



# **Robotics and Automation open day**

Saturday, 24<sup>th</sup> June 2017, 10am – 3pm Ashby building, 125 Stranmillis Road, Belfast, BT9 5AH



#### What to see?

- Manufacturing robots
  - ST robotics R12
  - Universal robot UR10
  - Parallel kinematic machines
- Human like robots
  - Baxter robots
  - NAO robots
- Submarine robots
  - Robosub
  - Open RoV
- Rubik's cube solver

- Virtual reality (VR)
- Augmented reality (Smart glasses)
- 3D factory simulation
- 3D scanning
- Building your own drone
- Building your own 3D printer
- Programming a robot
- Segway/hover board
- Mini lectures
- Light refreshments

Robots and automation are increasingly becoming an essential part of our life and economy. Application areas include medical surgery, traffic management, agriculture, environmental monitoring, marine exploration, aerospace, and manufacturing. The robotics and automation open day at Queen's University Belfast aims to showcase our research and educational activities in this exciting and rapidly growing field.



On the day, you will find out the vision for robots in factories of the future, how they interact with humans and the environment, how to program robots, and how to build one from scratch. You will also have the chance to have a go on a Segway and try our robot assisted Virtual Reality systems. Throughout the day there will be a series of mini-lectures covering topics from robotics and virtual reality research at Queen's University Belfast, to intelligent manufacturing, internet of things and industry 4.0.

## Mini Lectures (Board room)

10:40 - 10:50 Introduction to i-AMS and industry 4.0 – Prof **Seán McLoone** 

10:50 - 11:00 Flexible Manipulation and Manufacturing by Serial and Parallel Robots – Dr Yan Jin

11:00 - 11:10 Robot assisted manufacturing – **Colm Higgins** (followed by guided tour)

12:15 - 12:25 Robot assisted manufacturing – **Colm Higgins** (followed by guided tour)

13:00 - 13:10 Introduction to i-AMS and industry 4.0 - Prof Seán McLoone

13:10 - 13:20 Flexible Manipulation and Manufacturing by Serial and Parallel Robots- Dr Yan Jin

13:20 - 13:30 Robot assisted manufacturing – **Colm Higgins** (followed by guided tour)

#### **Guided tour**

Northern Ireland Technology Centre - NITC

(PKM, UR10 robot, Factory simulation, 3D scanning, etc.)

Time: 11:15, 12:30, 13:35

## Organized by:

Centre for Intelligent Autonomous Manufacturing Systems (i-AMS), QUB

Within the Faculty of Engineering and Physical Sciences at Queen's, **i-AMS** 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.