



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Modelling Climate-Ice Sheet Interactions,
School of Earth and Environment



Salary: Grade 7 (£33,797 – £40,322 p.a.) please note that an appointment will not be made above £36,914 p.a.

Reference: ENVEE1409

Fixed-term until 31 March 2023

We will consider job share/flexible working arrangements

Research Fellow in Modelling Climate-Ice Sheet Interactions School of Earth and Environment, Faculty of Environment

Are you an ambitious climate scientist or glaciologist looking for your next challenge? Do you want to work with world leaders in climate-ice sheet science and uncertainty quantification to tackle future sea level rise? Do you want to further your career in one of the UK's leading research-intensive Universities?

You will join a team of scientists from across the UK as part of the NERC funded project "Understanding rising seas and ice by linking coupled models and past climates". Our aim is to bring together state of the art coupled climate-ice sheet models, the latest knowledge of past climate events and cutting-edge statistical techniques to probabilistically project future ice sheet mass loss and contributions to sea level rise.

You will be based at the University of Leeds, working with [Dr Ruza Ivanovic](#) and [Dr Lauren Gregoire](#) to run ensembles of coupled climate-ice sheet simulations on High Performance Computers. These ensembles will focus on key time periods in Earth's recent geological past to provide unique insight into climate-ice evolution and its control on sea level change.

In collaboration with, [Dr Robin Smith](#) (University of Reading), [Prof Jonathan Gregory](#) (University of Reading, NCAS and Met Office), [Dr Tamsin Edwards](#) (Kings College London) and a postdoctoral researcher based in Reading, the results will be used to quantify and reduce uncertainty in sea level projections through statistical *emulation*. By evaluating your simulations against records of past climate and ice sheet change, you will innovate current tools for projecting sea level rise, contributing towards model development led by [Dr Robin Smith](#) and [Dr Vicky Lee](#) (University of Bristol).

You will have opportunities for training and development, including research secondments to the Universities of Reading and Bristol (UK), and to Project Partners at [TU-Delft](#) and [Utrecht University](#) (Netherlands), as well as opportunities to present work at international conferences.

You will have, or be close to obtaining, a PhD in Climate Science, Meteorology or Glaciology and have extensive experience of using models and observations to study climate and/or ice sheet processes. Applications for part-time work, job-share or other flexible working arrangements are encouraged.



What does the role entail?

As a Research Fellow, your main duties will include:

- Creating and analysing ensembles of climate-ice sheet simulations of key periods of the Last deglaciation (21,000-7,000 years ago), using the FAMOUS climate model and the [BISICLES](#) ice sheet model;
- Working in collaboration with [Dr Ivanovic](#) (climatologist; Leader of the Paleoclimate Model Intercomparison Project Deglacial Working Group), [Dr Gregoire](#) (glaciologist; UKRI Future Leaders Fellow), [Dr Robin Smith](#) (University of Reading), [Prof Jonathan Gregory](#) (University of Reading, NCAS and Met Office), [Dr Tamsin Edwards](#) (Kings College London), [Dr Vicky Lee](#) (University of Bristol) and a research fellow based in Reading to probabilistically determine the rate and magnitude of future sea level rise from ice sheet melt;
- Generating and pursuing independent and original research ideas related to the project goals;
- Contributing to setting the direction of the research project and forging new relationships with international scientific collaborators and industrial project partners to draw wider expertise into the project;
- Evaluating existing methods, techniques and results and applying the most appropriate to your own research;
- Publishing papers in leading international journals and disseminating research results through conference presentations;
- Working both independently and also as part of a larger team of researchers;
- Engaging in knowledge-transfer activities and the creation of fun table-top displays to engage and educate the general public;
- Making use of the extensive opportunities available for continuing your professional development and mentoring to less experienced colleagues as appropriate;
- Contributing to the training of both undergraduate and postgraduate students, including assisting with the supervision of projects relevant to your research.

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 near completion (i.e. initial thesis to be handed in before the start date) in climate, ocean or atmospheric science, glaciology or a closely allied discipline in the physical/mathematical sciences;
- A strong background in climate science and/or ice sheet processes;
- Demonstrated expertise in setting up and running climate or ice-sheet model simulations on high performance computers;
- Extensive experience in managing, processing, visualising and analysing complex and multi-dimensional climate data;
- Excellent experience in scientific programming (e.g. in FORTRAN, R or Python);
- 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 internationally recognised 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:

- Knowledge of Quaternary changes in climate and ice sheets and how these are reconstructed;
- Expertise in performing model sensitivity analysis, calibration or uncertainty quantification.



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 Ruza Ivanovic, Lecturer in Climatology](#)

Tel: +44 (0)113 343 2231

Email: r.ivanovic@leeds.ac.uk

Additional information

Find out more about the [Priestley International Centre for Climate](#)

Find out more about the [Centre for Polar Observation and Modelling](#)

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

Find out more about our [Research and Associated Facilities](#)

Find out more about [Athena Swan](#) in the Faculty

A diverse workforce

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

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.

