



OPPORTUNITY

Research Associate in Mathematics

Reference: R210395

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

Contract Type: Fixed term (16 months)

Basis: Full Time

Job description

Job Purpose:

We seek a highly motivated individual for this postdoctoral research position in the general areas of statistical physics and Bayesian inference. The emphasis of this research will be on employing theoretical and numerical methods from Bayesian statistics, game theory and statistical physics to study the impact of selfish and localised decisions on routing optimisation.

The candidate should have excellent mathematical and computational skills and have a background in statistical physics and Bayesian inference.

Main duties and responsibilities

- ▶ Carry out research work, analytically and numerically, jointly with the investigator in the area of routing, particularly the impact of selfish decisions on the individual and traffic as a whole.
- ▶ Apply established techniques and develop new methods inspired by statistical physics methodology for modelling traffic based on localised routing decisions.
- ▶ Implement the new algorithms, models and methods developed in software and study numerically their suitability to real world data
- ▶ Disseminate the work through high-quality journal publications and presentations at national and international conferences.
- ▶ Assist in the supervision of Post-Graduate students in this area as needed.
- ▶ Any other duties appropriate to the role of PDRA.

Teaching

- ▶ To help in delivering tutorials in the group's undergraduate/postgraduate programmes.

Community Engagement

- ▶ To be involved in outreach activities to raise the regional and national profile of the School of Engineering & Applied Science in general and the Mathematics group in particular.

Other related activities and functions

- ▶ 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
Education and qualifications	A PhD in a relevant discipline, e.g. Mathematics, theoretical Physics or related subject.	Application form
Experience	<p>Active research in the area of theoretical physics, Bayesian methods, probabilistic modelling or neighbouring research fields.</p> <p>Experience of conducting independent research.</p> <p>A track record of publications in internationally excellent journals and conferences.</p>	<p>Application form and interview</p> <p>Application form, interview and presentation</p>
Aptitude and skills	Ability to carry out a methodical and structured research plan.	Application form and interview

	Desirable	Method of assessment
Experience	A track record of research output and esteem.	Application form, interview.
Aptitude and skills	Ability to provide tutorials to undergraduate and postgraduate students.	Interview and presentation

