

Candidate Information

Position:	RiSC+ Research Fellow - Complexity Science
School/Department:	Queen's Business School
Reference:	25/112357
Closing Date:	Tuesday 28 January 2025
Salary:	£39,922 - £43,605 per annum
Anticipated Interview Date:	Wednesday 12 February, 2025
Duration:	Fixed Term, 3 years

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.

You will take responsibility for conceptualising and mapping these supply chains as complex adaptive systems, with focus on

- identifying current and potential contextual and endogenous vulnerabilities, challenges and risks to the resilience and security of these supply chains, and
- understanding cascading risks, impacts and trade-offs across the environment, society and economy. This will entail intense engagement with the research team, research partners, and the main actors/stakeholders of these supply chains. You will also collaborate with other members of the research team responsible for developing digital twins and simulation models, helping them to operationalise elements of the systems maps into their models.

We are interested in adding to our team a researcher interested in systems thinking and systems mapping methods, and capable of dialoguing with those leading the simulation model work.

MAJOR DUTIES:

- Undertake research under supervision into Modelling UK food / fashion / critical minerals supply chains as complex systems for improved resilience.
- Plan, design and deliver high quality research in conceptualising and mapping food, critical minerals and fashion supply chains as complex adaptive systems, with focus (a) identifying current and potential contextual and endogenous vulnerabilities, challenges and risks to the resilience and security of these supply chains, and (b) understanding cascading risks, impacts and trade-offs across the environment, society and economy.
- Work together with the project team, project partners, and the main actors/stakeholders to identify a set of interventions that enable resilience when considering supply chains as complex adaptive systems, including the actors, activities and outcomes involved, how they are connected, key vulnerabilities and interdependencies.
- Carry out searches, analyses, critical evaluations, and interpretations of data and literature (including policy documents) using methodologies and other techniques appropriate for supply chain-related research.
- 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 and through social media (where applicable).
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. Support activities aimed to increase capability and capacity for complex system research across supply chains.
11. Disseminate diverse types of outputs to a range of groups including scientific, policy, industry and lay audiences.
12. Prepare and present regular updates on research progress to the RiSC+ Network team.

ESSENTIAL CRITERIA:

1. Hold at least a 2:1 honours degree (or equivalent) in a relevant subject area (e.g., Business, Social Science, Engineering, Computer Science).
2. Have, or be about to obtain, a relevant PhD in a relevant subject area (e.g., Business, Social Science, Engineering, Computer Science). (Candidates about to receive their PhD should provide proof that their viva is scheduled within two months)
3. Recent relevant research experience to include:
 - Demonstrable experience in the use of Complexity Science, Systems Thinking, Systems Mapping, or Systems Modelling methods relevant to the research project.
 - Demonstrable experience in conducting interviews and/or facilitating workshops with a range of stakeholders to inform systems models.
 - 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 multidisciplinary/multisectoral teams.
 - A track record of publications appropriate to stage in career.
4. Ability to contribute to broader management and administrative processes.
5. At least introductory knowledge about complex systems simulation methods (e.g., agent-based modelling, system dynamics modelling) and/or digital twins.
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 and/or travel to same on a regular and frequent basis if needed.

DESIRABLE CRITERIA:

1. PhD project included Complexity Science, System Thinking, System Mapping or Systems Modelling methods relevant to the project.
2. PhD project in supply chain.
3. Demonstrable experience in:
 - Academic and industrial reporting and presentation skills.
 - Relevant experience in food, fashion or critical minerals systems.
 - Proven track record working in/with industry, particularly in food, fashion or critical mineral sectors.
4. Demonstrable experience in statistical techniques and tools such as SPSS and R for processing data.

ADDITIONAL INFORMATION:

Informal queries may be directed to Hangfei Guo, h.guo@qub.ac.uk