PhD Studentship in the Institute of Neuroscience – Self-organization of retinal neurons: from developmental growth rules to realistic morphologies and connectivity

Newcastle University

Qualification type:	PhD	**Placed on:**	8th March 2016
Location:	Newcastle Upon Tyne	**Expires:**	8th June 2016
Funding for:	UK Students, EU Students, International Students	**Reference:**	12MREA
Funding amount:	£14,296 plus UK/EU rate tuition fees		
Hours:	Full Time		

Value of award

100% of **UK/EU** tuition fees paid and annual living expenses of **£14,296**. Successful international candidates will be required to make up the difference between the UK/EU fees and international fees.

Number of awards

1

Start date and duration

September 2016 for 3 years.

Application closing date

The post will remain open until a suitable applicant is appointed. Early application is advised.

Overview

Interested in how neurons develop? This PhD project will explore the **development of retinal neurons**, by conducting sophisticated **computer simulations** as well as testing theoretical predictions in the **wet-lab**.

The aim of this project is to formulate a comprehensive computer model of neuronal development in the retina. In additional to computer modeling, the student will conduct wet-lab work to evaluate the predictions of the model, such as the impact of alterations of retinal development at specific stages.

This very interdisciplinary project has a strong training component, because the student will implement and simulate computer models under the supervision of computational neuroscientist Dr Roman Bauer. Moreover, the student will learn experimental techniques in the wet-lab under the supervision of experimental neuroscientist and expert on retinal development Dr Evelyne Sernagor. Finally, depending on the specific needs of the computational model, the student will contribute to prestigious software development collaboration with CERN openlab and Intel as project partners, and so gain precious experience in working together with high-profile partners on an international level.

Sponsor

Research Excellence Academy, Faculty of Medical Sciences, Newcastle University.

Name of supervisor(s)

Dr R Bauer, School of Computing Science
Dr E Sernagor, Institute of Neuroscience

Eligibility Criteria

You must have, or expect to achieve, at least a 2:1 honours degree or international equivalent, in a subject relating to computational neuroscience, including physics, computer science and biology. A further qualification such as an MRes is advantageous.

Candidates should have knowledge of a major programming language such as C/C++ or Java.

UK/EU and **non-EU International** students are eligible to apply, but international students will be required to make up the difference between the UK/EU fees and international fees.

How to apply

You must apply through the University's online postgraduate application system. To do this please 'Create a new account'.

Only mandatory fields need to be completed. However, you will need to include the following information:

- insert the **programme code 8300F** in the programme of study section
- select '**PhD in the Faculty of Medical Sciences – Neuroscience** as the programme of study
- insert the studentship code **12MREA** in the studentship/partnership reference field
- attach a **covering letter and CV**. The covering letter must state the title of the studentship, quote the studentship reference code **12MREA** and state how your interests and experience relate to the project

- attach degree transcripts and certificates and, if English is not your first language, a copy of your English language qualifications.

Contact

For further details, please contact:

Dr Roman Bauer
School of Computing Science
E-mail: roman.bauer@ncl.ac.uk
Telephone: +44 (0) 191 208 7975

Apply

Advert information

Type / Role:

PhD

Subject Area(s):

Biological Sciences Biology Other Biological Sciences Computer Science Computer Science Engineering and Technology Other Engineering

Location(s):

Northern England