

PROFESSOR in Machine Intelligence

Job Ref: REQ190129

As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.

Loughborough University London, our newest School operates from an inspiring postgraduate campus on the Queen Elizabeth Olympic Park (QEOP), home of the London 2012 Olympic and Paralympic Games. We are at the heart of an exciting cluster known as Here East, where an emerging group of forward-thinkers and digital makers have come together through education, business, technology and media. Activity in the school is delivered through 7 Institutes, each engaged with the business communities that are distinctive to London:

- Design Innovation
- Digital Technologies
- Diplomacy and International Governance
- Innovation and Entrepreneurship
- International management
- Media and Creative Industries
- Sport Business

The successful applicant will be a member of the Institute for Digital Technologies (IDT). The Institute is active across a number of areas of digital technologies, including interactive media systems, mobile networks, Internet of Things, cyber security, big data, machine intelligence and intelligent mobility. The Institute is renowned for building strong collaborations with national and international academic, research, and industrial organisations. The LUL campus is immediately adjacent to the newly created Ford Motor Company Smart mobility group.

Our QEOP campus-based partners include the Advanced Propulsion Centre, the TRL-led Smart Mobility Living Lab project for connected and autonomous vehicles and the UK Institute for Digital Engineering (UK-IDE). The latter is tasked with driving the uptake of digital tools across the UK automotive sector and is a component of the delivery mechanism for the APC funded Loughborough Spoke in Digital Engineering.

The successful applicant is expected to collaborate closely with the Department of Aeronautical and Automotive Engineering (AAE), one of three departments that make up the **School of Aeronautical, Automotive, Chemical and Materials Engineering**. The School is highly research active, entering 98% of academic staff members in the 2014 REF and achieving a UK ranking of 3rd based on research intensity (GPA x Volume). Overall, 83% of our research was rated 4* or 3*. Research is funded by EPSRC, Innovate-UK, industry, EC and QR income amongst other sources. Aeronautical and Automotive Engineering's annual research grants and contracts income is currently around £5 million per annum, and this supports a research community of almost fifty post-doctoral research associates, seventy research students and a number of technical and administrative staff. In both research and teaching, the Department enjoys strong industrial links that support research sponsorship and collaboration, student placement and graduate employment. Research highlights and key partnerships include:

- Rolls-Royce University Technology Centre in Gas Turbine Combustion and National Centre for Combustion and Aero-thermal Technology
- Advanced Propulsion Centre (APC), with significant projects with JLR, Caterpillar and Ford.
- Host to the UK Institute for Digital Engineering (formerly DETC) and APC spoke in Digital Engineering
- Caterpillar Innovation and Research Centre
- Fuel Cell research and spin outs.

The Post

The Institute for Digital Technologies is a leading research group at Loughborough University London and Digital Vehicle Engineering is at the heart of the research activity in AAE, where the focus is on simulation and modelling and the accompanying verification, validation and test. Expanding Loughborough University's digital engineering capability has been identified as a priority area for investment, including in positions of leadership and we are recruiting to complementary positions in AACME and Loughborough University London.

In the Loughborough University London post we are particularly interested in candidates that can enhance our digital engineering research in areas such as data analytics, machine learning and modelling for many application areas including intelligent/smart mobility and applications in digital engineering. Candidates must be able to demonstrate that they complement our existing strengths and must be prepared to build on the existing IDT activities in London and AAE in Loughborough. They will also take a leading role alongside the UK-IDE to lead collaboration with transport sector industrial partners.

Organisational Responsibility

Reports to the Dean of Loughborough University London.

Job Description - PROFESSOR

Please note that this is a generic job description for the position of Professor.

Job Grade

Research, Teaching and Enterprise Grade 9

Job Purpose

To work with other senior academic staff to ensure that the ambitions set out in the University's Strategy, Building Excellence are achieved.

To lead the development and implementation of research, teaching and enterprise strategy to maintain vitality in the activities of the school/department generally and in the academic area specifically.

To engage personally with those activities, adding to the School's international reputation.

Job Duties

Academic Leadership

- To provide academic leadership for the activities of the School specifically in the academic area as well as more generally across the School and the University.
- To pursue excellence in research, teaching and enterprise and to inspire others to do the same.
- To play a lead role in the development and communication of the strategic vision for the academic area.
- To lead and participate in internal and external networks to foster collaboration and to promote, the School and the University, nationally and internationally.
- To monitor the external environment and ensure that the School and University capitalise on emerging opportunities and to review the scope of current academic provision.

Research

- To pursue an 'internationally competitive' personal research programme consistent with the research priorities of the School/Department that increases the global visibility and reputation of the University.
- To secure external research funding.
- To supervise and manage research projects.
- To publish the outcomes of research in outlets of international standing.
- To attend and contribute to the organisation of major international conferences.
- To supervise postgraduate students at Masters and Doctoral levels.
- To initiate, lead and collaborate in research initiatives with colleagues both within the University and externally.
- To initiate, lead and collaborate in research initiatives with other HEIs and other relevant bodies.

