School of Psychology
Research Fellow
Full time, Fixed term for 15 months
Salary range: starting at £32,004 and rising to £38,183 per annum.
Expected start date: 2 May 2017

We are now seeking an individual to fill a position at research fellow level within the School. Applicants should be able to enhance or extend existing research areas within the School. The postholder will be expected to play a key role in supporting our behavioural neuroscience research program. This person will be examining the intrinsic and synaptic basis of how learned associations between natural rewards (e.g. sucrose) and environmental stimuli that predict their availability are acquired and maintained in a minority of stimuli-activated neurons called ‘neuronal ensembles’ in the prefrontal cortex. He/she will use state-of-the art ex vivo electrophysiology (patch-clamp) techniques in transgenic mice that express GFP in behaviourally-activated neurones (Koya et al., Nature Neuroscience 2012, PMID 23023294), to investigate how excitatory and inhibitory synapses and intrinsic membrane properties undergo dynamic changes at different stages of excitatory learning and extinction (inhibitory) learning. The laboratory is based in newly refurbished labs within the Neuroscience Center, which forms part of a vibrant neuroscience research community on campus (http://www.sussex.ac.uk/sussexneuroscience/).

To qualify, candidates should have a PhD degree in neuroscience (or related discipline/qualification) and extensive experience in whole-cell recordings from brain slices, immunohistochemistry and microscopy analysis, and running behavioural experiments (e.g. appetitive conditioning). Experience in recording from pyramidal and striatal neurons and performing paired-recordings is highly desired. He/she should enjoy working as part of a team and also display motivation and commitment to research in a fast-paced and competitive field.

Detailed information about the School is available at www.sussex.ac.uk/psychology

Contact for informal discussion about the post: Dr. Eisuke Koya (email: e.koya@sussex.ac.uk).

Closing date for applications: 27 March 2017
Interviews: 6 April 2017

For full details and how to apply see www.sussex.ac.uk/jobs

The University of Sussex is committed to equality of opportunity, and we welcome applicants who are interested in part-time and/or job-share roles.
The University of Sussex invests in the future of Psychology

The University of Sussex is a leading teaching and research institution and is ranked within the top 20 in the UK and the top 150 in the world. The School of Psychology at the University of Sussex is one of the largest centres for the study of psychology in the UK with considerable strengths in both research and teaching. The School was rated 10th in the 2014 Research Excellence Framework and receives excellent student ratings for its undergraduate and postgraduate teaching. The School offers a highly rated undergraduate degree course, a suite of PGT courses and has a substantial group of doctoral students, supported in part by an ESRC Doctoral Training Centre.

Within the School, there are four research groups: Behavioural and Clinical Neuroscience, Cognitive Psychology, Developmental and Clinical Psychology, and Social and Applied Psychology. We also have strong collaborative links with the School of Life Sciences, the School of Engineering and Informatics, and the Brighton and Sussex Medical School, especially through Sussex Neuroscience, and with the School of Education and Social Work through the Rudd Centre for Adoption Research and Practice and the Centre for Innovation and Research in Childhood and Youth.

2. Senior leadership and management
The Vice-Chancellor (Professor Adam Tickell) is the senior academic officer and, as Chief Executive, is responsible to the University Council for management of the University. He is supported by an executive group which includes the three Pro-Vice-Chancellors, the Registrar and Secretary, the Director of Finance and the Director of Human Resources. The Heads of the Schools of Studies at Sussex report to the Pro-Vice-Chancellors.

The Registrar and Secretary heads the Professional Services of the University. In addition, under the University Statutes, the Registrar and Secretary is Secretary to the University Council. The Director of Finance reports to the Vice-Chancellor. The Director of ITS reports to the Registrar and Secretary, and the Librarian reports to one of the Pro-Vice-Chancellors.

4. The School of Psychology
Psychology at Sussex combines cutting-edge, discovery-oriented research and strong engagement with policy-makers in health and social care, non-governmental organisations and the private sector. In this way we tackle contemporary challenges in mental and physical health, social inclusion and well-being. Psychology at Sussex ranked 10th out of 82 in REF 2014 (7th for impact), with 100% of research rated as internationally recognized or better, and 45% of research recognized as world-leading. Detailed information about the School is available at www.sussex.ac.uk/psychology.

