

Senior Lecturer in Aerospace Engineering Structures



Reference: 0114-26

Grade: 10

Salary: £58,225 to £67,468, per annum, depending on experience

Contract Type: Permanent

Basis:

Job description

Job Purpose:

Aston University's 2030 strategy is ***Inclusive, Entrepreneurial*** and ***Transformational***. We are building a new model of university for a changing world. Our vision is to be a leading university of science, technology and enterprise, measured by the positive transformational impact we achieve for our people, students, businesses and the communities we serve.

This new role provides academic and strategic leadership within the School of Engineering and Innovation allowing us to achieve our ambitious goals. The postholder will contribute to enhance research, education and external engagement in the Department of Mechatronics and Biomedical Engineering, while contributing significantly to the School's new provision in Aerospace Engineering, especially in areas aligned with aerospace engineering structures.

We particularly welcome candidates with background in smart structures, multifunctional materials, computational modelling, stress, fatigue and damage analysis, optimisation, testing and certification, with considerations to sustainability and manufacturing. We are looking for internationally established or developing research expertise in one or more of the following subjects:

- Lightweight and sustainable materials
- Multifunctional materials
- Smart structures
- Advanced simulation using finite element analysis (FEA)
- Testing and analysis for airworthiness

The postholder is expected to lead the development of impactful research, teaching and infrastructure in aerospace engineering structures in the School and take the role of Programme Director of BEng Aerospace Engineering, and very significant opportunities exist for the correct candidate to grow with this role pursuits.

The Department of Mechatronics and Biomedical Engineering brings together expertise across electrical and electronic engineering, mathematics, mechanical and design engineering, biomedical, robotics and manufacturing. The School has a strong commitment to industry-aligned education, interdisciplinary working and applied research and is a leading participant in the international CDIO (Conceive, Design, Implement, Operate) initiative.

The majority of academic staff will undertake a balance of research and teaching and learning activities. Whilst ability and effectiveness should be demonstrated in all areas, individuals may be more specifically focussed on research, teaching and learning or external engagement. This balance will be discussed and agreed with individuals annually in the Professional Development Review (PDR) meeting in line with operational needs, School and University strategy and with consideration of the individual's career goals and development plans.

Aston prides itself on an active and engaging learning approach for its students. The role demands the applicant is effective in working with a lively student community, helping the students to learn and develop through real world teaching, e.g., including engaging classes, insightful reviews, industry relevant lectures, tutorials, and workshop projects. We are looking for general and specialised teaching and require teaching expertise in aerospace engineering structures, with experience in related laboratory practices overseeing safety standards.

Main Duties/Responsibilities

Research, Innovation and Impact

- To produce internationally recognised research outputs, often as lead contributor, resulting in an independent and developing international profile.

- ▶ To contribute to, and lead, successful applications for significant external research funds from UKRI or other funding bodies consistent with discipline norms.
- ▶ To contribute to progression towards innovation activities with significant impact generation with respect to policy, society, the economy, technology or commercial activities, including Impact Case Studies and knowledge exchange activities.
- ▶ To successfully build and lead teams and participate in research community leadership, practicing strong and supportive team leadership embedding Aston values.
- ▶ To collaborate and encourage engagement with interdisciplinary research teams.
- ▶ To provide effective and supportive research student supervision towards completion and play active role in recruiting new PhD students.

Education and Student Experience

- ▶ To lead effective learning, teaching, and student support activities across levels, developing and applying new learning materials and approaches which may impact beyond the programme.
- ▶ To make an effective contribution across a number of teaching responsibilities within the school.
- ▶ To design and evaluate effective learning materials and approaches to assessment for a diverse student body, making a substantial contribution to the planning of curricula and assessment processes that enhance student learning outcomes.
- ▶ To deliver initiatives designed to enhance the student experience or support fairer continuation, completion and progression to further study or work.
- ▶ To develop collaborations, internally and externally, and a mentorship profile to build a Teaching and Learning focussed scholarship.
- ▶ To lead programmes, courses, disciplines, educational initiatives and actively engage with relevant School, University and/or external communities to develop understanding and leadership in inclusive educational practice.

Citizenship, Engagement and Services

- ▶ To show inclusive leadership through mentoring, supervision, paying attention to staff wellbeing, setting context, enabling teams and generating action leading to outcomes in line with the University objectives.
- ▶ To actively champion initiatives to promote diversity, fairness and transparency in our community, exemplifying positive academic citizenship and demonstrating behaviours in line with University of Aston values.
- ▶ To participate in internal service initiatives and roles.
- ▶ To pursue successful engagement activities and public engagement opportunities in line with the University objectives.