Teaching

- To lead colleagues in the School in delivering an exceptional learning environment for students.
- To teach and inspire undergraduate and postgraduate students, and to conduct associated assessments.
- To provide academic and pastoral support to undergraduate and postgraduate students.
- To promote the use of a range of methods and techniques in teaching, learning and assessment.
- To engage in the evaluation and development of modules for which you have responsibility, in terms of content, delivery and assessment.
- To be responsible for the design and content of specific areas of teaching and learning within the School's undergraduate and postgraduate programmes.
- To lead colleagues in the continuous review and development of the School's taught programmes and the curriculum.

Enterprise

- To initiate and lead engagement with business, public and voluntary organisations through knowledge exchange activities such as student projects and placements, research collaboration, consultancy and specialist training.
- To create social, cultural and economic impacts from academic, especially research, activity.
- To secure external funding in support of these activities.
- To seek opportunities for the commercialisation of research and the formation of social enterprises.

Related Activities and Functions

- To appraise and advise staff on personal and career development plans.
- To work effectively with relevant administrative, technical and academic staff in the School and across the University.
- To carry out specific administrative roles and functions as may be reasonably required.
- To take part in and, on occasion, act as chair of one or more of the School's committees.
- To 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.
- To undertake such other duties as may be reasonably requested and that are commensurate with the nature and grade of the post.
- To engage fully with the annual Performance and Development Review (PDR) process.

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

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.

Person Specification

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

Stages of assessment are as follows:

- 1 – Application
- 2 – Test/Assessment Centre/Presentation
- 3 – Interview

Essential Criteria

Area	Criteria	Stage
Experience	Significant leadership experience gained within university or business settings which may include: <ul style="list-style-type: none"> • project management • leading collaborations • managing professional staff (academic or otherwise) within a team. • managing budgets 	1,3
	Evidence of research and/or academic activity in a subject/discipline consistent with the needs of the School.	1
	A sustained and continuing record of excellence which has contributed to the furtherance of knowledge in [academic area], and is recognised by an established and high profile international reputation in that area.	1, 3
	Experience of leading and participating in projects in an internationally recognised academic research including sustained experience at a senior level.	1
	Evidence of authoring a substantial body of original work, in the highest quality refereed academic journals as judged against international norms.	1
	Extended experience of successfully supervising the projects of taught and research students or company staff at equivalent levels.	1,3
	Experience of presenting research work at international scientific conferences.	1
	Experience of teaching and assessment at undergraduate and postgraduate level and of curriculum development.	1,3
	Experience of work in or in collaboration with other businesses	1
	Candidates from outside of academia must be able to demonstrate the ability to make the transition to becoming a top academic	1,2,3
Skills and Abilities	Demonstrated ability to develop a major original research programme on your own initiative and to persuade others of its importance orally and on paper.	2,3
	Demonstrated ability to secure substantial research funding and/or enterprise funds from external / company sources on a regular basis.	1,3
	Demonstrated ability to create social / cultural / economic impacts from professional activity.	2,3
	Ability to stimulate and inspire others as reflected in academic leadership and influence beyond own discipline/institution.	2,3

	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
	Experience of leading a team.	2,3
	Excellent IT skills.	1
Training	Commitment to and evidence of continuing professional development.	1,3
Qualifications	Relevant PhD or equivalent research experience.	1
Other	Commitment to observing the University's Equal Opportunities policy at all times.	1,3
	Fellow of the Higher Education Academy	1

Desirable Criteria

Area	Criteria	Stage
Experience	Experience at research group head or equivalent level including: <ul style="list-style-type: none"> Strategic planning and delivery. Promoting your organisation. 	1,3
	Experience in commercial exploitation of products / services or formation of social enterprises.	1,3
Skills and abilities	A sound understanding of the structure of universities and issues facing the UK higher education sector, for example: <ul style="list-style-type: none"> Research funding opportunities in UK HE. The challenges faced in recruiting students to UK HE. 	2,3 1
Qualifications	Appropriate professional status	1

Conditions of Service

Salary will be on Research, Teaching and Enterprise Grade 9, minimum £65,361 per annum, plus a London allowance of £3,147 per annum, at a starting salary to be confirmed on offer of appointment. Subject to annual pay award, in exceptional circumstances the University may offer a market supplement of up to 10% of the maximum salary quoted per annum.

The appointment will be subject to the University's normal Terms and Conditions of Employment for Academic and Related staff, 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 [here](#).

We also offer an on-campus nursery with subsidised places, subsidised places at local holiday clubs and a childcare voucher scheme (further details are available [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 University holds a Bronze Athena SWAN award which recognises the importance of support for women at all stages of their academic career. For further information on Athena SWAN see [here](#).

Applications

The closing date for receipt of applications is 11 March 2019

