Diversity

Diversity is a strength, and at NTNU we aim to be an employer that reflects the diversity in society and makes use of the potential of the population's collective skills. Our vision is Knowledge for a better world, and our values are creative, critical, constructive and respectful. We believe that an organization that is equal, diverse and gender-balanced is essential for us to achieve our goals. We strive to attract employees with different skills, life experiences and perspectives to contribute to better problem solving in our societal mission in research and education.

If you think this position is relevant and interesting, we encourage you to apply, regardless of gender, functional ability and cultural background, or whether you have been out of work for a period of time.

At NTNU we want to increase the proportion of women in scientific positions. We have a number of measures to promote equality.

Salary and conditions

As of spring 2026: a Postdoctoral Fellow (code 1352) is normally paid from gross NOK 604,900 per annum before tax, depending on qualifications and seniority. From the salary, 2% is deducted as a contribution to the Norwegian Public Service Pension Fund.

The period of employment is 4 years. The position and potential extension are conditional on external funding.

As an employee at NTNU, it is important to keep yourself up to date with academic and organizational changes and to adapt to them.

The position is based in Trondheim. For the necessary professional and social interaction, you are expected to be physically present and available to the institution on a daily basis, with research visits to Paris arranged as part of the collaboration.

The appointment is carried out in accordance with the principles of the State Employees Act and export control legislation regulating the export of knowledge, technology and services. Candidates who, after assessment of the application and attachments, are considered to be in conflict with the applicable criteria will not be eligible for employment.

About the application

Your application should include a CV and a statement of research interest of no more than one page. The statement should explain your motivation, relevant quantitative expertise and how this contribute to the project.

At least 2 references (either letters or recommendation or contact information for references).

The attachments, including a description of your scientific work, must accompany the application, as these documents form the basis of the assessment. The documents must be in English, Norwegian or another Scandinavian language.

Please note that the application will be assessed only on the basis of the information received by the application deadline. Make sure that your application clearly shows how your skills and experience meet the criteria described above.

Questions?

If you are interested and would like more information, inquire with both Jonathan Whitlock (jonathan.whitlock@ntnu.no) and Alex Cayco-Gajic (natasha.cayco.gajic@ens.psl.eu).

Application deadline

20.October.2026.