Candidate Information

Position:	Research Fellow - Polymers and Composites
School/Department:	School of Mechanical and Aerospace Engineering
Reference:	25/112755
Closing Date:	Monday 8 September 2025
Salary:	£41,519 to £49,628 per annum
Anticipated Interview Date:	Friday 19 September 2025
Duration:	6 months

JOB PURPOSE:

To be a highly productive, ambitious and collaborative member of Polymers and Composites research team assisting in the development of research proposals and the planning and delivery of the research activity specifically related to stretch blow moulding.

The post is a critical role, and as such, successful applicants will have responsibilities in independent research, supervision, planning, day to day lab management, collaborations, and outreach.

MAJOR DUTIES:

1. Undertake research under supervision within a specific research project or as a member of a research team.
2. Design, develop and refine research using a range of experimental models and coding tools.
3. Analyse and interpret experimental data and literature using appropriate methods. This includes conducting experiments on polymer processing equipment (e.g. injection moulding, stretch blow moulding) and analysing spectrometry data using artificial intelligence algorithms.
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 an area associated with polymer processing and data analysis.
2. Experience in use of polymer analysis equipment such as FTIR, Raman.
3. Using AI tools to analyse spectroscopy data.
4. Experience in designing and building custom experimental rigs or prototype testing devices for research applications.
5. Recent relevant* research experience to include
   - Undertaking research in the area of spectroscopy analysis using AI
   - Knowledge of common polymer materials such as PET and how it is processed via injection moulding and stretch blow moulding.
   - Working effectively as part of a research team in the development and promotion of research.
6. Experience of contributing to broader management and administrative processes.
7. Evidence of ability to work in a team.
8. Demonstrate practical problem solving skills, independence of thought and initiative.
9. Proven ability to communicate complex information effectively in oral and written format.
10. Proven ability to build relationships/ to develop internal and external networks.
11. Ability to assess and organise resources.

DESIRABLE CRITERIA:

1. Programming experience in MATLAB/Python.
2. Proficiency in data acquisition and control systems using LabVIEW or similar platforms
3. Hands on experience in the use of polymer processing equipment such as injection moulding and stretch blow moulding.
4. Presenting research results at conferences.