



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Scale Interactions in the Indian Monsoon, National Centre for Atmospheric Sciences, School of Earth and Environment, Faculty of Environment



Salary: Grade 7 (£33,199 – £39,609p.a.) Due to funding restrictions this post can only be appointed at no higher than £36,261 p.a.

Reference: ENVEE1352

Closing date: 6 September 2019

Fixed-term for 18 months

Job share and flexible working arrangements will be considered

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School of Earth and Environment, Faculty of Environment

Do you have a background in tropical meteorology, dynamical meteorology, convection, climate and weather model evaluation, or a related field? Do you want to further your career in one of the UK's leading research-intensive universities?

STIMULATE (Seasonal Teleconnections to the Indian Monsoon: Understanding the Large-scale Atmospheric Tropical Environment) is a collaborative project between University of Leeds and three other UK universities and is funded under the Met Office Weather and Climate Science for Services Partnership (WCSSP) India Programme and led by the University of Reading. The project's institutional lead at Leeds is Jennifer Fletcher, working with Co-Investigator John Marsham. The post-holder will join a team of researchers in the STIMULATE project at University of Reading, University of East Anglia, and University of Edinburgh.

The Indian monsoon supplies around 80% of annual rainwater to more than a billion people in South Asia. Understanding seasonal and sub-seasonal variations in the monsoon is vital for society. A key aspect of this is understanding how large-scale variations on sub-seasonal time scales (e.g. active and break spells in the monsoon) affect convection at the local scale. The post-holder will use observation and reanalysis datasets to understand how convection responds to intra-seasonal variability in the monsoon circulation. These results will be compared with the latest Met Office models to judge and understand their performance. STIMULATE will also determine the impact of model errors on the prediction of sub-seasonal to seasonal variations in the monsoon.

You will have a PhD (or close to obtaining) in a quantitative physical science, such as Physics, Applied Mathematics or Meteorology, and have experience in dynamical and tropical meteorology. You will be experienced in the analysis of large observational and/or numerical model datasets within a programming language such as NCL or Python, have excellent communication skills and a willingness to travel to India.



You will be joining one of the most research active universities for atmospheric science in the UK (Leeds is rated 7th on the Shanghai global rankings for atmospheric science, and 1st in the UK). Within the National Centre for Atmospheric Science (NCAS) and the Institute for Atmospheric Science (ICAS), you will be joining a large group of tropical meteorologists and dynamicists, who together have an outstanding track record on India, the tropics and convection. Together with the opportunity to work with world-leading scientists in Reading, UEA, Edinburgh, and India, this provides an excellent opportunity for an individual with a long-term interest in this field.

What does the role entail?

As a Research Fellow, your main duties will include the following:

- Using satellite and reanalysis data to characterise the effect of tropical wave modes and intraseasonal variability on the timing and spatial distribution of convective rainfall over India;
- Comparing the observed convective response to tropical modes to those seen in convection permitting and parameterised models;
- Investigating whether, and how, the convective response to tropical modes of variability feed back onto the large scale circulation;
- Communicating or presenting research results through publication or other recognised forms of output;
- Travel within the UK and at least one short visit to India for project meetings;
- Presenting your results in at least one international conference;
- Working closely with the project partners in both the UK and India, and develop new external research links where possible;
- Maintaining your own continuing professional development and act as a mentor to less experienced colleagues as appropriate;
- Evaluating existing methods, techniques and results, and relate appropriately to your own work;
- Contributing to the research culture of the Institute, where 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 be obtaining- i.e. the initial thesis needs to have been handed in at the point of application) in a related quantitative physical science, such as Atmospheric Science, Physics, Applied Mathematics or Meteorology;
- An ability to analyse and extract key information from various (data) sources, and to construct corresponding physical interpretations;
- Experience in scientific programming in a language such as NCL or Python and experience with the Linux operating system;
- An interest in tropical or dynamic meteorology;
- A track record of publications appropriate to your career stage;
- A strong commitment to delivering high impact 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 collaborate and communicate effectively with a wide range of project partners;
- 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:

- A strong background in tropical or dynamical meteorology;
- A track record of successful, high quality, publications on tropical atmospheric dynamics and cumulus convection;
- Experience of handling and analysing large volumes of observational or numerical model data;
- Experience in using observations to evaluate processes in weather or climate models;
- Knowledge of statistical analysis methods;
- Experience with methods to identify and analyse tropical large scale waves;
- Experience with satellite rainfall data, or other satellite data;
- Willingness and ability to travel to India for at least one project meeting.



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:

Jennifer Fletcher, Senior Research Scientist

Tel: +44 (0)113 343 3389

Email: j.k.fletcher@leeds.ac.uk

Additional information

Find out more about the [Faculty of Environment](#).

Find out more about our [Research and associated facilities](#).

Working at Leeds

Find out more about the benefits of working at the University and what it's 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 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](#).

