

# PhD Project Proposal

*School of Electronics, Electrical Engineering and Computer Science*

<b>Proposed Project Title:</b> GPU Virtualisation in Fog Computing							
<b>Principal Supervisor:</b> Carlos Reano, Blesson Varghese	<b>Second Supervisor:</b> Karen Rafferty						
<b>Project Description:</b> <p>Hardware accelerators such as GPUs are available on the cloud for enhanced analytics. Next-generation clouds aim to bring enhanced analytics using accelerators closer to user devices at the edge of the network for improving quality of service (QoS) by minimizing end-to-end latencies and response times. The collective computing model that utilizes resources at the cloud-edge continuum in a multi-tier hierarchy comprising the cloud, edge, and user devices is referred to as fog computing. This research aims to identify the challenges in seamlessly using accelerators at the edge of the network and then design, implement and deploy novel techniques to achieve this. The research will build on existing technologies such as containers, GPU frameworks for accelerating applications and low-power edge devices.</p>							
<b>Contact details</b> <table><tr><td>Supervisor Name:</td><td>Carlos Reano</td><td>Tel: +44 (0)28 9097 1749</td></tr><tr><td>QUB Address:</td><td></td><td>Email: C.Reano@qub.ac.uk</td></tr></table> <p>Room 01.52, ECIT institute Queen's University of Belfast Northern Ireland Science Park Queen's Road, Queen's Island Belfast United Kingdom BT3 9DT</p>		Supervisor Name:	Carlos Reano	Tel: +44 (0)28 9097 1749	QUB Address:		Email: C.Reano@qub.ac.uk
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