



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Demographic Estimation and Forecasting, School of Geography



Salary: Grade 7 (£32,004 – £38,183 p.a.)

Please note that due to funding limitations an appointment will not be made above £34,956

Reference: ENVGE1053

Closing date: 9 April 2017

Fixed-term for 36 months, up to 10 August 2020 (external funding)

Research Fellow in Demographic Estimation and Forecasting

School of Geography

Are you an ambitious researcher looking for your next challenge? Do you have a background in demography, spatial analysis or a quantitative social science? Do you want to further your career in one of the UK's leading research intensive Universities?

The UK [Infrastructure Transitions Research Consortium](#) (ITRC) brings together seven research intensive universities to develop a new generation of infrastructure models to inform the analysis, planning and design of National Infrastructure. [MISTRAL](#): Multi-scale InfraSTRUCTure systems AnaLYtics, builds on previous success of the ITRC in establishing a National Infrastructure Systems Model (NISMOD). The aim of MISTRAL is to develop and demonstrate a highly integrated analytics capability to inform strategic infrastructure decision-making across scales, from local to global. MISTRAL has more than £5 million in funding from the Engineering and Physical Sciences Research Council, as well as the support of 52 industry partners.

You will be responsible for generating synthetic estimates of household composition and demographic attributes and for the future projections of household composition. These projections will be used to explore future household infrastructure demand in different social, economic and policy scenarios. Characteristics that influence household demand for infrastructure services will be assigned from new socio-economic datasets, including those recently made available by the Consumer Data Research Centre (CDRC). These might include household consumption records, social media traffic, movement data and capacity data. You will work with the larger MISTRAL team, delivering results which form part of larger work package for high resolution infrastructure simulation.

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 Mark Birkin](#) based in the [Leeds Institute for Data Analytics](#);



- Generating and pursuing original research ideas and methods in demographic estimation and forecasting;
- 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;
- Participate in a range of research activities within the Leeds Institute for Data Analytics and [Consumer Data Research Centre](#).

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 first degree and PhD (or close to completion) in demography, statistics, geography, quantitative social science or a closely allied discipline;
- A strong background in demographic analysis, spatial analysis and/or statistics;
- 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;
- Programming expertise in Java, C, R, Python, Matlab or a similar language;
- 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, University Academic Fellow in Spatial Data Analytics for Population Research

Tel: +44 (0)113 343 3321

Email: n.m.lomax@leeds.ac.uk

or

Professor Mark Birkin, Professor of Spatial Analysis and Policy; Director of the Consumer Data Research Centre

Tel: +44 (0)113 343 6838

Email: m.h.birkin@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.

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.

