![Queen's University Belfast logo]

Candidate Information

Position: Research Fellow
School/Department: School of Mechanical and Aerospace Engineering
Reference: 22/110270
Closing Date: Monday 17 October 2022
Salary: £35,333 - £38,592 per annum
Anticipated Interview Date: Monday 7 November 2022
Duration: Fixed-term for 12 months

JOB PURPOSE:

To be a highly productive, ambitious and collaborative member of the EPSRC CoatIN research project/team assisting in the development of research proposals and the planning and delivery of the research activity specifically in simulation of manufacturing processes.

The post is a critical role, and as such, successful applicants will have responsibilities in independent research, research planning and reporting and for collaboration with project partners.

MAJOR DUTIES:

1. Undertake research under supervision into simulation methods for the modelling of manufacturing processes related to surface engineering.
2. Design, develop and refine simulation methods and models for the representation of surface engineering processes, considering both production and laboratory environments.
3. Carry out analyses, critical evaluations, and interpretations of experimental data and the literature using methodologies and other techniques appropriate for process simulation.
4. Produce high quality research outputs consistent with project aims and commensurate with career stage. This will include collaborating and co-authoring with PI and project team (as appropriate) on outputs.
5. In consultation with the project team, promote research milestones and outputs at national and international conferences.
6. Assist grant holder in the preparation of funding proposals and applications to external bodies.
7. Carry out occasional educational supervision, demonstrating or lecturing duties within the post holder's area of expertise and under the direct guidance of a member of academic staff.
8. Undertake supplementary duties relevant to the success of the project including administrative duties and additional training and development activities as required.

ESSENTIAL CRITERIA:

1. Have, or be about to obtain, a relevant PhD in Mechanical, Mechatronics, Chemical engineering or closely related discipline. (Candidates about to receive their PhD should provide proof that their viva is scheduled within two months)
2. Relevant research experience in the modelling of manufacturing processes for the purpose of process design or optimisation.
3. Experience of data collection or data generation, and input data verification appropriate for the modelling of manufacturing processes.
4. A track record of publications commensurate with stage of career.
5. Ability to contribute to broader management and administrative processes.
6. A sufficient breadth of knowledge of general design methods and manufacturing systems.
7. Ability to work in a team.
8. Willingness to undertake additional training in research methods and other related skills as required.
9. Practical problem solving skills, independence of thought and initiative.
10. Ability to communicate complex information effectively in oral and written format.
11. Ability to build relationships to develop internal and external networks.

12. Ability to assess and organise resources.
13. Excellent interpersonal skills.
14. Willing to travel to partner facilities on a regular and frequent basis.

DESIRABLE CRITERIA:
1. Experience of open-source modelling software.
2. Working as part of a multidisciplinary research team, ideally with industrial collaborators.
3. Strong experience in programming, for example in Python, Labview, Matlab.