

Title: Microwave photonics: Waveform Generation and Applications

A fully funded PhD studentship to start in 2019 is available in the School of Computer Science and Electronic Engineering at Bangor University, supported by Bangor University's Great Heritage fund. The studentship will cover the full cost of UK/EU tuition fees, plus a maintenance stipend in line with RCUK rates (provisional £14,553 per annum for full time award holders) for 3 years as well as funding for the research. The primary supervisor will be Dr Yanhua Hong, with co-supervision from Prof Paul S Spencer and Prof Chris Hancock. The aim of this project is to use photonics to assist frequency modulated continuous wave (FMCW) microwave generation. The application of the generated FMCW microwave to medical/biological uses, such as, identifying tissue layers within the body will be investigated.

This PhD project is suitable for students with a good undergraduate degree in physics or engineering and is interested in experiment and simulation studies and real-world application of the technology.

Prior experiences of one or more of the following areas: 1) Optical components including semiconductor lasers, SOAs and VCSELs; 2) Nonlinear dynamics of semiconductor lasers; 3) Electronic Circuit; 4) MATLAB; 5) LabVIEW, would be an advantage.

Applications are invited from candidates who have, or are about, to obtain a minimum of a 2i Honours degree, or an appropriate Master's degree in Electronic Engineering, Physics, or related sciences. The closing date for applications is 15 October 2018. Interviews will be held approximately four weeks after the closing date. Candidates should email a Curriculum Vitae including names and addresses of two referees and a letter of motivation explaining why they want to apply for the project and detailing any relevant experience they have to primary supervisor Dr Yanhua Hong (y.hong@bangor.ac.uk).

The University values diversity and equality and encourages applications from all sections of the community. We welcome applications for full time study. The scholarship is open to UK Nationals and EU students who can satisfy UK residency requirements. Proof of English Language Competency (6.0 IELTS min.) will also be needed.

Bangor University is a vibrant research-led institution, uniquely situated between the mountains of Snowdonia and the sea. The School of Computer Science and Electronic Engineering has over 30 academic staff and support staff. Core research interests include: Optoelectronics, Organic Electronics, Laser Micromachining, Optical Communication, Medical Devices, Materials for Extreme Environments and Nuclear Engineering.

Closing date for Applications: 15th October 2018