Wolfson School of Mechanical, Electrical and Manufacturing Engineering

Loughborough University

# Senior Teaching Fellow - Robotics, Automation and Control Engineering

## REQ220878

**As part of the University's ongoing commitment to redeployment, please note that these vacancies may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.**

## Job Description

**Job Grade:**
Specialist and Supporting Academic Grade 8 pending experience and qualifications.

**Job Purpose**

To contribute to, develop and enhance the activities of the School through bringing direct academic, professional and vocational experience to the School's taught programmes and enterprise activities. To assist with the structure and development of teaching and enterprise activities. To provide teaching, administrative, and mentoring support.

Candidates with a background in robotics, automation and control engineering. The candidates will be supporting activity across our undergraduate and post graduate programmes in these areas and developing the future curricula in Robotics, Automation and Control Engineering programmes and supporting engineering control delivery across several of our Engineering Programmes. Experience with use and integration of sensors/sensing systems in control and automation features in our programmes and such experience would be welcome.

Engineering academics at Loughborough University have a long-standing tradition of industrial experience and engagement. Candidates will have a profile in line with this tradition and those from outside of academia who have promise to become a top academic are encouraged to apply.

### Job Duties are to:

***Teaching***

- Work with colleagues to deliver an exceptional learning environment for students.
- Teach and inspire undergraduate and postgraduate students and to conduct assessments.
- Provide academic and pastoral support to undergraduate and postgraduate students.
- Promote the use of a range of methods and techniques in teaching, learning and assessment.
- Lead in the evaluation and development of modules for which you are Module Leader, in terms of content, delivery and assessment.
- Responsibility for design and content of specific areas of teaching and learning.
- Cooperate with colleagues in the review and development of taught programmes and curriculum.
- Participate in the design, delivery and supervision of laboratory activities appropriate to the role
- Undertake Academic Tutor roles and visits to students on placement in industry
- Undertake leadership roles in delivery of teaching and curriculum design
- Supervise undergraduate and postgraduate student projects

***Enterprise***

- Engage with business, public and voluntary organisations through knowledge exchange activities such as student projects and placements, technology transfer collaboration, consultancy and specialist training.
- Actively support student recruitment including participation in open days, visit days and summer schools

***Related Activities and Functions***

- Work effectively with relevant administrative, technical and academic staff in the School and across the University.
- Carry out specific administrative roles and functions as may be reasonably required.
- Take part in one or more School committees.
- Chair one or more School committees
- Engage in training programmes in the University (e.g. through Staff Development) which are consistent with your needs and aspirations and those of the School.
- Undertake such other duties as may be reasonably requested and that are commensurate with the nature and grade of the post.

## Person Specification

Your application will be reviewed against the essential and desirable criteria below. Applicants are advised to explicitly state and evidence how they meet each of the essential (and desirable) criteria in their application.

**Essential Criteria:**

| Area | Criteria | Stage[1] |
|---|---|---|
| **Experience** | Background robotics, automation and control engineering | 1,2 |
| | Experience of working with and presenting to senior business leaders | 1,3 |
| | Evidence of academic or professional activity in a subject/discipline consistent with the needs of the School | 1 |
| | Experience of programming automated systems, such as robotic programming languages (e.g ROS), PLC programming/ladder logic. | 1 |
| | Candidates from outside of academia must be able to demonstrate the ability to transition to work in an academic environment | 1,2,3 |
| | Experience of robotics, automation systems integration projects incorporating sensors. | 1 |
| | Experience of leading a team | 1,3 |
| **Skills and abilities** | Excellent communication and interpersonal skills which give you the ability to engage with students, colleagues, business, and other agencies on a wide variety of matters | 1,2,3 |
| | Ability to stimulate and inspire others | 1,2,3 |
| | Ability to work and negotiate with a wide variety of internal and external stakeholders | 1,3 |
| | Flexibility and ability to manage workloads | 1,2,3 |
| | Ability to lecture to undergraduate and postgraduate engineering students across a broad range of control, automation and robotics subjects and projects. | 1,2,3 |
| | Mathematical ability to lecture on Forward/Inverse Kinematics and Jacobians. | 1,2 |
| | Ability to provide tutorial and support to undergraduate and postgraduate students | 1,3 |

