Faculty of Environment

Institute for Transport Studies

University Academic Fellow

Big Data and Transport Modelling

With a vision and drive to develop a prestigious internationally competitive research portfolio as well as a passion for undertaking research-led teaching you will make a significant impact on the performance, stature and profile of research and student education at The University of Leeds.

This University Academic Fellowship (UAF) is a tenure track equivalent post for future academic leaders which provides 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.

Traffic congestion costs £20bn per year to the UK economy. Active Traffic Management (ATM) has been designed to reduce traffic congestion through responsive control methods including variable speed limits, ramp metering on freeways or signal timings in urban networks. Traffic prediction models are a crucial part of such ATM programs that underpin traffic network reliability and efficiency and an area where the Institute for Transport Studies has a globally leading profile. In the past decade, network modelling has advanced rapidly with the development of dynamic traffic models that describe the dynamics of the traffic network in space and time. The advances in information and communication technologies (ICT) and the availability of real-time large scale traffic data, together with the increasing penetration of intelligent vehicles in traffic now make it possible to include real-time information in traffic models. Utilising such real-time traffic data available from multiple sources (i.e. Bluetooth, mobile phones, loop detectors or wifi) will make significant breakthroughs in traffic modelling theory and practice.

You will play a crucial role in maintaining our world leading academic profile whilst diversifying further the range of skills that can be brought to bear. You will provide a step-change in our capacity to engage with this area. As an all round academic,

you will develop a research profile that will contribute to the University's ambition to excel at REF2020, with a sustained record of internationally excellent (and some world-leading) publications and a strong record of presentations at international conferences. You will be expected to collaborate with colleagues within the Institute and forge links with the Leeds Institute for Data Analytics and the departments of Maths and Computing in order to build research proposals in the area of Big Data/Smart Cities. You will be expected to access funding opportunities coming from national and international sources in the area of real-time traffic management and planning of large-scale networks and to engage with organisations on the real-world application of the research.

On the teaching side, we see the Transport Systems Catapult as a key source of innovation funding in the Sector; the Transport Systems Catapult is positioning the UK as a Centre of Excellence in transport modelling and we aim to provide the globally leading programme to support that (from 2016). As such you will make an important contribution to our proposed new advanced modelling masters' programme on how to use big data in modelling transport.

With a PhD in a relevant related discipline such as mathematics, computer science, engineering or transport studies, you will have a strong research record and experience within the field of Transport Modelling which makes use of large data sources, the ability to teach at Postgraduate level, as well as a clear and compelling vision for personal academic development.

Career Pathway: Tenure track equivalent post requiring successful completion of a 5 year probationary period leading to appointment to grade 9 Associate Professor.

University Grade 8 (£38,511 to £45,954)

For informal enquiries about the role please contact Professor Simon Shepherd, tel: +44 (0)113 343 6616, email: S.P.Shepherd@its.leeds.ac.uk.

Ref: ENVTR1003

Click here for further information about working at the University of Leeds www.leeds.ac.uk/info/20025/university_jobs

Job Description

Reports to: Head of School

Main Duties and Responsibilities

Research, Innovation and Impact

- Pursue a programme of individual and collaborative research, resulting in high quality publications and a national and international profile and engaging with industry as appropriate to attract and co-ordinate major initiatives.
- Promote the integration of your own research area with other research interests and themes, in the school, faculty and University.
- Attract 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.
- Develop a strategy to ensure that your research has the potential for impact beyond academia.

Student Education

- Undertake research-led teaching at undergraduate and/or postgraduate level, with engagement in continual improvement in response to student and other feedback.
- Contribute to the design, development and planning of modules and policy within the subject area as required.
- Work 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.

Academic Leadership

- Contribute to the management of the school by taking on appropriate leadership, management and administrative responsibility.
- Lead academic initiatives and projects in research and student education which facilitate school, faculty and/or University development.
- Participate in the recruitment, management and development of staff as well as acting as a mentor to less experienced colleagues.
- Contribute 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.

General

- Contribute to the development and achievement of University, faculty and school strategy within the context of an international, research-led

university.

- Become a specialist in the field, developing and maintaining an external profile as appropriate to the discipline.
- Maintain own continuing professional development.
- Carry out the duties of the post in accordance with the University policies, procedures, values and standards, including the Leadership and Management standards.

This job description provides a framework for the role and it may be necessary for a University Academic Fellow to undertake any duties commensurate with the post as might reasonably be required.

Person Specification

Essential

- A PhD (or equivalent qualification) in a relevant field.
- 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 5 year probationary period.
- Significant proven research experience within the academic discipline with a developing record of internationally excellent publications.
- A track record of gaining 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.

Desirable

- 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.

University Values

All staff are expected to operate in line with the University's values and standards, which work as an integral part of our strategy and set out the principles of how we work together. More information about the University's strategy and values is available at http://www.leeds.ac.uk/comms/strategy/.

Additional Information

The University offers generous terms and conditions of employment, a wide range of benefits, services, facilities and family friendly policies. Full details are available on the Human Resources web pages accessible at www.leeds.ac.uk/hr

The Partnership

The Partnership has been developed by students and staff and describes the mutual expectations of us all as members of the University of Leeds community. More information about the Partnership is available at http://partnership.leeds.ac.uk

Disclosure and Barring Service checks

A Disclosure and Barring Service (DBS) check is not required for this position. However, applicants who have unspent convictions must indicate this in the 'other personal details' section of the application form and send details to the Recruitment Officer at disclosure@leeds.ac.uk.

Disabled Applicants

Disabled applicants wishing to review access to the building are invited to contact the department direct. Additional information may be sought from the Recruitment Officer, email disclosure@leeds.ac.uk or tel + 44 (0)113 343 1723.

Disabled applicants are not obliged to inform employers of their disability but will still be covered by the Equality Act once their disability becomes known.

Further information for applicants with disabilities, impairments or health conditions is available in the applicant guidance.