

THE ENGINEERING INNOVATION CENTRE

ENGINEERING SUMMER ACADEMY

July - August - September 2018

School of Engineering, University of Central Lancashire, Preston, PR1 2HE, UK.



Programme 2: Robots in Application

Date: 5-18 August 2018

Fee: £1,000 including Accommodation



Summer School Programmes focus on engineering activities that allow engineering students to practice the topic area of each programme and develop their skills. All programmes include lectures, tutorials, and an engineering challenge project. This programme is a non-credit bearing activity.

For further information and booking enquiries:

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SUMMER SCHOOL PROGRAMME 2: ROBOTS IN APPLICATION DATE: 5-18 AUGUST 2018

PROGRAMME AIMS:

This programme introduces different robotic systems and their applications, main elements, including different sensors, actuators, controllers, and use of a software to analyse robot kinematics. All attendees will be encouraged to join the Robot Manipulator Project Competition.

TOPICS COVERED:

- Introduction to Robotic systems
- Homogeneous transformation, coordinate frames, transform graphs, coordinate frames
- Direct kinematics, Forward kinematics, and Inverse kinematics
- Programming kinematic models
- Controllers, Sensors; Internal and External
- Actuators; Electrical and Fluid
- Application of Artificial Intelligence in robots, Path control

FEE: £1,000 includes accommodation (en-suite room), three trips to local sites, and group transfer from Manchester Airport. Fee does not cover visa, flights, insurance, food, and local travel. Accommodation booking should be made before 1 April 2018.

Fee: *£1,160 includes extra one week accommodation (en-suite room).*
£1,320 includes extra two weeks accommodation (en-suite room).

