Title: Examining the interface of neuroscience and robotics, developing methods for control and tactile feedback in prosthetic hands

Type of award  PhD Research Studentship
Department  Engineering Mathematics
Scholarship  A minimum £14,777 p.a. for 2018/19 subject to contracts (please check below for further scholarship details)
Funding Duration  3.5 years
Eligibility  Home/EU applicants only
Start date  1 October 2019

PhD Topic Background/Description
Funds are available for a PhD position within the University of Bristol’s Department of Engineering Mathematics.

Applicants with an interest in Upper-limb Prosthetic and Tactile Robotics research are encouraged to apply through Dr Benjamin Ward-Cherrier. The project is at the interface of neuroscience and robotics, developing methods for control and tactile feedback in prosthetic hands. There is flexibility in the precise scope of the project, which will comprise elements of machine learning, spike-based information processing and psychophysics.

This project involves the design and integration of tactile sensors within an existing upper-limb prosthetic hand (OpenBionics, Brunel hand) and the development of a non-invasive haptic feedback system. A control system will also be developed to allow the user to open and close the prosthetic hand using myoelectric sensors (Myoware).

This research will pave the way in the development of algorithms for shared autonomy within prosthetic hands and will benefit from close collaborations with industry (OpenBionics, iniVation) as well as a network of Dr Ward-Cherrier and Dr Lepora’s academic collaborators.

Further Particulars

Candidate Requirements
Candidates should possess a minimum 2:1 honour degree in Computer Science, Engineering, Mathematics, Physics or a related discipline, and have strong mathematical and programming skills. Previous experience in robotics or computational neuroscience would be an advantage but not essential. A recognised English language qualification is required if English is not your first language at Profile E.

Further information about English language requirements and profile levels.
Some programming experience, ideally in C, C++, python or Matlab is required.

**Scholarship Details**
Scholarship covers full UK/EU (EU applicants who have been resident in the UK for 3 years prior to 1st September 2018) PhD tuition fees and a tax-free stipend at the current RCUK rate (£14,777 in 2018/19).
EU nationals resident in the UK may also apply but will only qualify for PhD tuition fees.

**Informal enquiries**
For informal enquiries, please email Dr Benjamin Ward-Cherrier, b.ward-cherrier@bristol.ac.uk

For general enquiries, please email sceem-pgr-admissions@bristol.ac.uk

**Application Details**
Prior to application please send a CV and very brief letter describing your interest in the studentship to b.ward-cherrier@bristol.ac.uk

To apply for this studentship, submit a PhD application using our online application system [www.bristol.ac.uk/pg-howtoapply]

Please select PhD Engineering Mathematics on the Programme Choice page and enter details of the studentship when prompted in the Funding and Research Details sections of the form with the name of the supervisor.

**Closing date for applications 27 February 2019 but applications should be made as soon as possible.**

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