Job Description

Job title	Research Associate
Department/School	Mechanical Engineering
Job family	Education and Research
Grade	7
Reporting to	Principal Investigator (PI) or Co-Investigator (CI)
Responsible for	There may be a requirement for: day to day supervision of other staff e.g. technical staff or, co-supervision of doctoral or undergraduate students
Location	University of Bath premises

Background and context
The University of Bath wishes to appoint a Research Associate to work on the EPSRC funded project "Design simulation tools and process improvements for non-crimp fabric (NCF) preforming". The research is a Core Project of the EPSRC Future Composites Manufacturing Research Hub and partners Bath with the Universities of Cambridge and Nottingham as well as industrial collaborators which are invested in composites design and manufacturing. The Future Composites Manufacturing Hub engages academics from across the UK to deliver a step-change in the production of polymer matrix composites. We would like to appoint a composites research engineer who will work on the fundamental underpinning science of NCF preforming and will develop software tools for designers. The successful candidate will benefit from existing composites expertise at Bath and from frequent interaction and knowledge exchange with the project partners. Applicants should hold a PhD in Engineering or a relevant subject area, or equivalent significant relevant experience. In addition, we require proven experience of structural modelling and manufacture. Experience in some of the following areas will be a distinct advantage: mechanical testing, geometric modelling, software development, metrology, composite design and automation. Candidates should be self-motivated and possess project management and technical communication skills.

Job purpose
To provide subject-specific research expertise and undertake specific research work to a Principal Investigator (PI)/Co-Investigator (CI) and their research team for a specified grant/project.

Main duties and responsibilities	
	Responsible to the PI/CI for (as appropriate to discipline):
1	Conduct individual and/or collaborative research projects. Contribute to the design and execution of the project e.g. timetabling and meeting project milestones; participating in regular discussions with collaborative partners. Generate, collect and analyse existing data related to the project using qualitative and/or quantitative techniques.
2	Writing up results of research and contributing to the publication of results in high-quality peer-reviewed academic literature.
3	Disseminating results of research project as appropriate to the discipline through activities such as • overseas research visits • conference presentations • public engagement activities
4	Participate in departmental/group meetings and prepare and deliver presentations/seminars to project team, internal and external stakeholders or funders.
5	Assist with the supervision of postgraduate students and undergraduate project students and the assessment of student knowledge.
6	Continually update knowledge and understanding in field or specialism to inform research activity.
7	Identify sources of funding and provide assistance with preparing bids to funding bodies. Develop ability to secure own funding e.g. travel grants.
8	Contribute to the development of research objectives and proposals for own or joint research projects, with assistance of a mentor, if required.
9	Disseminate knowledge of research advances to inform departmental teaching.
	You will from time to time be required to undertake other duties of a similar nature as reasonably required by your line manager. You are required to follow all University policies and procedures at all times and take account of University guidance.

Person Specification

Criteria	Essential	Desirable
Qualifications		
A PhD degree in Engineering or a subject area of direct relevance for the project, or equivalent significant relevant experience and professional qualification	√	
Experience/Knowledge		
Post doctoral experience		√
Demonstrated significant depth and breadth of specialist knowledge of subject matter (including structural modelling and/or composites manufacture) to contribute to research programmes and to the development of	√	
Demonstrated awareness of latest developments in the field of research and in research design	√	
Demonstrated potential to publish in high quality, peer reviewed journals	√	
Skills		
Ability to prepare research proposals, to conduct individual research work and to disseminate results		√
Ability to organise and prioritise own workload to meet required deadlines	√	
Ability to write research reports and to effectively disseminate outcomes	√	
Excellent oral, interpersonal and written communication skills	√	
Proficiency in appropriate techniques (as appropriate to discipline)	√	
Proficiency in IT skills (as appropriate to discipline)	√	
Attributes		
Commitment to working within professional and ethical codes of conduct	√	
Innovation and developing creative solutions	√	
Commitment to excellence in research	√	

Enthusiasm and self-motivation	√	
Tenacity – working to achieve own and team objectives and to overcome obstacles	√	
Ability to be an effective team worker	√	
Commitment to safe working practices	√	