CANDIDATE BRIEF

Research Fellow in Modelling Collective Behaviour, Faculty of Engineering & Physical Sciences

Salary: Grade 7 (£33,797 – £40,322 p.a.) Due to funding restrictions, an appointment will not be made above £33,797 p.a.

Reference: EPSMA1003

Closing Date: 20 November 2019

Fixed-term for 4 years

We will consider job share / flexible working arrangements

Research Fellow in Modelling Collective Behaviour, School of Mathematics, Faculty of Engineering & Physical Sciences.

Are you an ambitious researcher looking for your next challenge? Do you have an established background in the mathematics of decision-making and collective behaviour? Do you want to further your career in one of the UK's leading research-intensive universities?

We are looking for a Research Fellow to join our project on Collective Behaviour of Cognitive Agents. This UKRI-funded project aims to develop new theories of individual and collective decision-making and motion in humans and animals.

You will work with Principal Investigator [Dr Richard Mann](#) on the development of mathematical and computational models based on principles of rational decision-making, Bayesian inference and game theory, and integrate these with the latest biological knowledge and experimental results.

You will have a PhD in Applied Mathematics, Statistics, Physics, Engineering or a closely aligned discipline. You will also have the ability to conduct independent research and a developing track record of publications in international journals. In addition, you will have excellent communication, planning and team working skills.

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 Richard Mann;
- Generating and pursuing independent and original research ideas in mathematical and computational modelling of decision-making and behaviour;
- Developing research objectives and proposals and contributing to setting the direction of the research project and team including 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;

- Preparing papers for publication in leading international journals and disseminating research results through other recognised forms of output;
- 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;
- Contributing to the training of both undergraduate and postgraduate students, including assisting with the supervision of projects in areas relevant to the project.

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 have submitted your thesis before taking up the role) in Applied Mathematics, Statistics, Physics, Engineering or a closely aligned discipline;
- A background in probability and statistical modelling;
- Experience of coding in R, MATLAB, or other well-recognised programming languages;
- A strong interest in the real-world behaviour of animals and humans, with a passion for interdisciplinary research;
- Good time management and planning skills, with the ability to meet tight deadlines, manage competing demands and work effectively under pressure without close support;
- A proven track record of peer-reviewed publications in high impact factor journals;
- Excellent written and verbal communication skills including presentation skills;
- A proven ability to work well both individually and in a team;
- A strong commitment to your own continuous professional development.

You may also have:
- Experience of pursuing external funding to support research;
- Experience of modelling collective behaviour or multi-agent systems;
- Experience in Bayesian decision-making and game theory;

- Experience in machine learning, artificial intelligence or active learning;
- Experience of conducting experimental or observational studies with humans or animals.

How to apply

You can apply for this role online; more guidance can be found on our How to Apply information page. 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 Richard Mann, University Academic Fellow in Data Analytics
Tel: +44 (0)113 343 8988
Email: R.P.Mann@leeds.ac.uk
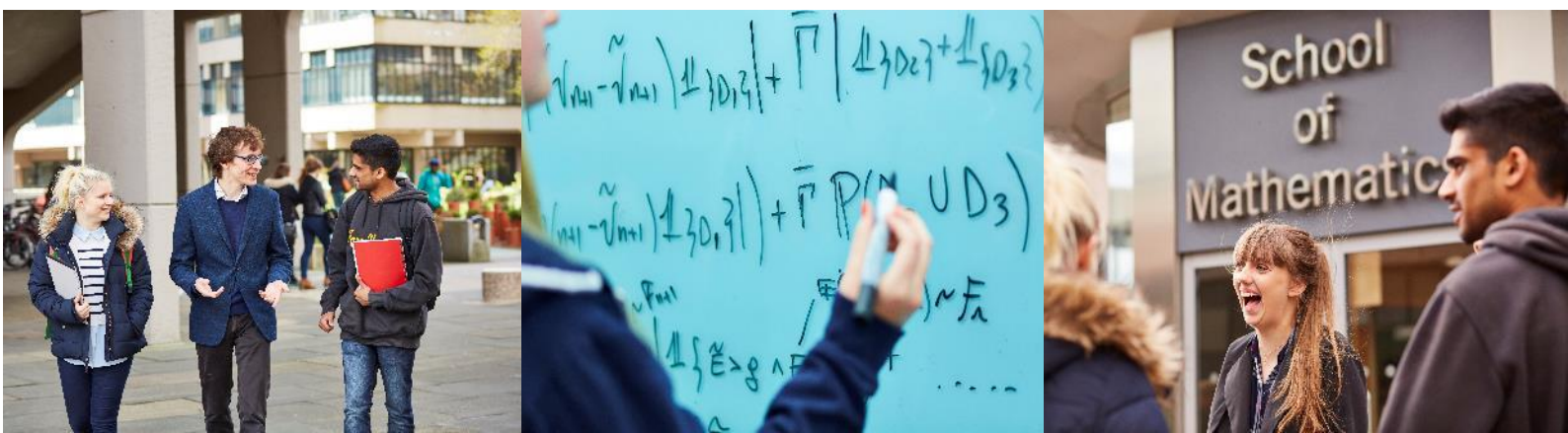
Additional information

A diverse workforce
The Faculty of Mathematics and Physical Sciences is proud to have been awarded the Athena SWAN Bronze Award from the Equality Challenge Unit, the national body that promotes equality in the higher education sector. Our equality and inclusion webpage provides more information.

Working at Leeds
Find out more about the benefits of working at the University and what it is like to live and work in the Leeds area on our Working at Leeds information page.

Candidates with disabilities
Information for candidates with disabilities, impairments or health conditions, including requesting alternative formats, can be found on our Accessibility information page 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 page.