



# OPPORTUNITY

## Research Associate

**Reference:** R210394

**Salary:** £34,304 to £36,382, per annum. Grade 8, depending on experience

**Contract Type:** Fixed term for 3 years

**Basis:** Full Time

# Job description

## **Job Purpose:**

To contribute to, develop and lead research activities of the School either independently or as part of a team, through professional practice and expertise. In addition, to exploit external links with regional, UK and international bodies such as government agencies, schools, colleges, professional bodies, business and industry as appropriate to the subject discipline and School and/or University strategy.

## ***Main Duties and Responsibilities***

### **Research**

- ▶ To lead and complete the research work packages that Aston team is responsible for in an EPSRC funded project of “Incorporating Size Effects into Multiscale Adhesion Modelling of Bitumen-Mineral Interfaces”, with support from the project principal investigator.
- ▶ To develop research objectives, projects and proposals for personal/joint research programmes consistent with the priorities and strategy of the School, with the assistance of a mentor if required.
- ▶ To write up and publish the outcomes of research in good quality publications.
- ▶ To present papers, posters, reports at seminars, conferences etc.
- ▶ To collaborate in research initiatives with colleagues in and beyond the School as appropriate.
- ▶ To identify sources of funding, develop and submit funding applications, securing external research funding.
- ▶ Where appropriate to School/University strategy and subject discipline, to participate in and develop external networks.
- ▶ To supervise and manage research projects
- ▶ To supervise PhD and other postgraduate students to completion.
- ▶ To coach junior colleagues in research.

### **Teaching**

- ▶ To undertake a limited amount of teaching with students at a range of levels, achieving good student feedback through critical reflective practice,
- ▶ To contribute to the assessment of student knowledge and the supervision of student projects.
- ▶ To assist in the development of student research skills.

### **External engagement**

- ▶ To work closely with project partners at The University of Nottingham to achieve the overall research objectives defined in the EPSRC project.

- ▶ To liaise with the industrial partners (Aggregate Industries and National Highways) regarding provision of asphalt materials and field assessment data.
- ▶ To liaise with software programmers developing the experimental database and web-based opensource adhesion analysis framework (AAF).
- ▶ To represent the interests of the subject and School via activities to raise the regional, national and international profile, particularly with the professions, schools and businesses.
- ▶ To forge relationships with the professional bodies and other bodies representing relevant professional interests.

### **Citizenship**

- ▶ To carry out specific (School) roles and functions as may be reasonably required e.g. Head of Department, Programme Director, Personal Tutor, Admissions Tutor).
- ▶ To take part in the meetings and activities of the Academic Department and, on occasion, act as Chair of one or more of the School committees, these responsibilities being equitably distributed across the academic staff.
- ▶ To demonstrate the University's leadership values through own actions and behaviour.
- ▶ To undertake such other duties as may be reasonably requested and that are commensurate with the nature and grade of the post.

### **Additional responsibilities**

- ▶ Engage in continuous personal and professional development in line with the demands of the role, including undertaking relevant training and development activities to develop themselves and support the development of others.
- ▶ Ensure and promote the personal health, safety and wellbeing of staff and students.
- ▶ Carry out duties in a way which promotes fairness in all matters and which engenders trust.
- ▶ Promote equality of opportunity and support diversity and inclusion as well as working to support the University's environmental sustainability agenda and practices.

## Person specification

	Essential	Method of assessment
<b>Education and qualifications</b>	<p>A master's degree in Civil Engineering, Mechanical Engineering, Material Science, or relevant subjects.</p> <p>A PhD in Pavement Engineering, Material Engineering, Mechanics, or relevant subjects.</p>	Application form
<b>Experience</b>	<p>Experience of initiating and conducting research up to doctoral level</p> <p>Experience of writing up/contributing to the write up of research for high quality publications.</p> <p>Experience of producing papers, posters, reports presenting at seminars, conferences etc.</p> <p>Experience of positive collaboration within and outside of candidate's immediate research team.</p> <p>Supervising other personnel involved in the project.</p>	Application form and interview
<b>Aptitude and skills</b>	<p>Ability to present data in both a clear and concise manner that is visually appealing.</p> <p>Ability to prepare written communications to a high standard</p> <p>Ability to develop and maintain a research programme and to publish in high quality publications.</p> <p>Ability to harness IT as a research and teaching tool</p> <p>A willingness to undertake further training as appropriate and to adopt new procedures as and when required.</p>	Application form and interview