The School’s flagship undergraduate programme is its BSc hons. in Psychology, which takes approximately 290 students per annum. The School also offers a number of joint degree programmes via the University’s pathway programme. In order to secure the excellence of our undergraduate body, the School is launching a foundation year in 2016.

The School of Psychology has four research groups with a total of nearly 60 teaching faculty and nearly double that number of PhD students. The research groups are:
- **Behavioural and Clinical Neuroscience**: this group focuses on addiction, ageing and learning. It conducts non-human animal, human and clinical research, emphasising translational links.

- **Cognitive Psychology**: the group has broad interests in language and communication, learning, memory, attention, visual perception, problem-solving and cognition and consciousness, with approaches that range from classic experimental psychology through to cutting-edge cognitive neuroscience techniques.

- **Developmental and Clinical Psychology**: the core objective of the group is to translate research in human development to clinical, policy and public contexts. Its work spans developmental and experimental psychopathology, quantitative behaviour genetics, and the development of cognition.

- **Social and Applied Psychology**: the group focuses on group and intergroup processes, identity processes, culture, well-being and health psychology. It uses a range of methodologies in laboratory and field settings, with a focus on applied relevance.

These research groups are the primary vehicles for the exchange of new research ideas, the development and informal peer review of new grant applications and articles, and the mentoring and appraisal of staff. Typically, groups meet fortnightly to discuss forthcoming conference presentations, ideas for new projects and work-in-progress. All grant applications are reviewed by senior colleagues to increase their quality and likely success rates.

All research and teaching faculty have one primary research-group affiliation. However, consistent with the interdisciplinary and collaborative ethos of the School, in practice many actively participate in more than one grouping. The quality of these groups is evident from outputs in premier journals across neuroscience and medicine, through experimental psychology to social psychology, while also encompassing quantitative-behaviour genetics and developmental psychopathology. Reflecting their international prominence in their respective fields, researchers in these four groups have published over 700 articles and 17 books, and have won research grants and consultancies to a value in excess of £12m over the census period for REF 2014.

Cross-School and cross-university research centres facilitate interactions between these research groups and with other researchers in the University. Such centres are established to nurture new research activity, build more effectively on areas of academic strength and enhance the vitality of our research environment. They run research colloquia and facilitate shared access to important research populations (e.g. clinical samples, children and young people, participants in disasters and emergencies) and major items of equipment. Centres with which the School of Psychology collaborates include:

- **Centre for Innovation and Research in Childhood and Youth (CIRCY)**: based in the School of Education and Social Work, but with strong links to Psychology.

- **Clinical Imaging Sciences Centre (CISC)**: provision of multimodal imaging facilities, including on-site fMRI, with an emphasis on quantifying the function and structure of the brain.
- *Rudd Centre for Adoption Research and Practice*: developing new insights into the cultural, social-relational, cognitive and emotional processes in the development of adopted children.

- *Sackler Centre for Consciousness Science*: a unique interdisciplinary centre spanning informatics, engineering, psychiatry, psychology and cognitive science.

- *Sussex Addiction Research and Intervention Centre (SARIC)*: a merger of pre-clinical, clinical, and psychological research in drug addiction to pursue translational projects.

- *Sussex Neuroscience*: a cross-university centre to develop the scientific and educational strategy for basic and translational neuroscience.

The School has excellent laboratory facilities to support its research. Specialist facilities include:

- **Behavioural Neuroscience laboratories**: sole use of a microscopy and histological suite and two laboratories dedicated to electrophysiological studies in brain slices; shared use of molecular biology laboratories, all of which have seen significant recent investment. We are a major user of the University’s animal unit, which comprises breeding, holding and experimental facilities for rodents and includes a surgery equipped with digital stereotaxic equipment for both rats and mice. The behavioural laboratories are equipped for sophisticated operant and observational studies with rats and mice.

- **Clinical Imaging Sciences Centre**: CISC houses a 1.5T Siemens MRI and PET/CT scanners, but a 3T scanner is being installed within the next 18 months. CISC hosts an autonomic psychophysiology laboratory that extends to world-leading capacity for integrating functional MRI with multi-axis physiological and neurophysiological measurements. It is also a centre for scanning patients enrolled into Phase II and III interventional treatment trials for neurodegenerative and neuro-inflammatory disorders and, through clinical scanning of patients from memory clinics across Sussex, is building the UK’s largest high-quality neuroimaging research dataset of patients at the onset of dementia.