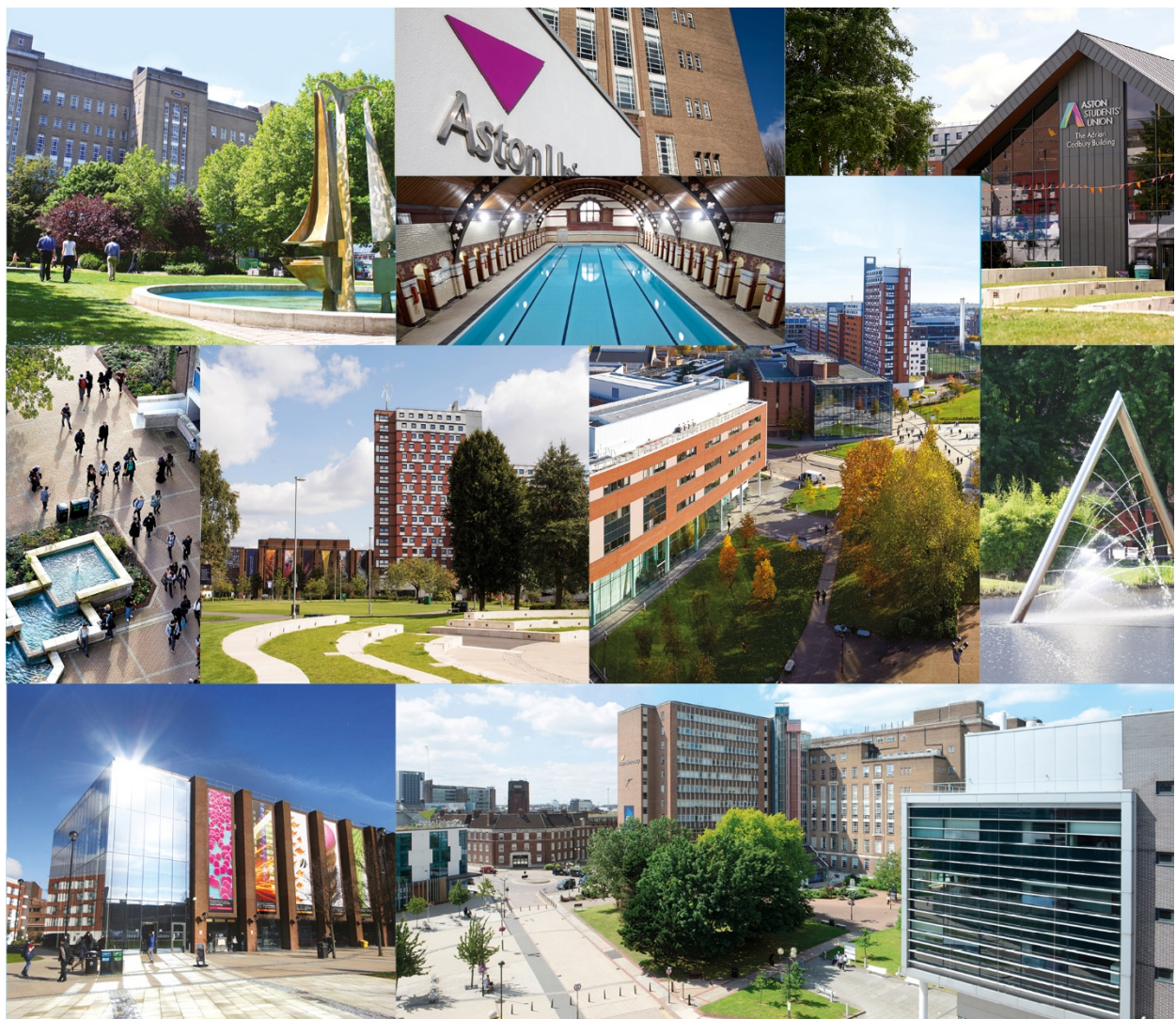
How to apply

You can apply for this role online via our website <https://www2.aston.ac.uk/staff-public/hr/jobs>.

Applications should be submitted by 23:59 on the advertised closing date.
All applicants must complete an application form, along with your CV.

Any CV sent direct to the Recruitment Team and Recruiting Manager will not be accepted.

If you require a manual application form then please contact the Recruitment Team via jobs@aston.ac.uk.



Contact information

Enquiries about the vacancy:

Name: Professor David Saad

Job Title: Professor

Email: d.saad@aston.ac.uk

Enquiries about the application process, shortlisting or interviews:

Recruitment Team via 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:

Post-Brexit transition period / EU Settlement Scheme

The post-Brexit transition period ended on 31 December 2020. If you are an EU/EEA citizen and you were a resident in the UK before 31 December 2020, you and your family members (including non-EU citizens need to apply to the EU Settlement Scheme to continue to live, work and study in the UK beyond 30 June 2021. The deadline for applying to the EU settlement scheme is 30 June 2021. You can apply via the Government webpage <https://www.gov.uk/settled-status-eu-citizens-families>
Irish Nationals do not need to apply for settlement as they retain the right to work in the UK.

New immigration system for EU/EEA and Swiss Nationals who were not resident in the UK before 31 December 2020

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 moving to the UK to work will need to get a visa in advance. You can find more information on the following website. Candidates should check their eligibility to enter or remain in the UK in advance of making any job application via the UKVI website <https://www.gov.uk/browse/visas-immigration/work-visas>. 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>

Aston University

Birmingham

B4 7ET, UK.

+44 (0)121 204 3000

aston.ac.uk



**Where change
gets real.**