UNIVERSITY OF SUSSEX

1 Advertisement

Post Title: Research Fellow
School/department: Life Sciences
Hours: Full time. Requests for flexible working options will be considered subject to need for experimental lab access.
Contract: fixed term for 1 year, renewable.
Reference: 10232
Salary: from £35,333 to £42,155 per annum, depending on experience
Placed on: 20 January 2023
Closing date: 01 March 2023. Applications must be received by midnight of the closing date.
Expected interview date: To be confirmed
Expected start date: TBC

A postdoctoral position funded by BBSRC is available in the laboratory of Miguel Maravall to study the relationships between neuronal activity, sensory inputs and behavioural signals in the somatosensory cortex of mice.

The work will investigate behaviour and neuronal responses in mice performing goal-directed tasks guided by whisker input, either in a head-fixed configuration combined with two-photon imaging, or in a freely-moving configuration in which mice can explore an environment and plan actions.

You should have either a recent PhD degree in neuroscience or a related field combined with expertise in quantitative data analysis, or else a background in a quantitative discipline such as physics or computer science combined with experience in experimental neuroscience. Programming experience in Python, Matlab or a similar language is an important plus.

We are looking for someone who is proactive and will drive the work forward, and is positive, eager to think creatively, and keen to work in our collaborative team (http://www.sussex.ac.uk/lifesci/maravalllab/).

Our lab welcomes applicants from all backgrounds. We strive to foster an open, inclusive environment and we actively work on an ongoing basis to improve equity and fairness both inside and outside our institution. We are committed to supporting and mentoring our members throughout their time in the lab and beyond.

The University of Sussex campus is located just outside the friendly, lively city of Brighton on

the coast of South East England, one hour away from London. It is surrounded by the South Downs National Park. Sussex Neuroscience (http://www.sussex.ac.uk/sussexneuroscience/) offers a vibrant intellectual environment and resources for mentorship and career development. Ongoing interaction with other members of the close-knit Sussex Neuroscience community provides opportunities for learning new approaches and skills, including in relevant areas such as open science hardware, in vivo two-photon imaging, and computational techniques.

The position is offered for 1 year in the first instance (renewable). Please attach a CV (2-3 pages max) and a statement of research interests (1 page max) to the application, and provide contact details for 2 or 3 referees. Informal enquiries are strongly encouraged: please contact Prof. Miguel Maravall (m.maravall@sussex.ac.uk).

The School of Life Sciences is committed to equality and valuing diversity, and currently holds an Athena SWAN Silver Award. Applications are particularly welcomed from women and black and minority ethnic candidates, who are under-represented in academic posts in Science, Technology, Engineering, Medicine and Mathematics (STEMM) at Sussex. The University offers various schemes to provide real benefits to parents, these can be found at http://www.sussex.ac.uk/humanresources/personnel/familyfriendlypolicies.

Please note that this position may be subject to ATAS clearance if you require visa sponsorship.

For full details and how to apply see our vacancies page

The University of Sussex values the diversity of its staff and students and we welcome applicants from all backgrounds.

2. The School of Life Sciences

The School of Life Sciences has a mission statement to understand the mechanisms that drive biological and chemical processes; to develop innovative and diverse approaches to enhance human health, technology and the environment. It undertakes research, teaching and engagement across a wide range of the Life Sciences, from Chemistry through a range of biological and medically-related areas to Conservation Biology. The breadth and depth of cutting-edge research and innovative teaching practice requires a diverse community who work across boundaries to deliver excellence. Multidisciplinarity is a key strength at Sussex, and the School of Life Sciences is part of two collaborative cross-School funded Strategic Research Programmes: Sussex Neuroscience (SN) and the Sussex Sustainability Research Programme (SSRP). Sussex Neuroscience brings together broad-ranging neuroscience approaches from the Schools of Life Sciences, Psychology, Engineering and Informatics, as well as the Brighton and Sussex Medical School. SSRP brings together Life Sciences, Global Studies and the University of Sussex Business School to address the United Nations sustainable development goals.

