[internal code :LSCM 2/3]

Fully funded PhD: Emerging optimisation challenges in Locational Analysis for Supply Network Management

The Logistics and Supply Chain Management Research Centre at Sheffield University Management School is seeking applications for a fully funded PhD from exceptional UK/EU/International students with an outstanding academic record (distinction/high merit or equivalent), as well as a proven record in research training.

Project description

The PhD research proposal is concerned with Locational Analysis, with particular emphasis on Advanced Network Design and Supply Chain Structural Complexity problems, and relevant applications in Production and Service Management. The project builds on previous consolidated research outputs both in the field of Supply Network Design problems and Structural Complexity, including high quality research outputs and EU funded research projects on the use of decision support tools for urban freight transport. In particular, the original research proposed here will address the need for studying advanced modelling features and concepts:

- The need for a proper modelling of operational requirements such as a maximum number of suitable active paths in distribution-based facility location problems;
- The need of considering complexity issues and their impact on profitability when deciding the location and size of facilities in a distribution network.

In contrast to classical flows, where a commodity can be distributed among any number of different paths, k-splittable flow requires a commodity that can be split into a bounded number of chunks on different paths, resembling a range of real-world operational constraints in supply chain management. Structural complexity refers to the negative effects of the proliferation of products, distribution channels and markets, to create awareness about the impact on profitability, as oversized distribution networks may cause hidden costs that hinder the capacity of the supply chain for translating revenue into bottom line benefits. The aim is to introduce the impact of advanced modelling features/concepts such as k-splittable flows and structural complexity in the field of facility location problems, thus exploring novel and promising research avenues.

How to apply

The deadline to apply is 1 July 2019 at 17:00 UK time. Please note that applications will not be processed if they are incomplete or received after the deadline. Shortlisted candidates will be invited to interview on Tuesday 13/Wednesday 14 August 2019.

Applicants should submit a 1000 word research proposal which directly addresses the theme and/or specific topic to which they are applying. The proposal should contain a brief background to the

topic, which demonstrates knowledge of existing work in the field, and potential contributions to knowledge. It should also explain the proposed research methods and include a plan of the research, and a timeline.

For more information and to submit an application, visit:
www.sheffield.ac.uk/management/study/researchdegrees/fundedprojects

Please clearly indicate the number of the project in your application: LSCM 2/3

Supervisors

Dr Antonino Sgalambro

Dr. Diego Ruiz-Hernandez

For an informal discussion about this opportunity, please contact: Dr Antonino Sgalambro a.sgalambro@sheffield.ac.uk

Funding notes

This scholarship is offered on a full-time basis for three years subject to satisfactory progress. The award pays tuition fees and an annual tax free maintenance stipend at the RCUK rate.

Scholarships are awarded on a competitive basis – applications are assessed on the basis of academic success and qualifications, experience, research background, a clear well-articulated research proposal, the potential impact of the research and a close synergy of research interests with supervisor/research centre expertise.