



Postgraduate Research Position

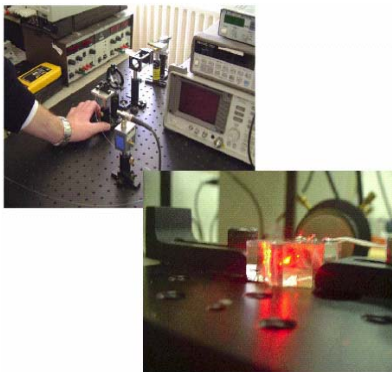
Applications are invited for a postgraduate position on 2-D and 3-D imaging using Geiger-mode avalanche photodiodes.

Project Description

This project lies in the area of photonics, the combination of electronics and optical technology. CMOS imaging sensors are increasingly favoured over the commercially available CCD (charge-coupled device) imagers due to advantages such as low cost, low power consumption, high speed and the potential for integration with signal processing circuitry. However, for complex imaging applications there is a growing need for higher sensitivity and wider dynamic range. To achieve this avalanche photodiodes and Geiger-mode avalanche photodiodes (GMAPs) are being employed in CMOS image sensors. This work involves the use of CMOS compatible GMAPs, developed for single photon counting by SensL Technologies Ltd., as candidates for use in high sensitivity, wide dynamic range CMOS imagers. This research will investigate, through the development of an imager, the sensitivity and dynamic range achievable by using a GMAP.

Photonics Research Group

The Photonics Research group within the Applied Optoelectronics Centre involves several Faculty members, post-docs and graduate students, undertaking research in areas such as CMOS imaging, CMOS detectors, Plastic Optical Fibre communications, Liquid Crystals and very fast wavelength measurement.



Research Position Details

The student is paid 12,500 Euro per year for 2 years to undertake a Masters, which may be extended to a Ph.D. subject to approval. All programme fees are also paid, provided the candidate submits their thesis on time. Funding is available for travel to conferences and for equipment.

Candidates should have a primary degree in Physics or Electronic Engineering or a closely related discipline, with a minimum honours grade of 2-1 or higher.

Applications:

Please send an up-to-date CV to: Dr. Aoife Moloney

Email: aoife.moloney@dit.ie **Phone:** +353-1-4024667 **Web:** www.electronics.dit.ie

This project is funded by the Dublin Institute of Technology under the Postgraduate R&D Skills Programme and will involve collaboration with SensL Technologies Ltd. and University College Cork

