

Postdoctoral Researcher in Heat Pump



OPPORTUNITY

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Reference: 0326-24

Grade: 8

Salary: £37,099 to £41,732 per annum, depending on experience

Contract Type: Fixed term (18 months)

Basis: Full time

Job description

Aston University is seeking a highly motivated and talented Postdoctoral Researcher to join our research team in the School of Engineering and Applied Science. This exciting opportunity is part of an exciting project focused on the development and commercialization of advanced cascade heat pump technology. The Postdoctoral Researcher will contribute to the project by working on the design, simulation, and validation of the heat pump system, as well as engaging in market research and analysis. The successful candidate will also be responsible for publishing high-quality research articles, conference papers, and technical reports.

Main duties and Responsibilities

Research

- ▶ 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 develop and lead research activities independently or as part of a team. This includes contributing to the planning, coordination, and monitoring of project activities, developing detailed simulation models to predict the performance of the cascade heat pump under various conditions, and validating these models against experimental data.
- ▶ To conduct economic assessments of the heat pump system and collaborate with project partners on product development, marketing strategies, and distribution channels.
- ▶ 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 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
Education and qualifications	<p>A good first degree in a relevant subject.</p> <p>A PhD in Mechanical Engineering, Energy Systems, or a relevant subject.</p>	Application form
Experience	<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, and reports and presenting at seminars and conferences.</p> <p>Experience of positive collaboration within and outside of the candidate's immediate research team.</p> <p>Supervising other personnel involved in the project.</p>	Application form and interview
Aptitude and skills	<p>Ability to present data clearly and concisely in a visually appealing manner.</p> <p>Ability to prepare written communications to a high standard.</p> <p>Ability to develop and maintain a research program and 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 adopt new procedures as and when required.</p>	Application form and interview

	Desirable	Method of assessment
Education and qualifications	<p>Additional qualifications or certifications in energy systems, sustainable engineering, or a related field.</p> <p>Postdoctoral experience in a relevant subject.</p>	Application form
Experience	<p>Experience with heat pump technology, thermodynamics, and fluid mechanics.</p> <p>Familiarity with simulation tools such as TRNSYS and MATLAB.</p> <p>Previous involvement in interdisciplinary research projects.</p> <p>Experience in securing research funding and grants.</p> <p>Experience in project management and reporting within an academic or industrial research setting.</p>	Application form and interview
Aptitude and Skills	<p>Strong analytical and problem-solving skills.</p> <p>Proficiency in using advanced statistical analysis software.</p> <p>Ability to mentor and supervise junior researchers and postgraduate students.</p> <p>Excellent networking and stakeholder engagement skills.</p> <p>Ability to work effectively both independently and as part of a multidisciplinary team.</p>	Application form and interview

How to apply

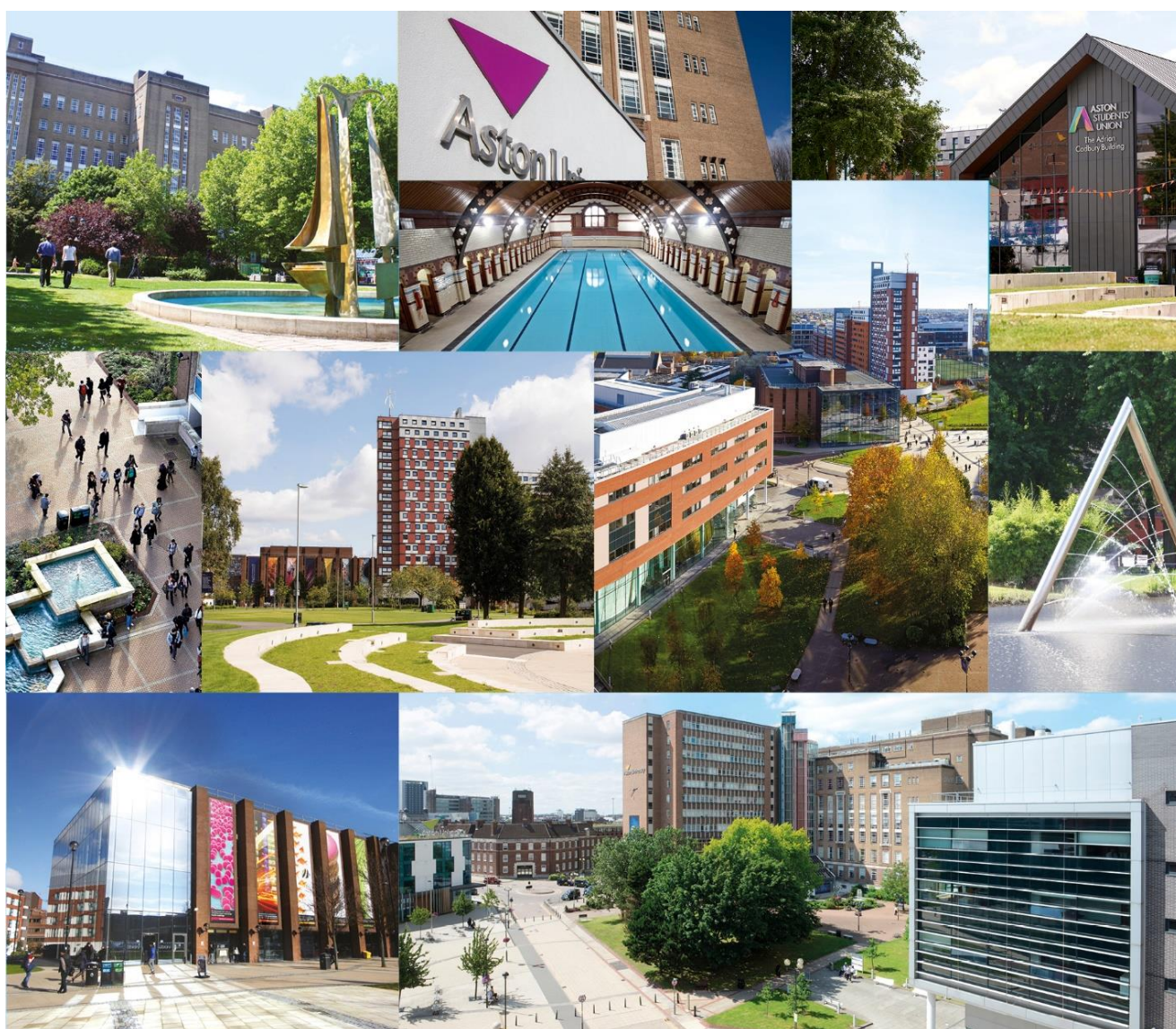
You can apply for this role online via our website <https://www2.aston.ac.uk/staff-public/hr/jobs>.

