



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

University Academic Fellow in Simulation Solutions for Vehicle Automation, Institute for Transport Studies, Faculty of Environment



Salary: Grade 8 (£40,792 – £48,677 p.a.)

Successful completion of a five-year probationary period leading to confirmation as a Grade 9 Associate Professor

Reference: ENVTR1078

Closing date: 18 November 2018

We will consider job share / flexible working arrangements

University Academic Fellow in Simulation Solutions for Vehicle Automation

Institute for Transport Studies, University of Leeds

Are you an academic with proven abilities to carry out teaching and research in computer science, vehicle simulation or engineering, with a particular emphasis on automated vehicles? Do you have an excellent research record and proven success obtaining funding? Are you passionate about delivering an exceptional student experience in a research-intensive Russell Group University? Do you aspire to become an academic leader in your field?

In a bid to improve road safety, reliability, energy efficiency and productivity, while reducing infrastructure costs, vehicle manufacturers are increasing the degree of automation in cars. These systems reduce the driver's involvement in the actual operation of the vehicle, and increasing their potential to engage in other tasks, such as reading emails, texting etc.

As automation penetration increases, it is not clear how humans will interact with these systems and what the real consequences of vehicle and road automation are. With its world leading [Virtuocity centre, incorporating an](#) immersive simulation suite which includes a motion-based driving simulator and state-of-the-art, EPSRC-funded, pedestrian-in-the-loop simulator, the Institute for Transport Studies (ITS) is at the forefront of understanding the human factors challenges these automated systems pose.

Members of the Human Factors and Safety group at ITS are partners in a number of leading projects in this area, including HumanDrive, funded by Innovate UK, and the EU-sponsored interAct and L3Pilot projects, which are investigating solutions for a human-centred design of these systems, as well as their verification and validation. Driverless cars have stimulated a new set of research needs relating to the redesign of traffic systems, legal frameworks, business models and environmental performance and the University of Leeds provides the perfect environment to leverage the multidisciplinary interaction between data analytics, artificial intelligence and immersive simulation, while ensuring the needs of the driver and other, more vulnerable, road users are taken into account.

This fellowship position is available in a vibrant research market, with over £500M of funding opportunities in the driverless car research area supported by multiple funding paths, including the Industrial Strategy Challenge Fund, Meridian Mobility



Technology, UKRI, Innovate UK, and the European Commission, as well as through direct collaboration with a wide range of industrial partners. You will be expected to develop your own research portfolio in this area, contributing to the University's ambition to excel at the UK's next Research Excellence Framework (REF2020), with a sustained record of internationally excellent (and some world-leading) publications, and a strong record of presentations at international conferences.

In partnership with colleagues at ITS, you will be encouraged to develop research proposals in this field, as well as working closely with our internal and external collaborators. The post holder will be able to apply knowledge from Engineering, Computer Science, or other relevant disciplines to understand developments in simulation, sensors, Artificial Intelligence, and control technologies, and have an appreciation of how humans will interact with the next generation of automated vehicles.

A key role of the post-holder will be to strengthen the link between the engineering and human factors aspects of this work, and you will be expected to play a key part in bringing together interests in automation research across the University of Leeds, working closely with colleagues from Virtuocity, Psychology, Leeds Institute for Data Analytics, the School of Computing, and Leeds Robotics, with an aim to build critical mass for contribution to a cross-disciplinary PhD training programme in automation, simulation and immersive technologies. You will contribute to current and future Masters teaching at ITS, and to the recruitment and supervision of doctoral students in the area.

This University Academic Fellowship (UAF) is for future academic leaders providing an excellent opportunity to establish an academic career at a research intensive university and play a key role in our ambitious plans for the future. You will embark on a structured five year development programme, successful completion of which will lead to your appointment as a grade 9 Associate Professor.

What does the role entail?

