CANDIDATE BRIEF

Research Fellow in Palaeoclimate Modelling, Faculty of Environment

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

Reference: ENVEE1784

Reporting to: Professor Alan Haywood and Dr Julia Tindall

Fixed term for up to 48 months to complete specific time limited work

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

We are open to discussing flexible working arrangements

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Overview of the Role

Are you interested in helping to improve the accuracy of future climate change projections? Would you like to use state-of-the-art modelling of past climates to inform climate model development? Would you like to work as part of a large international research team at the leading edge of paleoclimate modelling?

Understanding how climate will change in the future is of critical importance. However, models that are used to predict future climate change are mainly validated against recent observations that are not broad enough to encompass the range of scenarios for which the models are used.

Paleoclimate modelling allows models to be tested against climatic data from a large range of different climates that occurred in the past. For example, those with much higher CO2 or larger ice sheets. If the models can accurately reproduce these climates, it can provide confidence that they can also accurately simulate the future.

The past-to-future project will use paleoclimate data and modelling to validate and improve climate models and hence future climate change projections. This will be the first time that fully paleo-informed future climate projections have been attempted for the UK's leading climate model.

The past-to-future project is a consortium of 24 European partner universities. You will contribute to the project by simulating two key past climate intervals: the Late Pliocene (~3 million years ago) and the mid-Holocene (~6000 years ago) and will use results to improve future projections. This is an exciting opportunity at the cutting edge of paleoclimate modelling. It would suit someone who enjoys problem solving, with an eye for detail and who has a technical mindset.

The position is based in the School of Earth and Environment and will be supervised by Professor Alan Haywood and Dr Julia Tindall. You will be working closely with colleagues at the University of Bristol who will work in parallel by simulating other time periods.

Main duties and responsibilities

- Setting up and running a state-of-the-art climate model to simulate past climates;
- Developing solutions to technical problems;
- Assessing model skill using observations, paleodata and basic statistical techniques;
- Advising how to improve future climate change projections, based on what can be learned from the past;
- 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 and
- Engaging in knowledge transfer activities particularly with other members of the past-to-future consortium;
- Preparing papers for publication in leading international journals and disseminating research results through other recognised forms of output, including presenting your work at national and international meetings;
- 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 or near completion - i.e. the initial thesis needs to have been handed in at the point of application in meteorology, climatology, paleoclimate modelling or a closely allied discipline;
- A strong background in computational modelling;
- Good programming skills in python, matlab or a similar language;
- 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 developing track record of peer-reviewed publications in international 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.

Desirable
- Experience in running climate models and analysing model outputs for paleoclimate applications;
- An understanding of how physical processes are represented in climate/earth-system models;
- Understanding of past climates;
- Understanding of paleoclimate proxies.

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 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, 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 foehr@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 page.