Studentship Title: SWBio CASE

Research Area/ Project Title: Optimising closed-loop stimulation of slow wave sleep

Location: Cardiff University

Expected Start Date: 1 October 2017

Duration: 4 years

Deadline for Application: 5th December 2016

Description of Research Opportunity:
We spend 1/3 of our life asleep, and the brain is very busy during this time. The neural oscillations of sleep have known restorative functions, and are also critical for memory consolidation and emotional processing. We are interested in enhancing sleep to improve health (for instance by counteracting the impacts of ageing which lead to reductions in deep slow wave sleep). We are also interested in manipulating memory consolidation by triggering the replay of selected memories in different combinations and in different sleep stages. This can lead not only to stronger memory, but to integration of new memories with each other and with existing knowledge, providing a basis for creativity.

We are seeking a PhD candidate to investigate closed loop sound stimulation during deep sleep, studying its impact on behavioural performance, brain function, and (longitudinally) on brain structure. The successful candidate will have access to a wide range of state-of-the-art research facilities and resources, including a sleep lab, 3T and 7T MRI scanners, EEG/MEG and behavioural testing labs, and high-performance computing cluster. They will work with a leading neurotechnology company, Rythm, and with signal processing engineers at the University of Manchester in a flexible, highly integrated and highly-multi-disciplinary way.

Award:
The studentship is very generously funded through SWBio BBSRC Doctoral Training Partnership. It consists of full UK/EU tuition fees, as well as a Doctoral Stipend matching UK Research Council National Minimum (£14,296 p.a. for 2016/17, updated each year).

The research project listed above is in competition for funding with one or more of these projects available across the SWBio DTP. Usually the projects which receive the best applicants will be awarded the funding.
Eligibility:

Full awards (fees plus maintenance stipend) are open to UK Nationals, and EU students who can satisfy UK residency requirements. To be eligible for the full award, EU Nationals must have been in the UK for at least 3 years prior to the start of the course for which they are seeking funding, including for the purposes of full-time education.

As only one studentship is available and a very high standard of applications is typically received, the successful applicant is likely to have a very good first degree (a First or Upper Second class BSc Honours or equivalent) and/or be distinguished by having relevant research experience.

How to apply:

You can apply online - consideration is automatic on applying for a PhD in Psychology, with an October 2017 start date (programme code RFPDPSYA).

Please use our online application service at www.cf.ac.uk/regis/general/applyonline/index.html and specify in the funding section that you wish to be considered for School funding.

Please specify that you are applying for this particular project.

Please also email a copy of your CV and covering letter to the primary supervisor of the project(s) you are applying for, including two references.

In the research proposal section of your application, please specify the project title and supervisors of this project and copy the project description in the text box provided. In the funding section, please select "I will be applying for a scholarship / grant" and specify that you are applying for advertised funding from BBSRC SWBio DTP. If are applying for more than one Cardiff University project please note this in the research proposal section.

General Information:

The School of Psychology is one of the largest and most successful in the UK (http://www.cf.ac.uk/psych/). The School’s excellent standard of research and teaching has been recognised in every Research Assessment Exercise. It has its own brain-imaging centre (http://www.cf.ac.uk/psych/cubric/), enhancing the international-leading research in behavioural neuroscience, cognitive ergonomics, forensic, social and developmental psychology.

Cardiff is the youngest capital city in Europe and the fastest growing in the UK. It plays host to many national and international sporting events at the Millennium Stadium (http://www.millenniumstadium.com/). Culturally, the city is thriving, with the Wales Millennium Centre (http://www.wmc.org.uk/) in Cardiff Bay. Cardiff is in very close proximity to the beautiful Welsh countryside (http://www.breconbeacons.org/), has a two hour rail link to London and a (cheap) one hour air link to Paris and Amsterdam (http://www.cardiffairportonline.com/)
Please address any informal enquiries to:

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<th>Name</th>
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For further information please contact:

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