



Post Doctoral Research Associate – Supply Chain Modeling and Analytics

Post: Full-time role for 9 months from 1st June 2025

REQ Reference: REQ250330

As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.

This research role is based at Loughborough Business School, Loughborough University campus.

Manufacturers face a major challenge to deliver the UK's Net Zero by 2050 commitment whilst also improving supply chain efficiency (productivity) and reducing waste (sustainability). Achieving Net Zero by 2050 will require businesses to make carbon a central tenant of managing their supply chains, augmenting the classic management of cost, quality and service to include carbon management. Supply chain efficiency and carbon emissions need to be managed together.

This project will enable manufacturers to integrate carbon and productivity management into planning and scheduling design and executional processes. The software products that will be created from this project will be a supply chain planning parameter optimiser that enables users to design production plans optimised for a selection of objective functions, either service, cost, or carbon. Then, it delivers the expected outcome by creating network supply plans that respect the production plans and inventory design parameters.

Loughborough University is renowned for the relevance of its research. Research undertaken at Loughborough helps businesses and industry to compete more effectively, shape public policy and ultimately improve the quality of people's lives. Loughborough has a research community made up of more than 2,200 staff and students and is well known for having a wide range of research partnerships with multi-national businesses and has long-standing collaborative links with many public and private sector organisations. In the 2021 Research Excellence Framework (REF) 86% of the Business and Management research was rated as world-leading or internationally excellent.

Job Description

Job Grade: Specialist and Supporting Academic - Grade 6

Duration: Fixed term for 9 months from 1st June 2025

Job Purpose

To develop production and supply chain planning optimisation models and analyse them for their subsequent integration into the software products of industry collaborator. The post holder will then support the dissemination of insights through research reports, policy papers, publications, and presentations to provide actionable insights to stakeholder groups.

Job Duties

- To develop and analyse optimisation, simulation and machine learning models for production and supply chain planning.
- To collaborate with other researchers and industry leads to collate insights and develop actionable plans.
- To contribute to the production of research reports, policy papers, publications, and presentations.
- To engage with key stakeholders, including industrialists, policymakers and academics.

Job Responsibilities

- Be responsible for conducting the day-to-day running of the programme of work.
- To formulate detailed plans for the programme of work based on broad guidance from the project team.
- To feed back to the project team on progress and to make recommendations for next steps.
- To attend meetings, online and in-person, and to present to the project's internal and external stakeholders.
- To write research papers suitable for publication in high-quality academic journals.
- To attend and contribute to conferences.
- To contribute to project promotion and public engagement events.

General and Administrative

- To work effectively with relevant administrative, technical and academic staff in the School and across the University.
- To engage in training programmes in the University (e.g., through Staff Development) which are consistent with ongoing professional development, and the needs and aspirations of the project team and those of the School.
- To maintain confidentiality where relevant at all times and ensure that intellectual property agreements are not violated.
- To carry out specific other duties as may be reasonably requested by the project leaders and that are commensurate with the nature and grade of the post.

Points to Note

The purpose of this job description is to indicate the general level of duties and responsibility of the post. The detailed duties may vary from time to time without changing the general character or level of responsibility entailed.

Special Conditions

All staff have a statutory responsibility to take reasonable care of themselves, others, and the environment and to prevent harm by their acts or omissions. All staff are therefore required to adhere to the University's Health, Safety and Environmental Policy & Procedures.

All staff should hold a duty and commitment to observing the University's Equality & Diversity policy and procedures at all times. Duties must be carried out in accordance with relevant Equality & Diversity legislation and University policies/procedures.

Organisational Responsibility

Reports to Dr Kamran Ali Chatha, Senior Lecturer in Operations and Supply Chain Management.

Person Specification

Your application will be reviewed against the essential and desirable criteria listed below. Applicants are strongly advised to explicitly state and evidence how they meet each of the essential (and desirable) criteria in their application. Stages of assessment are as follows:

- 1 – Application
- 2 – Test/Assessment Centre/Presentation
- 3 – Interview

Essential Criteria

Area	Criteria	Stage
Experience	Experience of modeling using optimisation methods and machine learning techniques and simulation with excellent programming skills and analysis of research data.	1,2,3
	Relevant experience in an academic research environment or equivalent industrial experience.	1,3
	Experience of project planning and managing research projects.	1,3
	Experience of developing and delivering knowledge exchange activities.	1,3
	Experience of appropriate research reporting, documentation and dissemination activities.	1,3
	Experience of conducting research within ethical and regulatory procedures.	1,3
	Experience of working with public bodies, professional institutions and stakeholders from industry and other fields.	1,3
Skills and abilities	Strong writing and editing skills, with experience of communicating research and complex technical scientific concepts in an engaging, accessible way for different audiences.	1,3
	Excellent interpersonal and communication skills - both written and oral.	1,2,3
	Excellent team-working skills.	3
	Ability to work independently and as part of a team	1,3
	Highly motivated with the ability to set and meet deadlines.	1,3
	Accuracy and attention to detail.	
Training	Willingness to undertake further training as appropriate and to adopt new procedures as and when required.	1,3
Qualifications	A PhD in a relevant subject OR extensive equivalent experience in an intensive advanced research environment and working towards a PhD in a relevant area.	1
Other	Commitment to observing the University's Equal Opportunities policy at all times.	1,3
	Commitment to maintaining confidentiality, where relevant, at all times.	1,3

Desirable Criteria

Area	Criteria	Stage
Experience	Experience of authoring original work for academic journal papers, conference papers or technical reports.	1,3
	Experience of working in the Higher Education Sector and good knowledge and understanding of the Research Excellence Framework (REF), in particular what is meant more broadly by the impact of research.	1,3
	A sound understanding of the current scientific research environment.	1,3
	Experience of involvement with large multi-institutional projects, including stakeholder management.	1,3

Conditions of Service

The position is full time (37 hours per week) and fixed term for 9 months from 1st June 2025. Salary will be on Management and Specialist Grade 6, £35,116 – £45,413 per annum, at a starting salary to be confirmed on offer of appointment.

The University is committed to enabling staff to maintain a healthy work-home balance and has a number of family- friendly policies which can be found [here](#).

The University offers a wide range of employee benefits which can be found [here](#).

We also offer an on-campus nursery with subsidised places, subsidised places at local holiday clubs and a childcare voucher scheme (further details are available at: [http://www.lboro.ac.uk/services/hr/az/childcare- information---page.html](http://www.lboro.ac.uk/services/hr/az/childcare-information---page.html))

In addition, the University is supportive, wherever possible, of flexible working arrangements. We also strive to create a culture that supports equality and celebrates diversity throughout the campus. The University holds a Bronze Athena SWAN award which recognises the importance of support for women at all stages of their academic career. For further information on Athena SWAN see <http://www.lboro.ac.uk/services/hr/athena-swan/>