

PhD Project Proposal

School of Electronics, Electrical Engineering and Computer Science

Proposed Project Title: Intelligent systems techniques for improving manufacturing competitiveness

Principal Supervisor: Prof Seán McLoone

Second Supervisor: i-ams

Project Description: Manufacturing is entering a new era, the so called the 4th industrial revolution (Industry 4.0), where advances in the Internet of Things technologies and the exponential rise in the number of connected devices and sensors are enabling huge volumes of data to be collected on manufacturing processes and systems. Exploiting this data to gain business insights, enhance decision making, optimise performance, and ultimately improve competitiveness is at the heart of Industry 4.0. Potential applications include process health monitoring, predictive maintenance, anomaly detection and virtual sensing. Techniques such as data mining, machine learning and big data analytics are key skills required to realise these applications.

The Centre for Intelligent Autonomous Manufacturing Systems (*i-AMS*) in the Faculty of Engineering and Physical Sciences at Queen's (www.qub.ac.uk/iams) is an interdisciplinary team of researchers spanning the disciplines of Engineering, Computer Science, Applied Mathematics and Psychology working together to develop innovative technologies and solutions to address the challenges of Industry 4.0. The Centre has a range of PhD opportunities available addressing different aspects of the development of Intelligent Systems techniques for industry 4.0 applications. To learn more please contact, the centre Director, Prof. Seán McLoone.

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