MRC-funded IMPACT (Integrated Midlands Partnership for Biomedical Training) CASE Doctoral Training Partnership 3.5 Year PhD Studentship available for September 2019

Departments: University of Leicester, Department of Cardiovascular Sciences and University Hospitals of Leicester NHS Trust Medical Physics Department (Clinical Engineering Section). Cross institutional collaboration with Birmingham Children’s Hospital, and Musoft Ltd.

Supervisors:

Dr. Emma Chung, emlc1@le.ac.uk Lecturer, University of Leicester, Department of Cardiovascular Sciences
Prof. Antonio F. Corno, afc10@le.ac.uk Chair in Congenital Cardiac Surgery, University of Leicester, Department of Cardiovascular Sciences
Mr Paul Muston (Musoft) CASE Partner

Eligibility: UK/EU applicants who meet the MRC eligibility and residency criteria

Project Title:
Patient-specific analytics for modelling brain tissue perfusion during heart surgery

Project Description:
This PhD project involves working with the paediatric cardiac surgery team and medical physics department within the University Hospitals of Leicester NHS Trust to record physiological measurements relating to the supply of oxygenated blood to the brain during paediatric congenital cardiac surgery. Recordings will include blood pressure, haematocrit, blood oxygenation, cerebral blood flow, and near infrared spectroscopy measurements. This information will inform the development of a prototype brain perfusion monitoring system capable of estimating brain tissue perfusion and oxygenation levels during heart surgery. The student will work with a data analytics company (Musoft) and UHL Clinical Engineering to develop their model into an NHS-ready prototype suitable for future clinical evaluation.

Interviews will be held on Tuesday 26 and Friday 29 March 2019 at University of Leicester.

References:
See Dr Chung’s publication list at:
https://www2.le.ac.uk/departments/cardiovascular-sciences/people/chung-e
**Funding details:**

MRC IMPACT DTP CASE [Musoft Ltd.]

Studentship provides tuition fees and stipend for 3.5 years to UK applicants. EU applicants who do not meet the RCUK residency criteria can apply for a fees only award.

**Entry requirements:**

Applicants are required to hold/or expect to obtain a UK Bachelor Degree 2:1 or better in a relevant subject. The University of Leicester [English language](#) requirements apply where applicable.

**How to apply:**

Please apply via: [https://more.bham.ac.uk/mrc-impact/phd-opportunities/](https://more.bham.ac.uk/mrc-impact/phd-opportunities/)

**Project / Funding Enquiries:** Dr Emma Chung, [emlc1@le.ac.uk](mailto:emlc1@le.ac.uk), 0116 2525839 for informal enquiries

**Application enquiries to** [mrcicase@contacts.bham.ac.uk](mailto:mrcicase@contacts.bham.ac.uk)

**Closing date for applications** 15 February 2019