



PostDoc Job Opportunity



DUBLIN CITY UNIVERSITY	First Name	Last Name	email	Institute	Address
PI name & contact details:	Liam	Barry	liam.barry@dcu.ie	DUBLIN CITY UNIVERSITY	Glasnevin, Dublin 9, Ireland.
School:	Electronic Engineering				
Research Centre / group affiliation:	Radio and Optical Communications Group, The Rince Institute				
Research group / centre website:	http://www.eeng.dcu.ie/~opticlub/				

Brief summary of research group / centre activity:

The Radio and Optical Communications Lab in Dublin City University was established in 1999. This group now forms one of the main research laboratories within the Rince Institute. The main goal of the Radio and Optical Communications Group is to focus on the design, simulation and demonstration of new technologies for future broadband photonic communication systems. The group works with academic and industrial partners in Ireland and abroad on a mix of basic and applied research topics in radio and photonic systems domains.

Description of postdoctoral project on offer:

The use of tuneable lasers to reduce the cost of sparring and inventory in optical systems is already becoming the norm, but such lasers are designed for slow tunability in relatively static systems. In order to provide new interactive multi-media services to users, future optical access and metro networks will require fast dynamic bandwidth provisioning to better utilise the available network resources, using key technologies such as Optical Burst Switching (OBS). The key element of these fast reconfigurable networks will be tuneable wavelength transmitters that can switch in the order of nano-seconds. This research project will explore novel applications and implementations of wavelength tuneable lasers in optically switched WDM metro and access networks. The project will investigate the use of advanced modulation formats in fast reconfigurable metro and access networks, and evaluate new sub-systems approaches that can be implemented to optimise the performance of these systems.

Please indicate the core skills or disciplines that are required for this position:

Applicants should have a PhD in Telecommunications, Electronic Engineering, Information Engineering or related discipline. In addition, it is preferable that the candidate has experience in a number of the following domains: Detailed characterisation of optoelectronics devices; use of tuneable lasers in fast reconfigurable WDM networks; all-optical signal processing; spectrally efficient optical communications systems using advanced modulations formats; digital signal processing for coherent optical communications systems.