

Job Detail

(Overview, Role Detail and Person Specification)

School of Science, Engineering &
Environment

North of England Robotics Innovation Centre

Research Fellow – Grade 7

Role Title: Research Fellow

Reports To: Professor in Robotics and Autonomous Systems

Overview

Once at the centre of Britain's Industrial Revolution, the University of Salford is now at the heart of 21st century creativity and learning, harnessing the skills, imagination and enthusiasm of our staff and students to work in partnership with large and small enterprises across the public, private and charitable sectors to change people and communities and deliver lasting economic and social benefit.

We have shaped a completely refreshed vision for success. Our University comprises four large schools which are closely aligned to our industry partners. With a sustained focus on excellence through engagement, we are revamping our approach to employability, enterprise, curriculum development and research; embedding these activities across University to bring our vision to life.

The School of Science, Engineering and Environment (SEE) is an inter-disciplinary School comprises world-leading research and teaching in Engineering as well as Acoustics, Computer Science, Biology, Physics, Biomed, Wildlife, Geography and Environmental Management. The School's central strategy is to reinforce a strong international record for high-quality research-led teaching and continue with our real-world focus on education. This is enabled through a series of university-level industrial collaborations that facilitate the engagement of industrial partners in the design and delivery of our taught programmes.

As part of its commitment to excellent high-level research, with funding from Research England we have developed the North of England Robotics Innovation Centre (NERIC) project. This will be an internationally acclaimed research and innovation facility focusing the three sectors of food and drink, healthcare, and intelligent mobility.

This is an exciting opportunity for an outstanding Research Fellow to join the University of Salford. This post will be based in the Directorate of Engineering, but the role will work across the whole School and indeed across the wider University.

Highly pertinent to this vacancy is the School's leading role in the establishment of the North of England Robotics Innovation Centre (NERIC) to be opened in 2022. This will be an internationally acclaimed research and innovation 'go-to' facility and provider of Robotics / AI solutions for SMEs; housing robotics, manufacturing labs, a healthcare robotics laboratory, an industrial collaboration space and a smart mobility laboratory and will serve as a hub for the University of Salford's robotics and automation specialists who are looking to work with SMEs around the country to provide solution development, design, testing and validation of digital innovation. Disciplines covered by the development will include robotics for intelligent infrastructure; digital automation and supply chain improvement; future transport systems; and health, wellbeing, and integrated care technologies. We work with a diverse range of external collaborators, including industry and government agencies. Key health partners are NHS Northern Care Alliance, Manchester NHS

Foundation Trust, Health Innovation Manchester and multiple global assistive technology partners including WHO, International Society of Prosthetics and Orthotics, and 'Exceed' worldwide.

The development of the Robotics Innovation Centre is part of the Salford Crescent and University District Masterplan; a £2.5 billion, 240-acre major regeneration scheme, aimed at driving economic and social prosperity for the whole of the city over the 10-15-year life of the programme. English Cities Fund has been awarded the contract to be the delivery partner for the Masterplan.

Our degree programmes are designed to meet the accreditation requirements of the engineering professional bodies and consequently, we will be looking for an individual with professional registration and active membership of a professional body licenced by the Engineering Council such as the Institution of Engineering and Technology. The University of Salford is investing heavily in its engineering provision; from undergraduate teaching development through to research and industry collaboration facilities. We aim to develop students' capacity to learn independently and apply critical thinking to live projects from industry and global societal grand challenges.

All appointments will be made on merit, and as an equal opportunities employer, we welcome applications from all suitably qualified persons.

In recognition of our commitment to create a diverse team that draws from our widest talent pool we would particularly encourage applications from groups who are currently under-represented at this level. In engineering we would particularly encourage female applicants, as this group is currently under-represented.

For an informal discussion about this post, please contact the Dean of School of Science, Engineering and Environment, Professor Joe Sweeney (J.B.Sweeney@salford.ac.uk).

Role Detail

Role Purpose

Working in response to the needs of small and medium sized enterprises (SMEs), this role will support research projects, conducting research, analysing results and generating original ideas. There is now an exciting opportunity for 5 x Research Fellows to support this work for a fixed term period. This role will contribute to the delivery of project and provide technical, analytical and research support to commercial organisations in supporting the development of new products and services in the field of robotics and autonomous systems. The Research team will support research projects, conducting research, analysing results and generating original ideas; work with SMEs to 'problem solve' live business issues where Robotics/AI interventions will help improve growth, productivity or resilience. We particularly encourage applications from candidates with expertise/interests in health/assisted living, autonomous vehicles, and the implementation of robotics in manufacturing.

They will report to the Professor in Robotics and Autonomous Systems and will also have reporting responsibilities to the academic lead and be expected to engage with the wider project team. They will be expected to deliver outputs for the ERDF and RED elements of the project working with SMEs.

