Cardiff University President's Research Scholarship in Advanced Neuroimaging Methods, UK

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Cardiff University President's Research Scholarship: CRANIUM: Cardiff Research into AdvancedNeuroimaging Methods (PhD Studentship)

This is a Cardiff University President's Research Scholarship, part of a new £4M investment to coincide with the inauguration of Professor Sir Martin Evans (Nobel Prize for Medicine 2007) as Cardiff's new President. All of the University Schools and Research Centres offering opportunities under the programme have demonstrated the real potential of the Scholarships to contribute to research excellence through significant, challenging and original PhD research projects and excellent PhD supervision and support. Other attractive features of the Scholarships include the presence of multiple President's Scholars in each of the research areas and the guaranteed exposure of President's Scholars to innovative technologies, theories, methodological approaches, and debates. More information on the President's Research Scholarships scheme is available here: www.cardiff.ac.uk/presidents

Project Title: CRANIUM: Cardiff Research into Advanced Neuroimaging Methods

Project Description:
CRANIUM's aim is to stimulate the next phase of development of neuroimaging methodology for translational neuroscience applications in human health and disease. Quantitative neuroimaging is being used increasingly in academic research, neurological and mental health and diagnostics, and the pharmaceutical industry. Cardiff University wishes to capitalise on its £30m investments in neuroimaging-capable Centres including CUBRIC, EMRIC and PETIC. We wish to harness the creative resources of PhD students to understand signals from the mammalian nervous system and develop neuroimaging methods that will be adopted by animal and human neuroscience researchers across the world. The CRANIUM programme therefore forms a key area of recruitment for Cardiff University's prestigious President's Research Scholarships.

The doctoral research projects will be experimentally focussed with a bias towards physical science methodology applied to biological systems in three main areas: integration of multiple neuroimaging modalities; experimentally informed modelling of brain structure and function; and enhanced image quantitation

Research students will undertake their projects under joint supervision with supervisors at CUBRIC (Cardiff University Brain Research Imaging Centre, School of Psychology), the School of Biosciences, the School of Maths and the School of Medicine. We offer a research environment that, based on the multi-disciplinary expertise of the applicants, uses the most advanced neuroimaging methodologies to answer clinically relevant research questions. A multi-modal imaging approach in the proposed project will be strongly encouraged.

PhD projects will be funded for 3 years. This year we expect to recruit 2 students to begin in October 2011 and an additional student who would be able to start sooner than this but no later than October 2011 in the 4th subject area below.. There is flexibility in the final projects undertaken by students and this will be determined largely by matching the best students with the appropriate supervisors. In 201 we are recruiting candidates across the following 4 subject areas, further details of which can be found at http://www.cubric.cf.ac.uk/the-presidents-research-scholarships:

1. Imaging white matter microstructure: development and experimental validation of compressed sensing strategies
2. Multi-modal study of human brain activity during pharmacologically-induced sedation
3. FMRI as a physiological tool: the brain's control of vital cardiovascular and respiratory functions.
4. Genetic contributions to variation in brain structure, metabolism and cognitive function.

CRANIUM provides the opportunity to encounter a wide variety of imaging techniques (MRI, FMRI, MRS, EEG, MEG, TMS, PET) including grounding on the physiological principles underlying the technologies, the key technical issues involved in performing studies, analysing neuroimaging data and the combination of data from different imaging modalities in a principled fashion. In year 1, students will undertake, in parallel with their chosen thesis programme, a tailored Graduate Training Course.

We aim to attract the highest quality numerate graduates who are motivated to apply their skills to neuroimaging research questions. We are pleased to consider a broad range of graduate backgrounds including, but not limited to: physics, engineering, bio-engineering, physiology, neuroscience, psychology, maths, computer science, genetics and statistics.

Supervisor: Prof Richard Wise
Proposed Start Date: October 2011 or sooner for subject area 4 (genetic contributions)

Funding
This is a Cardiff University President's Research Scholarship. The award includes full UK/EU tuition fees plus a doctoral stipend matching UK Research Council National Minimum was £13,590 p.a. for 2010/11.

Number of Awards Available: 3 for 2011/12

Eligibility
Academic Criteria: Applicants must have a First Class Honours degree or a 2.1 plus a postgraduate Masters degree (or their equivalents) in a relevant subject.

Residency: Full awards (fees plus maintenance stipend) are open applicants of any nationality. Non UK/EU students would be required to cover the difference between UK and Overseas fees themselves.

How to Apply
1. Interested students are encouraged to make informal contact with potential supervisors named in each project area (http://www.cubric.cf.ac.uk/the-presidents-research-scholarships) and/or send a CV and covering letter to the CRANIUM coordinator Prof Richard Wise, CUBRIC, School of Psychology, Cardiff University, Park Place, Cardiff, UK, CF10 3AT. Email: wiserg@cardiff.ac.uk

2. A formal application should then be made using the Online Application Service (http://www.cf.ac.uk/regis/general/applyonline/index.html), stating in both the 'Research' and 'Funding' sections that you are applying for a President's Research Scholarship.

Application Deadline: 15th April 2011

Further Information
For more information contact Prof Richard Wise:
Email: wiserg@cardiff.ac.uk
Telephone: +44 (0) 29 208 70358
Web: www.cardiff.ac.uk/psych/degreeprogrammes/postgraduate/postgraduateresearch/index.html

For more information please visit our website: http://scholarshipsbank.com/cardiff-university-presidents-research-scholarship-in-advanced-neuroimaging-methods-uk/

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