Candidate Information

Position:	Research Fellow
School/Department:	Mechanical & Manufacturing Engineering
Reference:	23/110585
Closing Date:	Monday 20 February 2023
Salary:	£35,333 per annum
Anticipated Interview Date:	Monday 6 March 2023
Duration:	Fixed Term for 18 Months or until 31 December 2024, whichever is sooner

JOB PURPOSE:

To join the Advanced Composites Research Group (ACRG) in the School of Mechanical and Aerospace Engineering at Queen's University Belfast and contribute to world-leading research in the computational modelling of composite materials and structures.

To contribute to the development of advanced experimental tools which will enable to obtain unique material parameters that will be used to feed numerical models and for validation.

MAJOR DUTIES:

1. Develop a detailed research project plan with the Principal Investigator to meet expected deliverables and milestones within the Artemis project.
2. Execute the agreed project plan and undertake whichever research tasks are required.
3. Be an effective and collegiate member of the ACRG.
4. Develop research proposals, for submission to funding bodies, under the guidance of the Principal Investigator.
5. Produce regular research progress reports and deliver progress presentations to members of the ACRG and project consortium partners.
6. Prepare material for publication in leading journals and presentations at international conferences.
7. Partake in outreach activities when requested.
8. Carry out administrative tasks associated with the research project to ensure that the project is completed on time and within budget. These might include organisation of project meetings and documentation, financial control, risk assessment of research activities.
9. Assist in the supervision of PhD students within the ACRG.
10. Supervise undergraduate final year projects and MSc thesis projects.
11. Carry out occasional demonstrating or lecturing duties within the post holder's area of expertise and under the direct guidance of a member of academic staff.
12. Keep abreast of new developments in the specific area of research and related disciplines.
13. Maintain project-related social media sites.

ESSENTIAL CRITERIA:

1. An undergraduate degree in Mechanical or Aerospace Engineering.
2. A PhD in the field of mechanics of composite materials or structures.
3. At least 3 years relevant research experience.
4. Must be able to demonstrate:
   - sufficient breadth of knowledge of composite materials and their utilisation.
   - knowledge of composite damage mechanics.
   - extensive understanding of experimental mechanics.
   - knowledge of structural testing and material characterisation methods.
   - understanding of finite element analysis and computational fracture mechanics.
5. Ability to plan and manage a research project.

6. Ability to contribute to broader management and administrative processes.
7. Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes.
8. Ability to communicate complex information clearly.
9. Excellent communication skills.
10. Ability to build contacts and participate in internal and external networks.
11. Ability to assess and organise resources.

DESIRABLE CRITERIA:

1. A working knowledge of digital image correlation.
2. Experience of working with industry on research programmes.
3. Experience of using content management systems.