UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Climate Dynamics, Faculty of Environment

Salary: Grade 7 (39,105 – £46,485 p.a. depending on experience)

Reporting to: Professor Amanda Maycock
Reference: ENVEE1791

Fixed term for 18 months to complete specific time limited work

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

We are open to discussing flexible working arrangements.

Research Fellow in Climate Dynamics, Faculty of Environment

Overview of the Role

Are you an ambitious researcher looking for your next challenge? Do you have a background in atmospheric or climate science and an interest in the influence of wildfires on climate dynamics? Do you want to further your career in one of the UK's leading research-intensive Universities?

You will join the Climate Dynamics group at the University of Leeds led by Prof Amanda Maycock to work on the NERC funded Pushing the Frontiers project entitled The Wide-ranging Impacts of STratospheric smoke Aerosols (TWISTA). Smoke aerosol generated by intense wildfires has recently been detected in the stratosphere posing a new climate change threat. We hypothesise that the sustained presence of wildfire smoke in the atmosphere can influence major modes of atmospheric and climate variability.

The successful applicant will test this hypothesis by performing new simulations with the UKESM1 model that incorporate improved representation of stratospheric smoke aerosol from wildfires. You will analyse the simulations to identify the influence of smoke aerosols on the climate system, including stratospheric dynamics and tropospheric and surface climate.

You will work closely with TWISTA colleagues at the Universities of Exeter, Cambridge, and Lancaster, as well as with project partners at the Met Office Hadley Centre, and the Universities of Leeds, Cambridge and Lancaster. You will be expected to produce peer-reviewed papers documenting the results.

You will have, or be close to obtaining, a PhD in the field of Atmospheric or Climate Science, or a related discipline, and have experience of running global climate models on high performance computing platforms and analysing their output. You will have evidence of a strong commitment to publishing scientific results at an international level.



Main duties and responsibilities

- Working with Professor Maycock and the wider TWISTA team to ensure the objectives and deliverables of the project are successfully met;
- Setting up and performing an ensemble of UKESM1 simulations on a national HPC system with an improved representation of stratospheric smoke aerosol;
- Leading the management and analysis of the UKESM1 data;
- 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;
- Preparing papers for publication in leading international journals and disseminating research results through other recognised forms of output;
- Working both independently and as part of a team of researchers within the TWISTA project, sharing research 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.

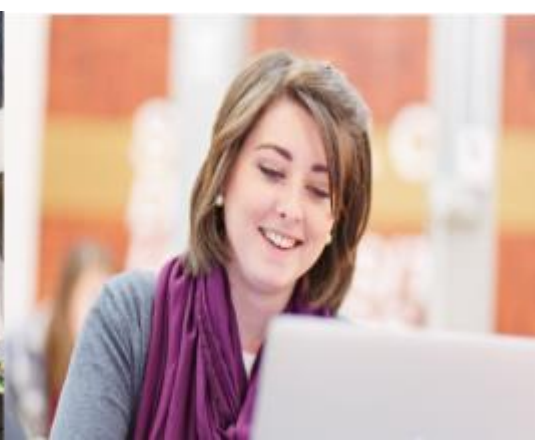
These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.

Qualifications and skills

<u>Essential</u>

- A PhD or near completion - i.e. the initial thesis needs to have been handed in at the point of application in meteorology, atmospheric science, climate science or a closely allied discipline;
- Experience of running a comprehensive global climate model or earth system model;
- Experience of processing and analysing climate model output;
- Knowledge of large-scale atmospheric circulation;





- Demonstrated experience of conducting research and ability to lead and deliver on key research tasks;
- 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 well regarded climate and atmospheric science 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;
- A developing track record of peer reviewed publications in international journals.

Desirable

- Experience of running the UKESM1 or HadGEM3 climate models;
- Knowledge of aerosol effects on climate;
- Knowledge of stratospheric processes and/or stratosphere-troposphere interaction.

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

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 Physical Climate Change group.

Find out more about the School of Earth and Environment.



Find out more about the Faculty of 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 and ethnically diverse people; people who identify as LGBT+; and people with disabilities. 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.

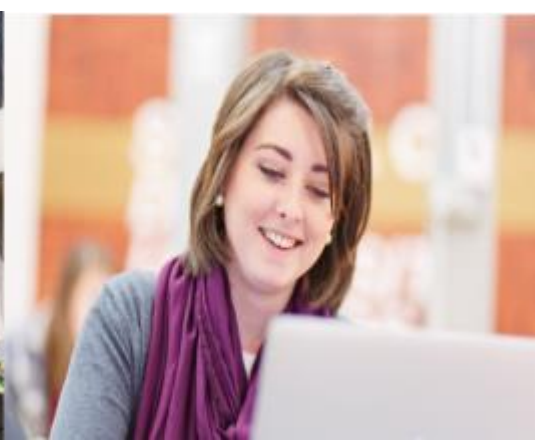
Working at Leeds

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 disclosure@leeds.ac.uk.





Criminal record information

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.