Studentship Title: EPSRC Doctoral Training Partnership

Research Area/ Project Title: Virtual reality assessment and rehabilitation tools for Visual Vertigo

Location: School of Psychology

Expected Start Date: 1st October 2017

Duration: 3 Years

Deadline for Application: 1st February 2017

Description of Research Opportunity:
The proposed PhD project will use innovative, multi-sensory technologies to develop novel assessment and rehabilitation tools relying on effective human-computer interaction.

Visual Vertigo is a heterogeneous condition where certain visual environments trigger debilitating episodes of dizziness and nausea. Environments characterised by repetitive, high-contrast patterns (e.g. supermarkets), are commonly reported triggers but the reason for this is unknown. Current rehabilitation tools for Visual Vertigo are not always effective and patients frequently continue to experience symptoms for months or years after onset. Therefore such patients constitute 30-50% of time allocation in vestibular rehabilitation clinics. Given an aging population and the current under-diagnosis of vestibular problems, this health burden will increase. Thus more effective tools for stratified diagnosis and rehabilitation are urgently needed.

In collaboration with audiological clinicians at University Hospital Wales (UHW), we are piloting a virtual reality approach to improve diagnosis specificity and rehabilitation. Virtual reality allows different features of the visual environment to be directly isolated and manipulated. These range from the rendering of realistic environments like supermarkets, to environments that isolate specific low-level features (e.g. a particular spatial frequency or orientation). The proposed PhD project will build on this pilot work, by developing and testing a suite of virtual reality environments and integrating theses with a motion platform and video capture suite located in Physiotherapy at UHW. This new technological marriage will allow us to investigate, for the first time, visual and vestibular functioning in Visual Vertigo simultaneously, and during realistic locomotion. Our aim is to develop, and quickly bring to clinics, tools to help clinicians identify individual triggers for different patients, and directly feed this information into customised virtual reality rehabilitation tailored to the individual needs of each patient.
Award:

The studentships will commence in October 2017, and will cover your tuition fees (at UK/EU level) as well as a maintenance grant. In 2016-17 the maintenance grant for full-time students was £14,296 per annum. As well as tuition fees and a maintenance grant, you will receive a participant allowance of £300 per annum, and conference funding (approx. £750 per annum). You will also receive a computer and office space. You will become a member of, and have access to courses offered by the University's Graduate College.

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.

Application deadline: 1st February 2017 with interviews (either in person or by Skype) being held on or at the end of February 2017 and decisions being made by the end of April 2017.

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/cubicr/), 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/](http://www.cardiffairportonline.com/))

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