Responsibilities

Perform the following activities in conjunction with the Principal/Co Investigator:

- To provide technical, analytical and research support to SMEs in supporting the development of new products and services in the field of intelligent automation and robotics
- To generate outputs for high quality peer review journals as well as wider forms of dissemination to academia, industry and government.
- To undertake research projects related to intelligent automation and robotics
- To help conceive and then to plan and deliver experimental and innovation projects within NERIC and supporting facilities.
- To develop research objectives in connection with the project
- To work within the project timescales, agreed work plans and funding guidelines
- Presentation of work at international and national conferences, at internal and external seminars, colloquia and workshops
- To collect, process and interpret data relevant to the aims of the research project to ensure that research is conducted to appropriate ethical and governance standards as defined by the University
- Ensuring the project progress is in line with agreed timescales
- Ensuring the senior academic is regularly informed of study progress and issues pertinent to future progress
- Contribution to the writing of report/s in line with the project funding and under the guidance of the NERIC Project Managers.

- Work with wider NERIC team to ensure projects are delivered.
- Comply with the personal health and safety responsibilities specified in the University Health and Safety policy.
- Perform any other duties appropriate to the grade as may be required by their Line Manager/Dean of School/Head of Division etc.
- Comply with the personal health and safety responsibilities specified in the University's Health and Safety Policy.
- To engage with the University's commitment to put our students first and to deliver services which are student orientated, represent value for money and contribute to the financial and environmental sustainability of the University when undertaking all duties and aspects of the role.
- Promote equality and diversity for students and staff and sustain an inclusive and supportive study and work environment in accordance with University policy;

This role detail is a guide to the work you will initially be required to undertake. It may be changed from time to time to meet changing circumstances. It does not form part of your Contract of Employment.

Person Specification

Qualifications

	The successful candidate should have:	Essential/ Desirable	Tested by* A, I, P, T
1	Completed PhD or PhD in progress in related in a numerate science subject including Robotics, Control and Automation, Mechatronics, Industry 4.0, Engineering or substantial relevant industry/sector experience in robotics and/or autonomous systems	E	A

Background & Experience

	The successful candidate should have:	Essential/ Desirable	Tested by* A, I, P, T
2	Evidence of research activity and published research	E	A, I, P
3	Experience of undertaking high quality research in an academic and/or consultancy environment	E	A, I,
4	Knowledge and experience in undertaking desktop research, and systematic identification and review of literature	E	A, I, P
5	Experience of producing outputs for academic and non-academic audiences	E	A, I,
6	Experience of working with industry or other external stakeholders	D	A, I,

Knowledge

	The successful candidate should have demonstrable knowledge of:	Essential/ Desirable	Tested by* A, I, P, T
7	The robotics and autonomous systems discipline and of research methods and techniques to work within established research programmes	E	A, I,
8	Qualitative and quantitative approaches to research	E	
9	The field of robotics or control and automation of systems.	E	A, I,
10	The practical application of robotics that are low-cost to deliver but have high productivity impact, ideally in relation to Food, drink and packaging, Healthcare innovation, or Smart mobility	E	A, I,
11	Experience in writing and submitting grant applications and/or papers	D	A, I,
12	The programming, design, construction and testing of advanced hardware and software platforms for robotics	D	A, I

Skills & Competencies

	The successful candidate should demonstrate:	Essential/ Desirable	Tested by* A, I, P, T
13	The ability to produce accurate and timely technical reports and to check the accuracy of reports produced by others.	E	A, I
14	Excellent communication skills	E	A, I
	Excellent problem-solving and analytical skills with the ability to approach and resolve problems in a thoughtful, logical and practical manner	E	A, I
	Able to communicate material of a specialist or highly technical nature.	E	A, I
	Good organisational skills	E	A, I
	Able to build contacts and participate in internal and external networks for the exchange of information and collaboration.	D	A, I

A = Application form, I = Interview, P = Presentation, T = Test

Details of any assessments required will be provided in the invitation to interview letter.



The University of Salford is proud of its diverse student population and in this academic role it's important for us to create an inclusive culture where all our students and colleagues can bring their whole selves to the University.

We recognise that our colleague profile is not as diverse as it should be, particularly looking at the diversity of our students and have developed targets to increase the ethnic diversity of our teams. The School of Science, Engineering and Environment (SSEE) has a colleague profile of 19% that come from a Black, Asian and Minority Ethnic (BAME) background. This, however, is far outweighed by an ethnically diverse student profile at 38%.

We also operate a guaranteed interview scheme for job applicants who declare they have a disability and meet the essential criteria of the job they are applying for and we make every effort to support disabled colleagues by providing them with equipment or making reasonable adjustments to support them in their career journey.

It is important to us that we can provide a high-quality learning experience and an environment in which our students can see themselves and thrive.

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Candidate guidance

****** In order to fully meet the essential criteria candidates must show clear evidence of how they meet the criteria. Simply stating that you have a skill or experience in an area is not sufficient, you must provide a clear example to show how you have met each of the criterion you address.
