

PhD Studentship

*Department of Mechanical Engineering
University College London*

PhD in Bioengineering Combined with Imaging and Artificial Intelligence (AI) -different areas to choose from-

Description:

This is an exciting opportunity since we are looking for a PhD studentship funded by the Department of Mechanical Engineering at UCL as part of the [EPSRC CDT in Intelligent, Integrated Imaging in Healthcare \(i4health\)](#).

The i4Health CDT is one of the top CDTs in the UK and provides an outstanding environment in which get your research career off to a great start.

The studentship will combine bioengineering/biomedical engineering with imaging and AI. This opportunity is open to, UK EU and International students.

The list of available projects covers the following topics (per clinical specialty):

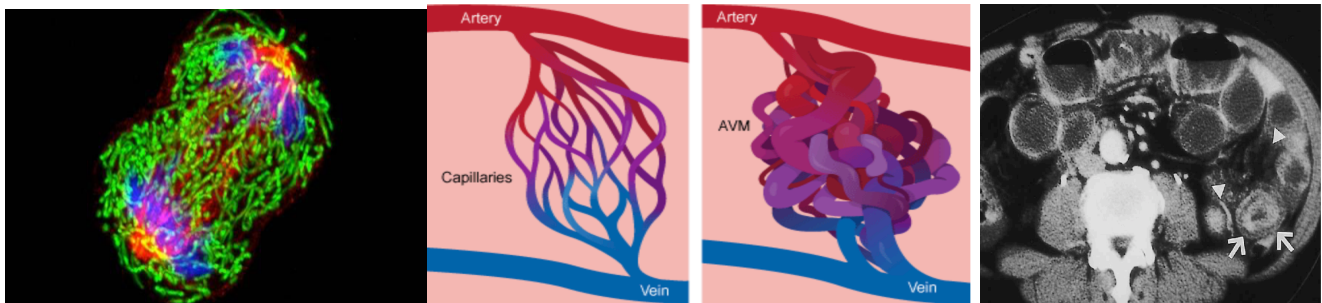


Figure credits: National Cancer Institute / Univ. of Pittsburgh Cancer Institute (left), Kidshealth.org (middle) and Kim et al., Korean Journal of Radiology (right).

Cardiovascular Engineering

- Patient specific, AI assisted computational angiography in arteriovenous malformations
- Understanding why peripheral grafts heal and fail, using AI assisted technology based on populations of models
- Localisation and characterisation of abnormalities in the pulmonary circulation in pulmonary hypertension
- Analysis of the left atrial appendage to understand thromboembolic events

Cancer:

- Transurethral shear wave method for prostate cancer diagnosis
- Tracking Internal Cancer Cell Signalling

Gastrointestinal System:

- High-resolution 3D printed nanosensors and CMOS images for smart gastrointestinal interventions

If you are interested in any of these topics, please don't hesitate and apply!. There are no preferred areas and we are looking for engaged, motivated and keen PhD students to make any of these projects a reality.

Person specification:

Required Qualifications

- Have achieved (or are predicted) a first class or upper second class honours undergraduate degree (or equivalent international qualifications or experience). An MSc is also preferred, though not essential.
- Our preferred subject areas are Physical Sciences (Computer Science, Engineering, Mathematics and Physics) with a preferred route through any core Engineering discipline (e.g. Bioengineering/Biomedical Engineering, Mechanical Engineering, Chemical, Electrical Engineering, etc.). All applicants must be able to demonstrate strong mathematical skills.
- Applicants should have an interest in bioengineering combined with medical imaging as this is core to our projects.
- Applicants whose first language is not English are usually required to provide evidence of proficiency in English by UCL. Further details can be found on the following [UCL web page](#)

Start date: October 2020

Value of award: Successful applicants will be awarded a stipend of at least £17,280 (tax free stipend) in line with all the other i4Health CDT applicants as well as fully funded fees.

Eligibility: UK, EU or International applicants.

Application Procedure:

If you meet the requirements set above you can apply directly by e-mail to our i4Health board member (from Mechanical Engineering) Professor Vanessa Diaz (v.diaz@ucl.ac.uk) with the following information:

- A recent CV
- The full transcript of exam results (listing all subjects and their corresponding grades/marks)
- A cover letter stating how this opportunity meets your research interests.

Individuals in their final year of study should list all modules/grades for which the results are already known.

Deadline: The process will be formally closed on the 15th of August 2020 but applications will be continuously assessed so we recommend to submit early.