Additional responsibilities

- ▶ Engage in continuous personal and professional development in line with the demands of the role, including undertaking relevant training and development activities.
- ▶ 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 recognised undergraduate degree in Aerospace Engineering, Aeronautical Engineering, Mechanical Engineering, or a relevant discipline.</p> <p>A doctorate in Aerospace Engineering, Aeronautical Engineering, Mechanical Engineering, or a relevant discipline.</p>	Application form and interview
Experience	<p>Experience of producing internationally recognised research outputs, often as lead contributor, evidenced by developing international profile and quantity and excellent quality of peer-reviewed publications or other scholarly outputs.</p> <p>Experience of external engagement with academics and industry stakeholders, evidenced by participation of external grant applications and some success as PI or Co-I, presentation or chairing sessions at international events, involvement in conference organisation, and participation in editorial boards of appropriate journals.</p> <p>Experience of winning internal funding and completing these projects successfully.</p> <p>Experience of mentoring and supporting early career researchers.</p> <p>Experience of leading supervision of PhD students to completion, commensurate with expectations for Senior Lecturer level.</p> <p>Experience of teaching and assessing within a degree programme.</p> <p>Experience of meeting or exceeding expectations from teaching observations and student feedback to module evaluation.</p>	Application form and interview

	Essential	Method of assessment
Aptitude and skills	<p>Excellent interpersonal, verbal and written communication skills to build external contacts that will support research and teaching activity.</p> <p>Ability to prioritise conflicting priorities and meet deadlines.</p> <p>Ability to work collaboratively as part of a team, contributing to outstanding team performance, as well as on own initiative.</p> <p>Ability to develop own teaching materials and contribute to course and programme development.</p> <p>Ability to consistently manage ECRs and less experienced academic colleagues to perform to their full potential.</p> <p>Ability to provide tutorial and counselling advice to undergraduate and postgraduate students.</p> <p>Ability to develop and maintain a research programme and to publish in international journals.</p> <p>Ability to secure research funds from external sources.</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> <p>Commitment to observing the University's Equal Opportunities Policy at all times.</p> <p>Ability to attend the University as and when required for scheduled teaching, relevant meetings and student support.</p> <p>Ability to lead taught modules and programmes for undergraduate and postgraduate students</p> <p>Evidence of securing research income and of maintaining an ongoing pipeline.</p>	Application form and interview

	Essential	Method of assessment
	<p>Knowledge of core principles related to aerospace engineering structures, including materials science, structural analysis, computer modelling and simulation using FEA, optimisation, testing and certification.</p>	

	Desirable	Method of assessment
Education and qualifications	<p>Membership of a relevant professional body.</p> <p>A recognised teaching qualification / membership of Advance HE (formally known as the Higher Education Academy) at Fellow level.</p>	Application form
Experience	<p>Experience of working in a UK Higher Education Institution.</p> <p>Experience of using a virtual learning environment (VLE) as a tool, e.g., Blackboard</p> <p>Experience of contributing to broader REF submission</p> <p>Experience of obtaining funding for KTPs or other enterprise funding</p> <p>Experience of delivering invited keynotes at international forums</p> <p>Experience of organising or contributing to events that foster collaborative and inter-disciplinary research</p> <p>Experience of undertaking Programme Director role and evidence of positive impact in the role.</p> <p>Experience of participating in collaborative links with other universities.</p> <p>Experience of leading engagement with external stakeholders in programme/module development.</p>	Application form and interview

	Desirable	Method of assessment
	Experience of contributing to accreditation or benchmarking strategy nationally or internationally.	
Aptitude and Skills	<p>Competence in lightweighting and structural analysis.</p> <p>Proficiency in CAD and FEA.</p> <p>Experience with Ansys, SolidWorks and MATLAB.</p> <p>Understanding of aviation regulations and safety protocols.</p>	Application form and interview

University values

All staff are expected to demonstrate/promote the University's values and expectations, which are an integral part of our strategy and underpin the culture of the University. In addition, our leaders are expected to be accountable, help to execute strategic visions of the University and share and set clear expectations that inspire those around them.

Values + Behaviours



Innovation

We strive for excellence within ourselves and others, providing solutions to new and existing challenges.



Collaboration

We work best when we are collaborative, working together to contribute to the Aston community.



Ambition

We strive together for improvement and innovation looking ahead to see the bigger picture.



Inclusion

We treat everyone in our community equally and how they would like to be treated.



Integrity

We are open, honest and fair. We take ownership of the way we work and how we treat each other.

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 recruitment@aston.ac.uk.

Contact information

Enquiries about the vacancy:

Name: Prof Claire Lucas

Job Title: Dean of School of Engineering and Innovation

Email: c.lucas@aston.ac.uk

Name: Prof Ricardo Sodré

Job Title: Head of Department of Mechatronics and Biomedical Engineering

Email: j.sodre@aston.ac.uk

Enquiries about the application process, shortlisting or interviews:

Recruitment Team via recruitment@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 as an exception under the act.

Eligibility to work in the UK: 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**.

Please see UKVI guidance for further information on eligibility, knowledge of English requirements and approved test centres <https://www.gov.uk/skilled-worker-visa> You can also find further information on our candidate immigration [web 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 our candidate immigration [web page](#) for further details.

Before you start and Right to Work

Right to Work Check

All employees must complete a Right to Work check before they commence work at Aston. HR will contact you during the onboarding process to arrange your check.

Cost of Living - Estate and Letting Agents

There are numerous Estate and Letting Agents that can help you find suitable accommodation. Useful websites for support and guidance

<https://www.gov.uk/government/publications/how-to-rent/how-to-rent-the-checklist-for-renting-in-england> and <https://www.citizensadvice.org.uk/housing/>

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>

Aston University
Birmingham
B4 7ET, UK.
+44 (0)121 204 3000

www.aston.ac.uk