PostDoc Job Opportunity

DUBLIN CITY UNIVERSITY	First Name	Last Name	email		Institute	Address
PI name & contact details:	Conor	Brennan	brennanc@eeng.dcu.ie		DUBLIN CITY UNIVERSITY	Glasnevin, Dublin 9, Ireland.
School:	Electronic Engineering					
Research Centre / group affiliation:	RINCE Institute, RF Modelling and Simulation					
Research group / centre website:	www.rince.ie and http://elm.eeng.dcu.ie/~brennanc/research/research.htm					

Brief summary of research group / centre activity:
The DCU RF modelling and simulation group has a 20 year long track record of developing efficient accurate numerical models for electromagnetic wave scattering and propagation. Applications involve propagation modelling for mobile radio and wireless systems as well as radar cross section modelling, remote sensing and imaging

Description of postdoctoral project on offer:
This project will continue our recent work in the area of full-wave modelling of electromagnetic wave propagation. Such models are capable of greatly enhanced accuracy when compared to the empirical or semi-empirical models typically employed by radio engineers. In addition mathematical compression and acceleration techniques developed by our group means that this accuracy can now be achieved in reasonable time-frames. High end computing resources can be used to reduce the computational burden further. In particular this project will examine the development of full-wave wide-band solvers for use in predicting propagation in indoor environments and will apply these models to the problem of locating and tracking users as they move through a building, an application with significant commercial and social potential. The project will examine how WiFi-based fingerprinting solutions as well as Ultra-wideband multipath-assisted algorithms could benefit from improved propagation modelling.

Please indicate the core skills or disciplines that are required for this position:
Mathematical skills particularly numerical methods, knowledge of electromagnetics and wireless systems, programming skills (Matlab, C++). Good communication and technical writing skills also.