University of Nottingham
UK | CHINA | MALAYSIA

Role profile

Job title	Senior Research Fellow (Solid Mechanics)	Job family and level	Research and Teaching Level 5
School/ Department	Mechanical and Aerospace Systems, Engineering	Location	Jubilee Campus

Purpose of role

The Mechanical and Aerospace Systems Research Group (MAS) requires a Senior Research Fellow who is experienced in the fields of solid mechanics and stress analysis to work across several industry relevant projects and for the development of future group research strategy. MAS has a large intra-disciplinary team of researchers, engineers, technicians, support staff and academics who work together to deliver research from fundamental to high TRL.

The role holder will contribute to several projects by managing a growing research team while conducting their own investigations. As a senior research fellow, the role holder will also have an opportunity to work with the management team and direct future group research strategy. It is expected that the role holder will contribute to the development of several funding applications with a wide range of industrial partners and will be able to demonstrate a high degree of independence by proposing new research themes and approaches. The nature of the position demands a confident and self-starting individual who is looking to develop a wide academic skillset and who is keen to offer their own ideas.

	Main responsibilities (Primary accountabilities and responsibilities expected to fulfil the role)	**% time per year**
1	**Research Activities** ▪ Lead and perform high quality research as part of a collaborative team that contributes to the achievements of the research objectives of MAS. ▪ Coordinate, in collaboration with academic staff and researchers, experimental and analytical activities across a variety of solid mechanics relevant projects. ▪ Collaborate with academic staff to develop group level solid mechanics strategy and explore funding opportunities. ▪ Resolve problems for self and other researchers on the project to meet research objective and deadlines, escalating any issues effectively to senior colleagues.	60%
2	**Stakeholder Liaison** ▪ Regular formal and informal liaison will be required with stakeholders, both internal and external to the group and university.	20%

	▪ Responsible handling of commercially confidential data will be required, including managing the secure electronic storage of this data. ▪ Liaison and monitoring of project milestones/deliverables.	
3	**Reporting** ▪ Attendance at meetings with presentation to internal and external stakeholders. ▪ Creation of written reports for internal and external stakeholders ▪ Dissemination activities, paper publication.	10%
4	**Group Collaboration** • Researchers within the group are expected to contribute to internal seminar and training activities, by attending and where appropriate presenting. • Participation in collaborative activities to further enhance group cohesion and development of new proposals/publications	10%

Person specification

	Essential	Desirable
Skills	▪ Ability to independently manage both technical and project workload, proactively alerting line manager of issues, with suggestion of potential resolution routes. ▪ Organisation of and leadership of meetings, recording of meeting information and creation of actions from meetings. ▪ Ability to liaise with a wide range of internal and external stakeholders including, but not limited to, industrial technical specialists, experimental researchers, engineering and technicians, project managers, academic staff. ▪ Ability to present complex data to a wide audience to provide a clear analysis and outcomes. ▪ Technical report/journal paper writing for a specialist audience. ▪ Identify opportunities for research development and, working with academic staff, contribute to the creation of funding applications. ▪ Good documentation practice for all work, especially relating to computer coding.	▪ Good documentation practice for all work, especially relating to computer coding.
Knowledge and experience	▪ Good understanding of several elements of solid mechanics and how these can be utilized across a range of applications. ▪ Ability to use programming software (particularly Matlab and Python languages) and manage large data sets for the modelling and analysis of engineering systems and components. ▪ Experience in the design of experimental and/or numerical studies for solid mechanics relevant problems. Demonstrable experience in uncertainty estimation and error quantification. ▪ Experience of having developed research strategies and/or funding applications.	

	▪ Experience of having managed large research projects involving multiple academic and industrial partners. ▪ Ability to manage a team of researchers/engineers working on a technical project and contributing to the timely delivery of project outputs. ▪ Experience in having developed and/or adhered to strict safety systems.	
Qualifications, certification and training (relevant to role)	▪ Degree in a subject relevant to mechanical engineering ▪ PhD in relevant subject or significant industrial experience directly related to mechanical engineering or mathematical modelling of engineering relevant systems.	▪ Project management qualification.
Statutory, legal or special requirements	▪ Satisfactory enhanced disclosure obtained from the Disclosure and Barring Service	

Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University's strategy, vision and values. The following are essential to the role:

Valuing people	Understands that it is essential to provide a structure that people can thrive in. Knows how to communicate with people to create a healthy working environment and get the best out of people.
Taking ownership	Communicates vision clearly, providing direction and focus. Knows how to create a productive environment where people are inspired and can work cross-departmentally in partnership.
Forward thinking	Has the ambition to be a pioneer in own area, anticipating the future change, needs and challenges. Knows how to innovate within their work context and champions others to be inspired to be part of this ambition
Professional pride	Keeps up to date on latest thinking, trends and work practices. Supports team to be thought leaders; willing to challenge if obstacles get in the way.
Always inclusive	Establishes far reaching partnerships, well beyond own area across a broad range of networks. Understand role to pay due regard to the needs of the whole community.

Key relationships with others