As a University Academic Fellow in Vehicle Automation and Simulation, your main duties will include:

- Pursuing a programme of individual and collaborative research, resulting in high-quality publications, and a national and international profile, engaging with industry, as appropriate, to attract and co-ordinate major initiatives;



- Promoting the integration of your own research area with other research interests, in the School, Faculty and University;
- Attracting research income on an individual and collaborative basis according to an agreed plan, as appropriate to the field or discipline, to support high quality research activity and research programmes/projects;
- Developing a strategy to ensure that your research has the potential for impact beyond the immediate subject area and/or beyond academia;
- Undertaking research-led teaching at different levels, with engagement in continual improvement in response to student and other feedback;
- Contributing to the design, development and planning of modules and policy within the subject area as required;
- Working in line with the University's Partnership Agreement and with our students as members of a learning community to provide outstanding education and an excellent student experience;
- Contributing to the management of the school by taking on appropriate leadership, management and administrative responsibility;
- Leading academic initiatives and projects in research and student education which facilitate School, Faculty and/or University development;
- Participating in the recruitment, management and development of staff as well as acting as a mentor to less experienced colleagues;
- Contributing to the development of the discipline or research area, e.g. through organisation of conferences or membership of key bodies setting the strategic direction of the area;
- Contributing to the development and achievement of University, faculty and school strategy within the context of an international, research-led university;
- Becoming a specialist in the field, developing and maintaining an external profile as appropriate to the discipline;
- Maintaining own continuing professional development.

These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.

What will you bring to the role?

As a University Academic Fellow in Vehicle Automation and Simulation, you will have:



- A PhD (or equivalent qualification) in Computer Science, Robotics, Electronic or Mechanical Engineering or a related discipline;
- Evidence of a clear and compelling academic plan that will deliver academic and more general impact at an international level, in order to meet the criteria for progression to Associate Professor within the five year probationary period (please attach a statement of no more than 2 sides of A4 to your application);
- Significant, proven research experience which is relevant to vehicle and road automation design and validation, with a developing record of internationally excellent publications;
- A track record of gaining significant competitive research funding;
- Experience of presenting at national and international conferences and/or symposia;
- Evidence of building strong working relationships within, and, as appropriate, beyond your own discipline and to contribute to successful projects and collaborations;
- The potential and commitment to undertake high quality and innovative teaching and gain a higher education teaching qualification or award;
- Experience of delivering and engaging with student education where opportunities have existed;
- A high level of interpersonal and communication skills, and a strong ability to communicate effectively in writing, and verbally, with students, academic and external audiences;
- The ability to lead projects and organise, balance and prioritise work commitments.

You may also have:

- Success in gaining significant independent research funding;
- Experience of leading on projects and initiatives, including managing resources and conflicting priorities within challenging circumstances;
- A growing track record of successful and innovative teaching at both undergraduate and/or postgraduate level;
- Experience of involvement in postgraduate research supervision;
- Experience of working collaboratively with external partner organisations;
- Experience of mentoring less experienced colleagues.



How to apply

You can apply for this role online; more guidance can be found on our [How to Apply](#) information page. Applications should be submitted by **23.59** (UK time) on the advertised closing date.

Your application should include:

- a supporting statement highlighting how you meet the criteria for the role and how you believe your existing knowledge and experience equips you for performing the role;
- a copy of your curriculum vitae giving full details of qualifications and experience.

Contact information

To explore the post further or for any queries you may have, please contact:

Prof Natasha Merat, Research Group Leader for Human Factors and Safety

Tel: +44 (0)113 343 6614

Email: N.Merat@its.leeds.ac.uk

Additional information

Find out more about the [Faculty of Environment](#).

Find out more about our [Institute](#).

Find out more about our [Research and associated facilities](#)

Find out more about [Athena Swan](#) in the Faculty

Working at Leeds

Find out more about the benefits of working at the University and what it is like to live and work in the Leeds area on our [Working at Leeds](#) information page.



Candidates with disabilities

Information for candidates with disabilities, impairments or health conditions, including requesting alternative formats, can be found on our [Accessibility](#) information page or by getting in touch with us at disclosure@leeds.ac.uk.

Criminal record information

Rehabilitation of Offenders Act 1974

A criminal record check is not required for this position. However, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending.

Any offer of appointment will be in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our [Criminal Records](#) information page.

