



UNIVERSITY OF LEEDS

## CANDIDATE BRIEF

Research Fellow in Convection over the Maritime Continent, Faculty of Environment



**Salary: Grade 7 (£38,205 – £45,585 p.a. depending on experience)**

**Reporting to: Cathryn Birch, Professor of Meteorology and Climate**

**Reference: ENVEE1763**

**Fixed term until 31 May 2025 to complete specific time limited work.**

**Location: University of Leeds (with scope for hybrid working)**

**We are open to discussing flexible working arrangements.**

## Overview of the Role

An exciting opportunity has arisen to model the atmospheric drivers of convective storms over the Maritime Continent.

Supervised by Prof Cathryn Birch and Prof John Marsham, you will analyse sub-km convection-permitting model simulations of severe convective storms over the Western Maritime Continent. You will quantify the relative importance of key processes causing the triggering, propagation and organisation of convection, such as the orography, land-sea breeze, cold pool outflows, gravity waves and the dependence on the synoptic-scale situation. The model simulations have been run by computing experts at our Centre for Environmental Modelling And Computation (CEMAC) and you will analyse them on national supercomputing facilities. The simulations are for a number of case studies and have been simulated at a range of horizontal resolutions to allow an assessment of the benefits of sub-km resolution.

## Main duties and responsibilities

- In-depth process-based research into the triggering, propagation and organisation of convection in the complex environment of the Western Maritime Continent;
- Analysis of a hierarchy of convection-permitting model simulations to understand the benefits of sub-km horizontal resolution;
- Diagnosis of the key deficiencies in the model through observation-based model evaluation;
- Disseminating research results through project meetings, reports, national and international conferences and through the preparing papers for publication in leading international journals;
- Generating and pursuing independent and original research ideas in the appropriate subject area;
- 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.

## Qualifications and skills

### Essential

- A PhD in a quantitative physical science, such as Atmospheric Science, Physics, Applied Mathematics or Meteorology, or be close to completion;
- A strong background in tropical and/or mesoscale meteorology;
- Experience in atmospheric moist convection and mesoscale storm dynamics,
- Experience of handling and analysing large volumes of Met Office Unified Model data;
- Experience in scientific programming in Python, Linux and the National Supercomputing facility Jasmin;
- Proven ability to produce research at a publishable standard and present it in peer-reviewed journals;
- Good time management and planning skills, with the ability to meet tight deadlines, manage competing demands and work effectively under pressure without close support;
- 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.

### Desirable

- Experience in running and evaluating numerical weather prediction models
- A proven track record of peer-reviewed publications in high impact factor journals;
- Experience of pursuing external funding to support research.



## Additional information

Please note: If you are not a British or Irish citizen, from 1 January 2021 you will require permission to work in the UK. This will normally be in the form of a visa but, if you are an EEA/Swiss citizen and resident in the UK before 31 December 2020, this may be your passport or status under the EU Settlement Scheme.

Please note that this post may be suitable for sponsorship under the Skilled Worker visa route but first-time applicants might need to qualify for salary concessions. For more information please visit: [www.gov.uk/skilled-worker-visa](http://www.gov.uk/skilled-worker-visa)

For research and academic posts, we will consider eligibility under the Global Talent visa. For more information please visit: <https://www.gov.uk/global-talent>

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

Find out more about the [School of Earth and Environment](#).

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

Find out more about [equality](#) in the Faculty.

### Our University

As an international research-intensive university, we welcome students and staff from all walks of life and from across the world. We foster an inclusive environment where all can flourish and prosper, and we are proud of our strong commitment to student education. Within the Faculty of Environment we are dedicated to diversifying our community and we welcome the unique contributions that individuals can bring, and particularly encourage applications from, but not limited to Black, Asian, people who belong to a minority ethnic community; people who identify as LGBT+; and disabled people. Candidates will always be selected based on merit and ability.

The Faculty of Environment has received a prestigious Athena SWAN silver award from [Advance HE](#), the national body that promotes equality in the higher education sector. This award represents the combined efforts of all schools in the Faculty and shows the positive actions we have taken to ensure that our policies, processes and ethos all promote an equal and inclusive environment for work and study.



## **Working at Leeds**

We are a campus based community and regular interaction with campus is an expectation of all roles in line with academic and service needs and the requirements of the role. We are also open to discussing flexible working arrangements. To find out more about the benefits of working at the University and what it is like to live and work in the Leeds area visit 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 [hr@leeds.ac.uk](mailto:hr@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.

