Rapid 3D Reconstruction of Coral Ecosystems from Multi-Camera Imagery (Ref CSEE/APR18/09)

The Schools of Computer Science and Electronic Engineering and Biological Sciences at the University of Essex are pleased to announce a PhD studentship available in "Rapid 3D reconstruction of coral ecosystems from multi-camera imagery".

This studentship will start from 23 April 2018 and will receive a scholarship for three years (subject to satisfactory progression).

The studentship includes:
- a fee waiver equal to the Home/EU fee (for 2017/18, £4,120). International students will need to pay the balance of their fees.
- a stipend equivalent to the Research Councils UK National Minimum Doctoral Stipend (£14,553 in 2017-18)

By using camera systems taking images from multiple angles, compelling 3D models of coral reef structures can be built using a photogrammetry technique called "structure from motion". An alternative is a technique known as "visual SLAM", which runs in real time. By adopting elements of both techniques, this studentship will develop a hybrid approach to support marine surveying, in particular for threatened coral reefs. For example, by producing 3D models of reefs, biodiversity can be monitored in ways that are currently not possible using manual measurements taken in-situ by divers.

The successful applicant will be supervised by Dr Jon Chamberlain and Dr Adrian Clark (in CSEE), with regular input from Prof David Smith and Dr Philippe Laissue (in SBS) and will be part of a growing inter-disciplinary group focusing on state-of-the-art computer applications in marine sciences.

Additional questions and queries about the studentship to be addressed to: Dr Jon Chamberlain (jchamb@essex.ac.uk)

Entry Requirements

The successful candidate would be expected to speak fluent English and meet our English Language requirements, if applicable, and will have a good honours BSc or BEng degree (1st, 2:1, or equivalent) in computer science, electronic engineering, mathematics, biological sciences or related subject.

An MSc with Merit or Distinction is desirable (but not essential for students with a first class degree). Strong analytical and mathematical skills are required, as well as good programming skills. Knowledge of photogrammetry, computer vision techniques and/or marine ecology are desirable but not essential.

How to Apply

- To be considered for this Scholarship applicants are required to apply for their PHD course in the usual way via the University of Essex online admissions application process here: website,

(including uploading all supporting documents required) by the deadline of **Friday 23 February 2018**.

- Please note on your PG Admissions application form in the 'Proposed research topic or area of research' field that you wish to apply for this scholarship, quoting Ref CSEE/APR18/09.

- In addition to your main online PHD application, you are also required to submit a separate application form, which can be accessed [here](#) and submit separately to: csee-schooloffice@essex.ac.uk by the deadline of **Friday 23 February 2018,** quoting Ref CSEE/APR18/09.

- Applicants will be informed of the outcome of their application for their PHD course and the scholarship award by the end of March 2018.

For further information on our current areas of research please refer to our [research interests](#) and [staff profiles](#).

If you have a disability and would like information in a different format telephone (01206) 873521/874588.