The School of Life Sciences is the largest in the University in terms of research activity, with an annual research income of around £13 million. The School has a teaching and research faculty of around 90, over 140 research staff, and an administrative team of around 20. The School is structured into five Departments led by a Head of Department. These are Biochemistry & Biomedicine, Genome Damage and Stability Centre, Neuroscience,

Evolution, Behaviour & Environment and Chemistry, working closely with the Sussex Drug Discovery Centre. The Head of School Professor Sarah Guthrie leads the Head of School Executive, which includes two Deputy Heads of School (one focussed on research and enterprise, the other on education), the School Administrator and the Director of Technical Services. Wider School organisation and administration is overseen by the School Management Committee, which includes the Heads of Departments and others in Directorship roles.

Our School aims to develop scientists that are able to connect with global issues and develop innovative solutions to the challenges that face the planet. We therefore work to ensure that our research positively impacts our local community, the economy and society as a whole. We have and continue to develop relationships with business, policy and community partners ranging from local SMEs to large scale multinational organisations. Academics, researchers, and students at all levels are encouraged to engage with non-academic partners through activities such as technology and skills sharing, licencing IP, contract research or consultancy, working closely with colleagues in the Sussex Innovations and Business Partnership team.

In the recent Research Excellence Framework (REF2021), 90.6 % of our Biological Sciences outputs and 84.8% of our Chemistry outputs were rated as world-leading or internationally excellent. In both areas, 100% of our Impact cases were rated as world-leading or internationally excellent. We are proud that our research has diverse impact that includes enabling and enhancing diagnosis of cancer and rare genetic diseases, using novel chemical methods to produce new medicines, saving endangered species, influencing policy and practice in pesticide use to protect bees and establishing conservation, economic and health initiatives in Papua New Guinea and Ecuador.

Our vibrant post-graduate research community is made up of around 130 PhD students who are key to our success, undertaking cutting-edge research across all our areas of interest in the Life Sciences. We are part of a number of cross-School and multi-partner PhD programmes: the Sussex Neuroscience PhD programme, 2 Leverhulme-funded Doctoral Scholarship programmes (*Sensation and Perception to Awareness* and *Biomimetic Embodied AI*), the UKRI funded *UK Food Systems* Centre for Doctoral Training and the BBSRC *South Coast Biosciences (SoCoBio)* Doctoral Training Partnership.

The School's teaching is firmly based on our research excellence and offers students an intellectually stimulating and supportive experience, with opportunities for personal research experience and use of modern technology to enhance learning. The School has a population of around 1500 undergraduates studying a range of subjects across the School's expertise. For each degree we offer a 3-year BSc and a 4-year integrated Masters (MSci or MChem). We also offer a Life Sciences Foundation Year, which is ideally suited for students whose A-level (or equivalent) qualifications don't meet the requirements for direct entry on to our BSc/MSci degrees. We have a population of around 85 postgraduate taught students undertaking MSc or MRes courses across our subject expertise.

The School is committed to the University's core values of kindness, integrity, inclusion, collaboration and courage. The Equality, Diversity and Inclusion Committee (with representation on the School Management Committee) promotes and encourages our values across the School, championing initiatives that meet the University's goals of being Equal, Diverse, Accessible and Flexible. We currently hold an Athena SWAN Silver Award and have a BAME Awarding Gap Committee who closely liaise with the University's Race Equality Charter committee. The School also hosts a wellbeing room and a multi-faith prayer room within its estate and the University supports the Trans Rights are Human Rights UK initiative. We believe that equality, diversity and inclusion is everyone's business and aim to provide a friendly and supportive environment for all who work, study and visit the School of

Life Sciences.

3. Job Description

Job Description for the post of: Postdoctoral research associate

Department: Neuroscience

Section/Unit/School: Life Sciences

Location: JMS/CRPC

Grade: 7.1 to 7.7 depending on experience

Responsible to: Professor Miguel Maravall

PRINCIPAL ACCOUNTABILITIES

1. To engage in individual and/or collaborative research activity resulting in high-quality publications; and to develop research funding and knowledge exchange income individually or in collaboration with others, as appropriate, depending on the size and scope of the bid.

