

## Candidate Information

<b>Position:</b>	Research Fellow
<b>School/Department:</b>	School of Mechanical and Aerospace Engineering
<b>Reference:</b>	24/111601
<b>Closing Date:</b>	Monday 19 February 2024
<b>Salary:</b>	£37,841 per annum
<b>Anticipated Interview Date:</b>	Thursday 14 March 2024
<b>Duration:</b>	Fixed Term available until 30/09/2026

### JOB PURPOSE:

To be a highly productive, ambitious and collaborative member of the W-Tech (Wright Technology Centre) research team assisting in the development of research proposals and the planning and delivery of the research activity specifically in Modelling the Supply Chain Behaviour and Risks for Next Generation Bus Vehicles.

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 Modelling the Supply Chain Behaviour and Risks for Next Generation Bus Vehicles.
2. Design, develop and refine mathematical modelling and simulation methods for the representation of supply chains for next generation bus vehicles, considering:
  - a. Factors directly related to internal production planning.
  - b. Factors external to the partner enterprise.
  - c. Identification / quantification of uncertainty / risks.
  - d. The development of frameworks for supply chain construction and management.
3. Deliver / Enable / Identify:
  - a. New understanding of the sensitivities of the bus sector to external market variations.
  - b. New business approaches to increase resilience of the UK supply chains.
  - c. Better informed decisions relative to supply chain management.
  - d. Development of strategic partnerships across supply chain tiers.
4. Carry out analyses, critical evaluations, and interpretations of design and simulation data and literature using methodologies and other techniques appropriate for engineering research.
5. 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.
6. In consultation with the project team, promote research milestones and outputs at national and international conferences.
7. Assist grant holder in the preparation of funding proposals and applications to external bodies.
8. 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.
9. Undertake supplementary duties relevant to the success of the project including administrative duties and additional training and development activities as required.

### ESSENTIAL CRITERIA:

1. Hold at least a 2:1 honours degree in Mechanical, Aerospace, Automotive Engineering, Computer Science, Business Management or closely related discipline.
2. Have, or be about to obtain, a relevant PhD in Mechanical, Aerospace, Automotive Engineering, Computer Science, Business or closely related discipline (Candidates about to receive their PhD should provide proof that their viva is scheduled within two months).

3. Relevant research experience to include:
  - Demonstrable experience in the use of production and/or supply chain planning /modelling, optimisation of production systems.
  - Demonstrable experience in programming/scripting, beyond that taught in undergraduate engineering courses.
  - A proven track record of using relevant techniques to carry out analyses, critical evaluations, and interpretations of data as relevant to the research project.
  - Working effectively as part of a research team in the development and promotion of the research theme.
  - Proven track record working in / with industry.
4. Ability to contribute to broader management and administrative processes.
5. A sufficient breadth of knowledge of production planning methods and supply chain principles.
6. Ability to work in a team.
7. Willingness to undertake additional training in research methods and other related skills as required.
8. Practical problem solving skills, independence of thought and initiative.
9. Ability to communicate complex information effectively in oral and written format.
10. Ability to build relationships to develop internal and external networks.
11. Ability to assess and organise resources.
12. Excellent interpersonal skills.
13. Willing to spend time on placement at partner facilities / travel to same on a regular and frequent basis when required.

**DESIRABLE CRITERIA:**

1. Demonstrable experience in:
  - Mathematical modelling and simulation.
  - Artificial Intelligence and Edge Computing.
  - Industrial engagement and technology transfer.
  - Academic and industrial reporting / presentation skills.
  - Experimental Testing and Analysis.
  - A track record of high quality publications appropriate to stage in career.