	Desirable	Method of assessment
<b>Experience</b>	<p>Viscoelastic, fracture and damage mechanics analysis of road construction materials, e.g., bitumen, asphalt and aggregates.</p> <p>Cracking modelling and performance prediction of asphalt materials.</p> <p>Data analysis of microstructural and mechanical tests of bituminous and mineral materials.</p> <p>Multiscale modelling and performance predictions of road materials.</p> <p>Molecular dynamics modelling of polymer and mineral materials.</p> <p>Finite element modelling of road material and structures.</p> <p>Programming and computing skills using mathematical, coding or database software.</p>	Application form and interview



# Contact information

## Enquiries about the vacancy:

Name: Yuqing Zhang  
Job Title: Senior Lecturer  
Email: [y.zhang10@aston.ac.uk](mailto:y.zhang10@aston.ac.uk)

## Enquiries about the application process, shortlisting or interviews:

Recruitment Team via [jobs@aston.ac.uk](mailto:jobs@aston.ac.uk) or 0121 204 4500.

# Additional information

Visit our website <https://www2.aston.ac.uk/staff-public/hr> for full details of our salary scales and benefits Aston University staff enjoy

**Salary scales:** <https://www2.aston.ac.uk/staff-public/hr/payroll-and-pensions/salary-scales/index>

**Benefits:** <https://www2.aston.ac.uk/staff-public/hr/Benefits-and-Rewards/index>

**Working in Birmingham:** <https://www2.aston.ac.uk/birmingham>

**Employment of Ex-Offenders:** Under the Rehabilitation of Offenders Act 1974, a person with a criminal record is not required to disclose any spent convictions unless the positions they applying for is listed an exception under the act.

## Eligibility to work in the UK:

### New immigration system from 1 January 2021

A new immigration system has been introduced for people arriving in the UK from EEA countries with effect from 1 January 2021. In addition to those who have always required a visa, EU citizens who were not resident in the UK before 31 December 2021 will need to get a visa in advance.

You can find more information [here](#)

Candidates should check their eligibility to enter or remain in the UK in advance of making any job application via the [UKVI website](#). Before applying you should ensure that you meet the requirements, including meeting the English Language requirements. If you do not meet the eligibility criteria, any application for a work visa would be unsuccessful.

If you require a visa to work in the UK the most common types of visa are:

- Skilled Worker Visa <https://www.gov.uk/skilled-worker-visa>
- Global Talent Visa

If you are a leader or potential leader in one of the following fields you may be eligible to

apply for a Global Talent Visa:

- Academia or Research
- Arts and Culture
- Digital Technology

Please click the following link for further information and to check your eligibility for this visa. <https://www.gov.uk/global-talent>

**Equal Opportunities:** Aston University promotes equality and diversity in all aspects of its work. We aim to ensure, through our admissions policies for students, and our staff recruitment and selection processes that we encourage applications from all groups represented in the wider community at a local, national and international level.

The University will endeavour not to discriminate unfairly or illegally, directly or indirectly, against student or potential students, staff or potential staff. This commitment applies to all functions of the University and to any stage of an individual's career.

An Equal Opportunities Monitoring Form is included within the application form. Data you provide on the Equal Opportunities Monitoring Form will be included in a general database, for statistical monitoring purposes, enabling the University to monitor the effectiveness of its Policy, Codes of Practice and Guidelines on Equal Opportunities in Employment. Individuals will not be identified by name.

**Data Protection:** Your personal data will be processed in compliance with the Data Protection Act 2018 and the General Data Protection Regulation ((EU) 2016/679) ("GDPR"). The University's Data Protection Policy and Privacy Notices, including the Job Applicant Privacy Notice can be found at <https://www2.aston.ac.uk/data-protection>. Your application will only be used to inform the selection process, unless you are successful, in which case it will form the basis of your personal record with the University which will be stored in manual and/or electronic files. Information in statistical form on present and former employees is given to appropriate outside bodies.

Full details of our terms and conditions of service and associated policies and procedures are available online at <https://www2.aston.ac.uk/staff-public/hr/policies>

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**Where change  
gets real.**