Job Description

Research Fellow/Senior Research Fellow

**Department:** Sainsbury Wellcome Centre  
**Grade:** 7/8  
**Salary:**  
G7: £42,099 to £50,585 per annum inclusive of London Allowance  
G8: £51,474 to £60,521 per annum inclusive of London Allowance  
**Hours:** 36.5 per week (full-time, 1.00 FTE)  
**Reports to:** Group Leader, Dr Athena Akrami

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**Context**

We are looking for an excellent Post-Doctoral Research Fellow to join the Akrami Lab at the SWC. The Akrami lab employs a synergistic combination of theory and experiment to study the fundamental principles by which the nervous system computes, represents and integrates various forms of sensory memories and priors in the process of learning and inferring meaningful statistical patterns and abstract relations in the environment.

In our cross-species approach (mice, rats, and humans), we use high-throughput training to combine sophisticated, well-controlled and quantifiable behavioural paradigms with powerful tools to monitor and manipulate neural circuits. Combining experimental and theoretical neuroscience, we aim to bridge our understanding of memory and (statistical) learning at the behavioural level with its implementation at the circuit and systems level.

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**The Role**

**Project title: Learning and exploiting sensory statistics in the brain and machines**

You will be involved in a range of activities, including animal behavioural training, electrophysiological recordings, neuronal perturbations, setting up experimental equipment, data analysis and computational modelling.

You will have extensive experience in areas ranging from behavioral experimentation, in vivo electrophysiology and imaging, neural circuit manipulation to computational/theoretical neuroscience. Prior experience with two-photon imaging or high-density electrophysiological recordings would be highly desirable.

You will be expected to work in a highly collaborative and multidisciplinary research environment, and strong communication and critical thinking skills, as well as a dedication to teamwork and collaboration, are essential.

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**Duties and responsibilities**

- To be a primary worker on the given project and ensure it is carried out efficiently and in a proper scientific manner.
- Ensure the design and implementation of their part of the project.
- Liaise with external collaborators both in the UK and abroad.
• Write and contribute to the preparation of scientific manuscripts, reports, presentations and records of experimental plans and results.

• Work closely with the Laboratory Head and other team members to gather and collate data and report on results via publications.

• Maintain lab equipment connected to the research to ensure it functions at the correct levels.

• Supervise and provide technical advice to more junior members of the team when appropriate in order to develop their skills where required.

• Communicate lab results within divisional lab meetings to keep colleagues informed of developments and progress of the project.

• Adhere to good laboratory practice at all times and observe all required health and safety procedures.

• Observe all ethical and legal requirements in relation to the use of animal models in research.

• Observe all required Data Protection and Security requirements.

**General**

• Carry out any other duties within the scope spirit and purpose of the job as requested by the line manager.

• Actively participate in UCL networks, meetings and committees relevant to the role, as required.

• All staff are expected to act professionally, co-operatively and flexibly in line with the post.

• UCL’s Sustainability policies and objectives, attend management meetings and
dele sufficient research support and undertake such training and development as may be required for the post

• The post holder, like all academic, research and teaching staff, is expected to demonstrate their ongoing commitment to excellence in line with the **Academic Career Framework**

• Meet UCL’s expectations set out in UCL’s **Core Behaviours Framework**

• The above description is not exhaustive, and the post-holder will be required to undertake any other duties as may reasonably be requested within the scope, spirit, and purpose of the post.
Applicants are to copy and paste the following criteria (which are assessed on the application form) into the “Statement in support of your application” describing underneath each criterion how they meet it, giving examples.

<table>
<thead>
<tr>
<th>Essential Criteria</th>
<th>Assessment method</th>
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<tbody>
<tr>
<td><strong>Qualifications, experience and knowledge</strong></td>
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<tr>
<td>Hold a relevant PhD in neuroscience or cognate area.</td>
<td>Application</td>
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<tr>
<td>Proven track-record of research (e.g. publication record) in an appropriate area.</td>
<td>Application</td>
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<tr>
<td>Grade 7: Previous experience of contributing to publications/presentationsGrade 8: Strong publication record</td>
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<tr>
<td>Grade 8: Strong publication record and familiarity with the existing literature and research in the field</td>
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<tr>
<td>Experience in rodent behaviour, physiology and modelling.</td>
<td>Application/Interview</td>
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<td>Experience in analysing neurophysiological phenomena.</td>
<td>Application/Interview</td>
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<td>Software architecture experience (framework development).</td>
<td>Application/Interview</td>
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<td>Computer programming expertise (MATLAB, Python, C# or SQL).</td>
<td>Application/Interview</td>
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<td>Experience with long term planning of experiments and timelines.</td>
<td>Application/Interview</td>
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<td>Grade 7: Ability to contribute ideas for new research projects and research income generationGrade 8: Ability to independently plan and manage a research project, including a research budget</td>
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<td>Experience in organisation of scientific seminars and scientific community events.</td>
<td>Application</td>
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<td>Grade 8 only: Experience of supervising/mentoring a small team of scientist or PhD Students.</td>
<td>Application</td>
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<td><strong>Skills and abilities</strong></td>
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<td>Strong written and oral communication skills, along with good presentation skills.</td>
<td>Application/Interview</td>
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<td>Excellent analytical skills and understanding of statistics.</td>
<td>Application/Interview</td>
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<tr>
<td>Able to prioritise, manage your own time, and multi-task and integrate the demands of a range of different activities and deadlines in parallel.</td>
<td>Application/Interview</td>
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### UCL Ways of working

<table>
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<tr>
<th>Personal Excellence</th>
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<tr>
<td>Grade 7: Being able to respond constructively. Grade 8: Responding proactively and appropriately to the needs of colleagues, staff, students and partners)</td>
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<tr>
<td>Working together Grade 7: Listening to others and supporting them with compassion. Grade 8: Listening closely, and speaking with clarity to all colleagues, staff, students, and partners</td>
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<tr>
<td>Achieving our Mission Grade 7: Using evidence and quality data to support approaches. Grade 8: Making timely and data-led decisions</td>
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### Desirable Criteria

**Applicants should copy and paste the following desirable criteria into the “Statement in support of your application” under the Desirable criteria section and describe underneath each criterion how they meet it, giving examples.**

- Experience with in-vivo surface and depth electrophysiology recordings.  

**Application**
In addition to 41 days annual leave (inclusive of public holidays and closure days) and generous pension schemes, UCL provides a number of other staff benefits which are linked from the page below:

✓ https://www.ucl.ac.uk/human-resources/pay-benefits/staff-benefits

UCL benefits and policies apply equally, whatever the sexual orientation and/or gender identity of employees. Benefits and policies relating to employees partners, includes both different sex and same sex partners.

Annual leave
Annual leave is 27 working days for a full-time member of staff + 6 UCL closure days in addition to 8 Bank Holidays.

Pension
Post-holders will be eligible to join the Universities Superannuation Scheme (USS), subject to the Scheme's rules and eligibility conditions.

Hours of Work
UCL’s full time working week is 36.5 hours per week. SWC is willing to consider flexible-working arrangements, subject to discussion and agreement with your line manager.

Other benefits
UCL is a dynamic, global university based in one of the most exciting capital cities in the world. Not only does working at UCL offer the opportunity to work with some of the greatest intellects in the world, it also offers competitive terms, conditions and benefits to its staff.

As part of the UCL community you can access free lunch hour lectures, exhibitions and museums and collections. On campus UCL has the Bloomsbury theatre hosting a range of performances and a series of bars, cafes, and other facilities, which UCL staff can use.