Candidate Information

Position: RiSC+ Research Fellow (2 posts)
School/Department: Queen's Business School
Reference: 25/112477
Closing Date: Monday 28 April 2025
Salary: £39,922 - £43,605 per annum.
Anticipated Interview Date: Monday 12 May 2025
Duration: Available until 31 March 2028

JOB PURPOSE:

To be a highly productive, ambitious and collaborative member of the RISC+ team assisting in the development of research proposals and the planning and delivery of the research activity specifically in Modelling UK Supply Chains as complex systems for resilience.

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.

The post is part of the ReImagining Supply Chains Network Plus (RiSC+ Network) project, whose main aim is to model and reimagine supply chains across the UK in food, critical minerals and fashion. The RiSC+ Network will offer evidence that exposes vulnerabilities, remedies current risks and demonstrates future potential, ultimately helping to empower the UK to move towards more resilient and secure supply chains.

MAJOR DUTIES:

1. Undertake research under supervision into Modelling UK supply chains as complex systems for improved resilience.
2. Map supply chains by making use of complete databases and data analytics to understand the way in which supply chains operate.
3. Assist in the creation of a digital twin for key supply chains and develop new ways in which supply chains could operate and be configured to increase their resilience to external threats and factors such as climate change and geopolitical tensions.
4. Carry out analyses, critical evaluations, and interpretations of data and literature using methodologies and other techniques appropriate for supply chain resilience 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.
10. Disseminate diverse types of outputs to a range of groups including scientific, policy, industry and lay audiences.
11. Prepare and present regular updates on research progress to the RiSC+ Network team.

ESSENTIAL CRITERIA:

1. Have, or be about to obtain, a relevant PhD in Computer Science, Data Analytics, Business Analytics, Supply chain management, Industrial Engineering,   or closely related discipline. (Candidates about to receive their PhD should provide proof that their viva is scheduled within two months).

2. Recent relevant research experience to include:
   - Demonstrable experiences in working with datasets (e.g. Bloomberg, Factiva, etc).
   - Demonstrable experience in data analytics (e.g., data management, data visualization, predictive analytics, etc.) and machine learning methods (text mining, natural language processing, reinforcement learning etc.).
   - Demonstrable experience with supply chain modelling (e.g., system dynamics, fuzzy cognitive mapping) and/or supply chain simulation (e.g., discrete event simulation, agent-based modelling, system dynamics, etc).
   - A track record of publications appropriate to stage in career.
   - Working effectively as part of a research team in the development and promotion of the research theme.
   - Academic and/or industrial reporting / presentation skills.
3. Ability to contribute to broader management and administrative processes.
4. Engaging in different stakeholder groups.
5. Ability to work in a team.
6. Willingness to undertake additional training in research methods and other related skills as required.
7. Practical problem-solving skills, independence of thought and initiative.
8. Ability to communicate complex information effectively in oral and written format.
9. Ability to build relationships to develop internal and external networks.
10. Ability to assess and organise resources.
11. Excellent interpersonal skills.
12. Willing to spend time on placement at partner facilities / travel to same on a regular and frequent basis if needed.

DESIRABLE CRITERIA:
1. Demonstrable experience in:
   - Having experiences in developing AI models (e.g., LLM).
   - Having experience in using econometric models and panel data analysis (e.g., DID, fixed effect models).
   - Have knowledge in the agri-food or critical mineral supply chains.
   - Demonstrable experience in conducting interviews and/or facilitating workshops with a range of stakeholders to inform system models.
   - Analysing qualitative data using complexity approaches (causal loop diagram, Fuzzy cognitive map).
   - Industrial engagement and technology transfer.
   - Have experiences in writing industrial reports and policy paper.

ADDITIONAL INFORMATION:
Informal enqueries can be directed to: Hangfei Guo - h.guo@qub.ac.uk