Applications should be submitted by 23:59pm 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: Dr Muhammad Imran

Job Title: Senior Lecturer

Email: m.imran12@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: [Benefits and Rewards | Aston University](#)

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 are applying for is listed an exception under the act.

Eligibility to work in the UK: You should ensure that you meet the eligibility requirements, including meeting the [English language standards](#). If you do not meet the eligibility criteria, any application for a work visa would be unsuccessful. Please see UKVI guidance for further information on eligibility, knowledge of English requirements and approved test centres <https://www.gov.uk/tier-2-general>

With the end of free movement for EU/EEA/Swiss nationals from 1 January 2021, the UK's new immigration system applies to all non-UK/Irish nationals who require a visa.

Where an individual is subject to UK immigration control, they will require a visa to work in the UK.

The following individuals do not need a visa for the UK, but do still have to prove their right to work before employment can commence:

- **British Citizens or Irish Nationals**
- **EU/EEA/Swiss nationals with Settled or Pre-settled status under the EU Settlement Scheme**
- **Non-EEA nationals with Indefinite Leave to Remain/Settlement in the UK**

The main routes available for those who need a visa to work in the UK are **Skilled Worker**, **Global Talent**, and the **Graduate Route**.

You can find further information about each of these visa routes on our [candidate immigration page](#).

If you will conduct research in your role, you may need to apply for and obtain ATAS clearance before Aston can issue a Certificate of Sponsorship for your visa application. Please see below for further details.

Academic Technology Approval Scheme (ATAS): If you will conduct research in your role and you apply for a Skilled Worker or Temporary Worker GAE visa, you may need to apply for and obtain ATAS clearance before Aston can issue a Certificate of Sponsorship for your visa application.

This process can take at least 6 weeks to process, and Aston will consider this when confirming your expected start date. Processing times will increase between April and September and can longer to complete.

There is no fast-track option available. ATAS certificates will be processed in order of receipt.

You can find more information about ATAS on our [candidate immigration page](#).

Before you start and Right to Work

90-day entry vignette

If you have applied for your visa outside of the UK, you will receive a vignette in your passport which is usually valid for 90 days. Please make sure to travel to the UK within the 'valid from' and 'valid to' dates on this visa. If you entered the UK before or after these dates, you would not 'activate' the visa and you would need to leave and re-enter the country.

You will also receive a decision letter confirming details about your immigration permission and where to collect your Biometric Residence Permit.

Cost of Living - Estate and Letting Agents

There are numerous Estate and Letting Agents in and around Birmingham that can help you find suitable accommodation. The [Midland Landlord Accreditation Scheme](#) provides a list of professional agencies and landlords who have applied with them for accreditation. Whilst accreditation is not a guarantee of quality, it provides some reassurance about the standard of the service they provide.

You can also use property search websites such as [Rightmove](#) or [Zoopla](#).

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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