UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Computational Neuroimaging of Decision-Making, Faculty of Biological Sciences

Salary: Grade 7 (£33,199 – £39,609 p.a.)

Reference: FBSBM1121

Closing date: 7 July 2019

Available from 01 October 2019 for a fixed-term of 30 months

Research Fellow in Computational Neuroimaging of Decision-Making
School of Biomedical Sciences

Are you an ambitious researcher looking for your next challenge? Do you have an established background in Human Neuroscience? Do you want to further your career in one of the UKs leading research intensive Universities?

We are looking to appoint a postdoctoral fellow to make a leading contribution to an EU funded project on the neurobiology of human decision making. The post will be based at the School of Biomedical Sciences at the University of Leeds.

The aim of our research is to characterise the spatiotemporal dynamics and the computational principles of the brain networks underlying the processing of multisensory information, the formation of perceptual decisions and the execution of subsequent actions. To this end, we use multimodal recordings including neuroimaging (EEG), motor signals (EMGs and kinematics) and behavioural data coupled with advanced multivariate analysis methods and computational modelling. We develop computational methodologies inspired by machine learning, statistical signal processing, information theory and Bayesian modelling to fuse data from different modalities, extract the main patterns of brain activity and characterise their functional roles with respect to the task at hand.

The primary goal of this project will be to unravel the neural representations of the mental processes implicated in the processing of (multi-)sensory information and the formation of perceptual decisions. Candidates must have previous practical experience in EEG recordings and data analysis as evident by a strong track record of publications in international journals. The post holder must also have working knowledge of multivariate data analysis techniques and excellent programming skills in Matlab and/or Python.

You should have a PhD (or be close to completion) in a numerate (e.g. computer science, engineering or maths) or neuroscientific (e.g. neuroscience, psychology or cognitive science) discipline, together with experience in human neuroimaging (in particular EEG) experiments and data analysis. A working knowledge of multivariate analysis techniques and computational modelling, as well as excellent programming skills in Matlab and/or Python are essential.



What does the role entail?

As a Research Fellow your main duties will include:

- Designing, planning and conducting a programme of investigation, in consultation with Dr Ioannis Delis
- Generating independent and original research ideas and methods in Human Neuroscience with an aim to extend the Computational Neuroimaging research portfolio.
- Making a significant contribution to the dissemination of research results by publication in leading peer-reviewed journals, and by presentation at national and international meetings.
- Working independently and as part of a larger team of researchers, both internally and externally to develop new research links and collaborations and engage in knowledge transfer activities where appropriate
- Contributing to the supervision of junior researchers and PhD students and acting as a mentor to less experienced colleagues
- Evaluating methods and techniques used and results obtained by other researchers and relating such evaluations to your own research
- To contribute to, and to encourage, a safe working environment.

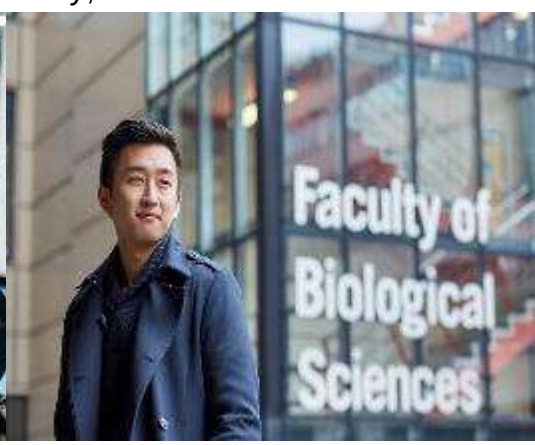
These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.

What will you bring to the role?

As a Research Fellow you will have:

- A PhD (or close to completion) in a numerate (e.g. computer science, engineering or maths) or neuroscientific (e.g. neuroscience, psychology or cognitive science) discipline;
- Experience in human neuroimaging (in particular EEG) experiments and data analysis;
- Working knowledge of multivariate analysis techniques and computational modelling;
- Excellent programming skills in Matlab and/or Python;
- Strong analytical skills, with the ability to work accurately and carefully, designing, executing and writing up research independently;





- A developing track record of peer reviewed publications in international journals;
- Excellent communication skills, both written and verbal and the ability to communicate your research at national and international conferences;
- The ability to work well both independently and as part of a team;
- Strong initiative and a pro-active approach, with excellent organisational, planning and self-management skills, including the ability to prioritise workloads to meet deadlines/demand and deliver high quality under pressure
- A strong commitment to your own continuous professional development.

You may also have:

- Experience in designing experimental paradigms to study human cognition and behaviour or in developing machine learning or information-theoretic techniques to extract information from neural data;
- Evidence of pursuing external funding to support research.

How to apply

You can apply for this role online; more guidance can be found on our How to Apply information page. Applications should be submitted by **23.59** (UK time) on the advertised closing date.

Your application should include:

- A supporting statement providing evidence to support each requirement listed on the 'What will you bring to the role' section of the Candidate Brief (no more than two sides of A4, minimum font size 11);
- An academic curriculum vitae, including a list of your publications.

Contact information

To explore the post further or for any queries you may have, please contact:

Dr Ioannis Delis, Lecturer
Tel: +44 (0)113 343 3075
Email: i.delis@leeds.ac.uk



Additional information

The University of Leeds and the Faculty of Biological Sciences are committed to providing equal opportunities for all and offer a range of family friendly policies. The University is a charter member of Athena SWAN (the national body that promotes gender equality in higher education), and the Faculty of Biological Sciences was reawarded a Bronze award in 2017. We are proud to be an inclusive Faculty that values all staff, and are happy to consider job share applications and requests for flexible working arrangements from our employees. Our Athena SWAN webpage provides more information.

Find out more about the Faculty of Biological Sciences and the School of Biomedical Sciences

Find out more about our Research and associated facilities and the Motor Control and Neurorehabilitation group

Working at Leeds
Find out more about the benefits of working at the University and what it is like to live and work in the Leeds area on our Working at Leeds information page.

Candidates with disabilities
Information for candidates with disabilities, impairments or health conditions, including requesting alternative formats, can be found on our Accessibility information page or by getting in touch with us at disclosure@leeds.ac.uk.

Criminal record information

Rehabilitation of Offenders Act 1974
A criminal record check is not required for this position. However, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending.

Any offer of appointment will be in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our Criminal Records information page.