- **Sussex Child Research Hub**: The hub comprises ten research rooms, including a child-interaction observation unit with one-way mirror, a room with CCTV for videoing child sessions, two rooms for experimental infant techniques with coding facilities, and a developmental psychophysics and eye-tracking room. The suite also includes multiple waiting and play areas appropriate for infants, toddlers and older children, and tea/coffee facilities for visiting parents.

- **Human Psychopharmacology laboratory**: two medical rooms, a wet lab, 12 specialised testing cubicles, Eyelink eye-trackers, and a fully equipped kitchen for the preparation of food for research on human ingestion.

- **Human Psychophysiology and Psychoacoustic laboratories (129 m2)**: six cubicles, two acoustic booths and a reception area. Equipment includes both
Neuroscan and EGI rigs for EEG/ERP, a Magstim TMS rig, and three Eyelink II eye-trackers.

- Vision laboratories: A suite of six rooms – of which some are designed to exclude all natural light – include specialist equipment for presenting visual stimuli. In addition to these dedicated facilities, Psychology also has 85 m2 of new general facility, bookable lab space, including 11 test cubicles for faculty and student research projects and other research, a meeting-room, waiting area and kitchen facility.

4. Job Description and Person Specification

Job Description for the post of: Post-doctoral researcher in behavioural neuroscience

Job title: Post-doctoral research fellow in behavioural neuroscience
Grade: 7
School: Psychology
Location: CRPC
Responsible to: PI through head of school
Direct reports: n/a
Key contacts: Members of research group, members of faculty within the school and university
Role description: Postholders will investigate how excitatory and inhibitory synapses undergo dynamic changes at different stages of excitatory learning and extinction (inhibitory) learning. They will be expected to contribute to the work of the research team, and also to develop their research skills with support from more experienced members of staff.

Key Responsibilities:

1. Research, Scholarship & Enterprise

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

1.2 Conduct research projects individually and in collaboration with others.

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

1.4 Produce high-quality research outputs for publication in monographs or recognised high-quality journals, or performance/exhibition, as appropriate, and
contribute to the School’s REF submission at acceptable levels of volume and academic excellence.

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

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

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

1.8 Continually update knowledge and understanding in field or specialism (e.g. keeping up with relevant literature) and engage in continuous professional development (e.g. networking at conferences).

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.

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 the level of responsibility entailed.

Date 8 Dec 2016
UNIVERSITY OF SUSSEX

Person Specification for the post of: Post-doctoral researcher in behavioural neuroscience.

Criteria can only be described as essential if the outcome required is absolutely dependant upon them. Consider reasonable adjustments and discount factors that unfairly discriminate on the grounds of race, age, religion or belief, gender, sexual orientation or disability.

ESSENTIAL CRITERIA

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

. Evidence of engagement in high-quality research activity.

. Excellent presentation skills, with the ability to communicate effectively, both orally and in writing, with students, colleagues and external audiences (e.g. national and international conferences).

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

. Ability to exercise a degree of innovation, creative problem-solving, and generate new research ideas.

. Excellent organisational and administrative skills.

. Ability to prioritise and meet deadlines.

. Excellent IT skills.

ESSENTIAL ROLE-SPECIFIC CRITERIA

. Extensive background in neuroscience or related discipline (e.g. experimental psychology) at PhD level or appropriate level of experience as appropriate to discipline.

. Extensive experience in slice electrophysiology (whole-cell recordings), the ability to measure and analyse intrinsic membrane and synaptic properties, immunohistochemistry/microscopy analysis, and running behavioral experiments (e.g. appetitive conditioning).

. Willingness to rapidly learn skills outside of electrophysiology (e.g. running molecular
assays, surgeries, etc.) and if necessary teach these skills to others.

- Flexibility to work outside normal hours when necessary (e.g. weekends)

- Track record of high-quality publications in reputable journals (or other appropriate media of similar standing). Commensurate with evidence of productivity

- Experience in analysing the role of neuronal ensembles in various learned behaviours.

**DESIRABLE CRITERIA**

- Experience in generating research or knowledge exchange income.

- Experience in rodent behavioural assays, such as appetitive conditioning procedures.

- Experience in dual recordings and working with Fos-GFP transgenic mice.

- Experience with immunohistochemical staining.

- Experience with intracranial surgeries.

Date 1 Feb 2017