**Fully funded PhD studentship about a novel cardiovascular assisting device**

A 3-year PhD studentship is available at UCL Department of Mechanical Engineering for an enthusiastic student interested in development of a novel cardiovascular assisting device.

This device is aimed at helping blood circulation of patients with total cavopulmonary connection, typically seen in patients after surgeries of congenital single ventricular heart defects.

This is highly multi-disciplinary project including following aspects:

* human pathophysiology
* fluid-structure interaction of flexible tubes
* fluidmechanical and electrical optimisation of pumping performance
* device design (shape optimisation, control system and electric circuit)
* metallic and soft material characterisation

Instrumentation and device design, experimental and computational fluid mechanics will be the key components of the project. The project will be carried out in collaboration with Great Ormond Street Hospital.

**Supervisors**: Dr. Ryo Torii, Prof. Richard Bucknall, Dr. Gaetano Burriesci (UCL Mechanical Engineering)  
 and Prof. Victor Tsang (Great Ormond Street Hospital)

**Eligibility:** UK/EU students

**Start Date**: as soon as possible

**Financial support**: UK/EU tuition fee and tax-free stipend at RCUK standard London rate, £16,057 p.a.

**Key Requirements**

Applicants should have a very good degree in engineering, physical science or mathematics. Understanding, skills and aptitude for fluid mechanics and power systems analysis are essential. Experience on experimentation is also desirable. Education and training in advanced computational modelling and cardiovascular biological sciences along with other appropriate training will be provided additionally.

**Application Process**  
Applicants should in the first instance email their CV and a brief covering letter/statement to Dr Ryo Torii. The supervisory team will arrange an interview for short-listed candidates. After interview, the successful candidate will be required to formally apply online via the UCL website. Applicants are also encouraged to informally contact Dr Torii prior to formal application.

**Application Closing Date**: 31/08/2017

**Application and enquiries to:** Dr Ryo Torii ([r.torii@ucl.ac.uk](mailto:r.torii@ucl.ac.uk))