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|---|---|---|
| | Ability to work independently and as part of a team | 1,3 |
| | Highly competent in IT skills | 1,2, |
| | The ability to self-teach and adapt to “new” software | 3 |
| **Training** | Commitment to and evidence of continuing professional development | 1,3 |
| | Commitment to enhance skills as new software and technologies and upgrades/techniques emerge | 1,3 |
| **Qualifications** | Educated to first degree level, or equivalent | 1 |
| | PhD degree in a relevant discipline | |
| **Other** | Commitment to observing the University’s Equal Opportunities policy at all times. | 1,3 |
| | Formal recognition of professional standing in teaching (e.g. Fellow of the HEA) or commitment to obtaining this within reasonable timeframe | 1 |
| | Willingness to travel and on occasions work unsocial hours | 1,3 |

**Desirable Criteria:**

| **Area** | **Criteria** | **Stage** |
|---|---|---|
| **Skills and abilities** | Ability to take part in module and programme development | 1,3 |
| | A sound understanding of the structure of universities and issues facing the UK higher education sector and executive education | 1,3 |
| | Leadership experience gained within university or business settings | 1,3 |
| | Budget management experience | 1,3 |
| | Experience of software such as Matlab, Simulink, Gazebo, ConstructSim, CoppelliaSim ROS, PLC programming. NX or equivalent CAD/CAE is also welcome. Training will be provided. | 1,2 |
| **Experience** | Experience of teaching and/or assessment in Mechanical and/or Manufacturing Engineering at BEng / Meng / MSc level | 1,2 |
| | Previous experience in an engineering training Role | 1,2 |
| | Experience of supervising undergraduate, postgraduate or industrial projects. | 1,2 |
| | Substantial experience of teaching and assessment in HE | 1 |
| | Experience of curriculum development | 1,3 |
| | Experience in programming languages (C, C++, Python etc.) | 1 |
| **Qualifications** | Incorporated, or preferably, Chartered Engineer status | 1 |
| | PhD degree in a relevant discipline | 1 |
| **Training** | Completion of a recognised training programme for academic staff | 1 |

[a] 1 – Application 2 – Test/Assessment Centre/Presentation 3 – Interview

**Points to Note**

The purpose of this job description is to indicate the general level of duties and responsibility of the post. The detailed duties may vary from time to time without changing the general character or level of responsibility entailed.

**Organisational Responsibility**

Reports to the Associate Dean for Education & Student Experience.

## Conditions of Service

The position is full time and open ended. Salary will be on Specialist and Supporting Academic Grade 8 (£53,348 – £60,322 pa), at a starting salary to be confirmed on offer of appointment.

The appointment will be subject to the University's Terms and Conditions of Employment for Staff Grade 6 and above, details of which can be found here.

The University is committed to enabling staff to maintain a healthy work-home balance and has a number of family-friendly policies which are available at http://www.lboro.ac.uk/services/hr/a-z/family-leave-policy-and-procedure---page.html.

The University offers a wide range of employee benefits which can be found here.

In addition, the University is supportive, wherever possible, of flexible working arrangements.

We also strive to create a culture that supports equality and celebrates diversity throughout the campus. The Wolfson School and the University hold Bronze Athena SWAN awards that recognises the importance of support for women at all stages of their academic career.

For further information on Athena SWAN see http://www.lboro.ac.uk/services/hr/athena-swan/

## Applications

The closing date for receipt of applications is 24 August 2022.

**Special Conditions**

All staff have a statutory responsibility to take reasonable care of themselves, others and the environment and to prevent harm by their acts or omissions. All staff are therefore required to adhere to the University's Health, Safety and Environmental Policy & Procedures.

All staff should hold a duty and commitment to observing the University's Equality & Diversity policy and procedures at all times. Duties must be carried out in accordance with relevant Equality & Diversity legislation and University policies/procedures.

Successful completion of probation will be dependent on attendance at the University's mandatory courses which include Respecting Diversity and, where appropriate, Recruitment and Selection.