KEY RESPONSIBILITIES

1. Research, Scholarship & Enterprise

1.2 Develop research objectives and proposals for own or joint research, at acceptable levels, with assistance if required.

1.3 Conduct research projects individually and in collaboration with others.

1.4 Analyse and interpret research findings and draw conclusions on the outcomes.

1.5 Produce high-quality research outputs for publication in monographs or recognised high-quality journals, or performance/exhibition, as appropriate.

1.6 Contribute to the preparation of proposals and applications to external bodies, for example for funding purposes.

1.7 Individually or with colleagues, explore opportunities for enterprise activity, knowledge exchange income and/or consultancy, where permissible.

1.8 Build internal contacts and participate in internal networks and relevant external networks in order to form relationships and collaborations.

1.9 Continually update knowledge and understanding in field or specialism, and engage in continuous professional development.

2. Teaching & Student Support

2.1 Undertake teaching duties, if required.

2.2 Assist in the assessment of student knowledge and supervision of student projects if required.

2.3 Assist in the development of student research skills, for example as part of a postgraduate supervision team.

3. Contribution to School & University

3.1 Attend and contribute to relevant School and project meetings.

3.2 Undertake additional duties, as required by the Principal Investigator and/or Head of School.

4. Role-specific duties

4.1 To undertake a programme of research aimed at understanding sensory processing in mice, and to do so expertly, rigorously and in compliance with ethical and legal guidelines.

4.2 To identify, develop, troubleshoot and apply techniques to pursue the research objectives.

4.3 To present scientific work at seminars within the Laboratory and Department and at external meetings.

4.4 To contribute to lab-wide discussions on developments within the field.

4.5 To draft scientific papers, and contribute to the overall preparation of research for publication.

4.6 To assist in the training of PhD students and other members of the laboratory where necessary.

This Job Description sets out current duties of the post that may vary from time to time without changing the general character of the post or level of responsibility entailed.

INDICATIVE PERFORMANCE CRITERIA

- A PhD or equivalent scholarly or relevant professional activity.
- Pursuing a line of independent research within a research group.
- Publishing research (either from a recently completed PhD or new original research).
- Other forms of externally recognised professional practice of creative output of a standing equivalent to regular publication of original research.

- Initiating, developing or participating in links between the University and external bodies such as business and industry, the professions, community organisations and policy-makers, or in the delivery of outreach activities involving the wider public.

- Evidence of successful engagement in teaching or supervision.

4. Person Specification

ESSENTIAL CRITERIA

1. Normally educated to doctoral level, or other equivalent qualification, or appropriate level of experience, as appropriate to the discipline (see role-specific criteria below).

2. Evidence of engagement in high-quality research activity.

3. Excellent presentation skills, with the ability to communicate effectively, both orally and in writing, with students, colleagues and external audiences.

4. Ability to work individually on own initiative and without close supervision, and as part of a team.

5. Ability to exercise a degree of innovation and creative problem-solving.

6. Excellent organisational and administrative skills.

7. Ability to prioritise and meet deadlines.

8. Excellent IT skills.

ESSENTIAL ROLE-SPECIFIC CRITERIA

1. PhD in Neuroscience or a related, preferably quantitative discipline.

2. Strong and creative work ethic.

3. Commitment to carrying out research of high quality and standards.

DESIRABLE CRITERIA

1. Emerging track record of high-quality publications in reputable journals and other appropriate media of similar standing.

2. Experience of generating research or knowledge exchange income.

3. Experience in the use of mice for research, e.g. mouse training and husbandry.

4. Experience in molecular biology, e.g. techniques for expression of optical reporters and actuators of neuronal activity.

5. Experience with multiphoton imaging of neuronal activity.

6. Experience with computational analysis of neuronal data including programming in languages such as Matlab, Python or similar.

7. Experience in the design of experiments for analysing mouse behaviour or neural circuits.