UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Data Synthesis and Simulation, School of Geography

Salary: Grade 7 (£33,199 – £39,609 p.a.)

Reference: ENVGE1091

Closing date: 9 June 2019

Fixed-term until 31 May 2024

Job Share/Flexible working applications will be considered.

Research Fellow in Data Synthesis and Simulation

School of Geography

Are you an ambitious researcher looking for your next challenge? Do you want to apply your quantitative skills to provide insight in to policy? Do you want to further your career in one of the UK's leading research intensive Universities?

The University of Leeds is seeking to appoint a talented and highly motivated Research Fellow in Data Synthesis and Simulation to join The SIPHER Consortium, a large new UK public health research initiative, which is being established with funding from the UK Prevention Research Partnership (UKPRP). SIPHER seeks to develop innovative research to prevent physical and mental ill health, and tackle persistent health inequalities. It will work across some of the most important social determinants of health: inclusive economic growth; decent and affordable housing; policies that promote mental wellbeing, and mitigating the long-term effects of adverse childhood experiences. SIPHER is a multidisciplinary, multi-institution partnership bringing together six universities, policy partners at local, regional and national scales of Government, including: Scottish Government, Greater Manchester Combined Authority and Sheffield City Council, as well as a large number of senior practice partners, e.g. Public Health England, Public Health Wales, the Local Government Association and NICE.

You will develop individual level models, together with underpinning methods that capture the dynamic relationships between societal conditions, such as economic growth, affordable housing or adverse childhood experiences, on the one hand and health and wellbeing on the other. You will use these models to produce estimates of distributional (inequality) impacts needed for policy appraisal at high spatial resolution and assesses the evolution over time of effects in the system. You will liaise with other SIPHER researchers to formulate causal and dynamic model structures, use data from a wide range of sources, and knowledge elicited from experts to build models for prediction and provide quantification of associated uncertainties. You will also calibrate and validate these models in close dialogue with other SIPHER researchers and practice partners. You will be responsible for dealing with data from a range of partners, this will include undertaking data analytics, manipulation and linkage to create a dynamic data infrastructure for the SIPHER consortium.

What does the role entail?

As a Research Fellow, your main duties will include:

- Designing, planning and conducting a programme of investigation, in consultation with Dr Nik Lomax and Professor Alison Heppenstall based in the Leeds Institute for Data Analytics;

- Dealing with Data from a range of partners, this will include undertaking data analytics, manipulation and linkage;

- Using and developing novel methods and tools to synthesise and model populations and their attributes, for example using individual based modelling;

- Producing model outputs which include population level and spatial distributions of attributes which will be used in policy appraisal;

- Developing research objectives and proposals and contributing to setting the direction of the research project and team including, where appropriate, preparing proposals for funding in collaboration with colleagues;

- Evaluating methods and techniques used and results obtained by other researchers and to relate such evaluations appropriately to your own work;

- Communicating or presenting research results through publication or other recognised forms of output;

- Preparing papers for publication in leading international journals and independently writing reports;

- Working both independently and also as part of a larger team of researchers, engaging in knowledge-transfer activities where appropriate and feasible;

- Maintaining your own continuing professional development and acting as a mentor to less experienced colleagues as appropriate.

These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.

What will you bring to the role?

As a Research Fellow you will have:

- A PhD or close to completion - i.e. the initial thesis needs to have been handed in at the point of application, in computer science, statistics, physics, mathematics, quantitative social science or a closely allied discipline;

- A strong background in data analytics and modelling;

- Programming expertise, for example in Python, Java, C++, R, or a similar language;

- Demonstrated experience of conducting high quality research;

- Good time management and planning skills, with the ability to meet tight deadlines and work effectively under pressure;

- Excellent written and verbal communication skills including presentation skills and the ability to communicate effectively with a wide range of stakeholders;

- Proven ability to manage competing demands effectively, responsibly and without close support;

- A proven ability to work well both individually and in a team;

- A developing track record of peer reviewed publications in international journals;

- A strong commitment to your own continuous professional development.

You may also have:
- Experience in spatial microsimulation and/or multi-level modelling;

- Expertise in Geographical Information Systems: ArcGIS, Mapinfo, R, QGIS or similar.

How to apply

You can apply for this role online; more guidance can be found on our How to Apply information. Applications should be submitted by **23.59** (UK time) on the advertised closing date.

Contact information

To explore the post further or for any queries you may have, please contact:

Dr Nik Lomax
Tel: +44 (0)113 343 3321
Email: n.m.lomax@leeds.ac.uk
or
Professor Alison Heppenstall
Tel: +44 (0)113 343 6631
Email: a.j.heppenstall@leeds.ac.uk

Additional information

Find out more about the Faculty.

Find out more about our School.

Find out more about the Leeds Institute for Data Analytics (LIDA).

Find out more about Athena Swan in the Faculty.

The SIPHER consortium has further exciting vacancies across our collaborators' sites in Sheffield, Glasgow and Leeds: a Consortium Manager, Consortium Administrator, Research Associate in Policy Studies, Research Associate in Complex Systems Modelling and Research Associate in Decision Modelling and Data Analytics. For details see SIPHER vacancies.

Working at Leeds
You can find out more about our generous benefits package and more about what it is like to work at the University and live in the Leeds area in our Working at Leeds information.

Candidates with disabilities
Information for candidates with disabilities, impairments or health conditions, including requesting alternative formats, can be found in our Accessibility information or by getting in touch with us at disclosure@leeds.ac.uk.

Criminal record information

Rehabilitation of Offenders Act 1974

A criminal record check is not required for this position, however, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending.

Any offer of appointment will be, in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our [Criminal Records](#) information.