



**UNIVERSITY OF LEEDS**

## **CANDIDATE BRIEF**

**Research Fellow in Low-Emission Driving, Management and Assistance,  
Faculty of Environment**



**Salary: Grade 7 (£33,199 – £39,609 p.a.)**

**Reference: ENVTR1091**

**Closing date: 7 July 2019**

**Fixed term for three years (due to external funding) to start no later than 1 September 2019**

**We will consider job share/flexible working arrangements**



# Research Fellow in Low-Emission Driving, Management and Assistance

## Institute for Transport Studies, Faculty of Environment

**Are you an ambitious researcher looking for your next challenge? Do you have a background in vehicle emissions, driving behaviour, big data analytics or deep learning? Do you want to further your career in one of the UK's leading research intensive Universities?**

ITS has been awarded the three-year MODALES project from H2020 which aims to develop solutions to reduce the impact of the user (including driving behaviour and choices in maintaining the vehicle) on emission production. Over a 36-month timeframe, MODALES will monitor driving behavioural variability and recognise typical driving patterns and practises and establish the correlation of the variability with vehicular emissions characterised by powertrain, brakes and tyres. Based on this knowledge, the project will then create training courses for low-emission driving. These will be tested and validated in pilot exercises carried out in Europe, China, Latin America, and beyond.

You will work with and in support of Dr Chen's research to ensure project tasks are successfully completed. Primarily you will be working on the MODALES project.

### What does the role entail?

As Research Fellow, your main duties will include:

- Working with and in support of Dr Chen's research to ensure the MODALES project is successfully completed. You may also support other projects as and when required;
- Leading driver behaviour analysis and correlated impact on powertrain emission and brake, road/tyre emissions;
- Contributing to the development of training material for low emission driving and training strategy;
- Analysing and assessing the effectiveness of on-board diagnostics (OBD) and inspections for detecting poor maintenance and tampering behaviour;
- Developing research objectives and proposals and contributing to setting the direction of the research project and team including, where appropriate, preparing proposals for funding in collaboration with colleagues;



- Evaluating methods and techniques used and results obtained by other researchers and relating such evaluations appropriately to your own work;
- Communicating or presenting research results through publication or other recognised forms of output;
- Preparing papers for publication in leading international journals and disseminating research results through other recognised forms of output;
- Working both independently and also as part of a larger team of researchers, engaging in knowledge-transfer activities where appropriate and feasible;
- Maintaining your own continuing professional development and acting as a mentor to less experienced colleagues as appropriate;
- Contributing to the training of both undergraduate and postgraduate students, where appropriate, including assisting with the supervision of projects in areas relevant to the project.

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 Research Fellow you will have:

- An undergraduate degree in Engineering, Science, Computing Science or Mathematics and Statistics (2.1 or above);
- Either a PhD or near completion- i.e. the initial thesis needs to have been handed in at the point of application in transport, environment or a closely allied discipline **or** significant work experience relevant to vehicle emissions, air pollution and driving behaviour;
- A strong background in quantitative or qualitative analysis of emission-related data from sources such as GPS devices, vehicles, roadside stations, apps and attitudinal surveys;
- Experience of field operational tests related to driving behaviour and emissions;
- Experience in correlation analysis of driver behaviour/reaction under different traffic and environment conditions;
- A good knowledge of design and management of database and data server for the security and protection of personal data;
- Experience with data analysis software such as SPSS, MATLAB, Excel macros;
- A track record of publication in top transport journals (e.g. Transportation Research series, IEEE Transactions on ITS);



- Excellent written and verbal communication skills including presentation skills;
- A proven ability to work well both individually and in a team;
- A strong commitment to your own continuous professional development;
- Good time management and planning skills, with the ability to meet tight deadlines, manage competing demands and work effectively under pressure without close support.

You may also have:

- Knowledge of GIS software tools such as ArcGIS;
- Good knowledge of deep learning, AI;
- Experience of software programming languages such as C, Basic, R or Python;
- A good understanding of transport modelling and traffic management.

## How to apply

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

## Contact information

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

[Dr Haibo Chen, Principal Research Fellow](#)

Tel: +44 (0)113 343 5355

Email: [H.Chen@its.leeds.ac.uk](mailto:H.Chen@its.leeds.ac.uk)

## Additional information

Find out more about the [Faculty](#)

Find out more about our [Institute](#)

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

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





## **A diverse workforce**

The Faculty of Environment has been awarded the Athena SWAN bronze award for our work on advancing gender equality across the three schools.

## **Working at Leeds**

You can find out more about our generous benefits package and more about what it is like to work at the University and live in the Leeds area in our [Working at Leeds](#) information.

## **Candidates with disabilities**

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

