



Job Description

This form summarises the purpose of the job and lists its key tasks. It is not a definitive list of all the tasks to be undertaken as those can be varied from time to time at the discretion of the School, in consultation with the postholder.

Job title: Research Officer in Latent Network Modelling

Department/Division: Department of Methodology Accountable to: Dr Eleanor A. Power

Job Summary:

This full-time research officer position is a one-year position to work with Eleanor Power, Caterina De Bacco (Max Planck Institute in Intelligent Systems) and Daniel Redhead (Max Planck Institute in Evolutionary Anthropology) to develop novel applications of latent network models, open-source software tools for network analysis, and on-line support materials for these activities. This work extends ongoing work begun under the funded ESRC project “Developing Latent Hierarchical Network Models for Cross-Cultural Comparisons of Social and Economic Inequality,” a collaborative project, bringing together an interdisciplinary set of scientists.

The ideal candidate will have a computing or computer science background, with extensive programming skills, combined with experience or an interest in network analysis. A PhD in computer science, applied mathematics, or related fields is desirable but not necessary for this role.

The person appointed to the research officer position will be responsible to Dr Eleanor Power, Assistant Professor in the Department of Methodology. To facilitate active collaboration with De Bacco and Redhead, the person appointed may also have the opportunity to access some of the resources of MPI-IS and MPI-EVA.

Duties/Responsibilities

The research officer’s general duties and responsibilities will be to develop and code novel latent network models, including the extension and ongoing development of open-source software for this purpose. Support activities will include programming in R, Python, and other languages, working with databases, and implementing efficient numerical computing. The research officer will be expected to work with existing tools for network analysis, actively participate in the development of new tools, and participate in the application of these tools to the analysis of social network data.

Secondary roles of the research officer will include coordinating the work of research collaborators outside of LSE. This collaborative project has funded the development of new latent network tools, intended to be packaged as open-source R and Python packages for use by social scientists and others, and the research officer would be encouraged to participate actively in the further development of this and related software.

The successful applicant will be expected to possess advanced skills and experience with computer programming. Essential skills include:

- Ability to program in R and/or Python



- Experience with methods for analysing and handling network data

Desirable computing skills include:

- Experience with software development, preferably designing R or Python packages
- Experience with scientific libraries and/or parallel programming

In terms of other knowledge, experience, and abilities, the candidate:

- Is expected to have good mathematical knowledge of linear algebra, calculus, probability and/or numerical analysis
- Is expected to contribute to the writing up of research for publication in peer-reviewed journals.
- Is expected to work closely with the Dr Power throughout the duration of the project, and to cooperate and collaborate with De Bacco, Redhead, and other members of this collaborative project, including those not based at LSE. Active participation with De Bacco's group at MPI-IS will be particularly valued.
- Is expected to have an interest in network analysis with social science applications.
- Is expected to attend workshops and international conferences as part of the grant activities.

Flexibility

To deliver services effectively, a degree of flexibility may be required in the duties performed in order to meet the exigencies of service. Job roles may also naturally develop over time and ongoing substantial changes to a role will be discussed between line managers and their staff, with job descriptions updated as and when appropriate.

Equity, Diversity and Inclusion (EDI)

LSE is committed to building a diverse, equitable and truly inclusive university. All posts (and post holders) will seek to ensure diversity and inclusion, while opposing all forms of unlawful and unfair discrimination on the grounds of age, disability, gender identity, marriage and civil partnership, pregnancy and maternity, race, nationality, ethnic or national origin, religion or belief, sex and sexual orientation, or social and economic background.

Ethics Code

Posts (and post holders) are assumed to have a responsibility to act in accordance with the School's Ethics Code and to promote the principles and values that the Code enshrines. The Ethics Code clearly states that the whole LSE community, including all staff, students, and governors of LSE, are expected to act in accordance with the principles which are set out in the Code. As such you are required to read and familiarise yourself with it. The School's Effective Behaviours Framework is designed to support this Code. It sets out examples for the six behaviours that all staff are expected to demonstrate, these can be found on the following link: [click here](#)

Environmental Sustainability

The post holder is required to minimise environmental impact in the performance of the role, and actively contribute to the delivery of the LSE Environmental Policy.