UNIVERSITY OF LINCOLN
JOB DESCRIPTION

JOB TITLE	Post Doctoral Research Associate (North Atlantic jet stream under climate change)				
DEPARTMENT	Department of Geography				
LOCATION	Lincoln Campuses				
JOB NUMBER	CHS250	**GRADE**	7	**DATE**	August 2025
REPORTS TO	Principal Investigator (Professor of Climate Science and Meteorology)				

CONTEXT

The Department of Geography is rapidly developing its research profile in the areas of meteorology and climate science and has a very active Lincoln Climate Research Group. This includes a new NERC-funded 28-month project on "Understanding the drivers and implications of a more variable North Atlantic jet stream under climate change (JetVar)", led by Edward Hanna, Professor of Climate Science and Meteorology. The project will involve a novel evaluation of North Atlantic jet-stream changes in large numbers of state-of-the-science global climate model simulations that have recently been produced by a couple of other key inter/national projects, using the latest observation-based climate datasets as a benchmark. In addition to analysing new global climate model output, we will also use innovative machine learning tools to evaluate the relationship between a set of hypothesised climatic precursor conditions, called (potential) jet-stream drivers, and jet-stream variability. We will then develop a set of constraints, based on relations between global climate model representation of the observed jet stream and model-projected future climate change, with the goal of developing unique and robust predictions of changes in North Atlantic jet-stream variability to the year 2100. Furthermore, we will provide critical guidance for end-users and stakeholders to help prepare for climate-related impacts of likely future variations in the jet stream.

JetVar involves close collaboration with Co-Investigators and Partners at the Universities of Reading, Sheffield and Newcastle, the Met Office, Environment Agency, National Energy System Operator and the Wildlife Trust.

Here we have an exciting opportunity for a Postdoctoral Research Associate (PDRA) with experience of statistical analysis and/or modelling, computer programming and preferably some meteorology/climate background, to join our growing team. The PDRA will work directly on the NERC project to help push back the frontiers of knowledge and understanding in the topical and high-impact area of the North Atlantic jet stream under climate change. Although the NERC project is the primary focus, the successful candidate may suggest their own ideas or topic of research to co-develop an idea that could lead to further funding. We expect the project to begin on 1 December 2025 or as soon as possible thereafter.

You will have recently finished or be finishing a PhD or PDRA position and have a desire to work in the Department of Geography/Lincoln Climate Research Group.

JOB PURPOSE
The Research Associate is responsible for conducting research, publication and outreach activities on the project, as directed by the Principal Investigator (E. Hanna) and is expected to operate with a significant degree of autonomy. The Research Associate is not expected to operate as an independent researcher. During this appointment the Research Associate will work closely with the Principal Investigator (E. Hanna), Co-Investigators, Project Partners and the two other PDRAs on the project (based in Reading and Sheffield) to: *Ascertain to what extent global climate models capture the observed changes and extremes in North Atlantic atmospheric jet-stream variability, especially the observed increase in winter variability and accompanying UK weather extremes since AD 2000; *Understand the causes of the observed changes in jet-stream variability (externally-forced change from various jet-stream drivers versus random fluctuations); *Assess and constrain future changes in jet-stream variability out to 2100, and the accompanying impacts of UK and Northwest Europe weather extremes on relevant stakeholders. The focus of this position is on research, publication and outreach activities that are directly related to the NERC grant. However, there may be opportunities to make occasional contributions to the teaching of meteorology and/or climate science within the Department of Geography. The successful candidate may also suggest their own ideas or topic of research, in collaboration with the PI, to co-develop an idea that could lead to further funding.

KEY RESPONSIBILITIES

Literature Surveys
Undertake literature surveys and state-of-the-science investigations. Prepare reports as required.
Research
Undertake a programme of research under the direction of the Principal Investigator, demonstrating a significant level of autonomy, to generate original knowledge, contribute to decisions about research direction, and to prepare reports on results, as required. Lead the production of high-quality research outputs, including project reports and papers of national/international standing. Prepare for, and present at, project workshops and inter/national research conferences. Help with project planning and reporting, as required.
Liaison and Networking
Liaise with internal and external collaborators on the grant, and with colleagues in the Department of Geography, maintaining positive and effective working relationships; this may include liaison with senior personnel in other organisations including collaborators. Participate in internal research activities, including seminars, research meetings and continuous professional development activities.

Grant Applications
Contribute to the production of grant applications.
Teaching Support
Engage by mutual agreement in occasional teaching support activities, up to a maximum of six hours per week.

In addition to the above, undertake such duties as may reasonably be requested and that are commensurate with the nature and grade of the post.

ADDITIONAL INFORMATION

Key working relationships/networks	
Internal	**External**
• Principal Investigator • Co-ordinator of Research Group • Head of School • Other academic staff within the Department of Geography	• Research collaborators

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PERSON SPECIFICATION

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JOB TITLE	Post Doctoral Research Associate	**JOB NUMBER**	CHS250

Selection Criteria	**Essential (E) or Desirable (D)**	**Where Evidenced Application (A) Interview (I) Presentation (P) References (R)**
Qualifications:		
Have, or about to receive, a PhD in relevant topic such as climatology or meteorology	**E**	**A**
Experience:		
Some experience of relevant research methods	**E**	**A/I**
Experience specific to project/area, e.g. statistical analysis and/or modelling and relevant computer software/programming (e.g. Python).	**E**	**A/I**
Experience and record of scientific publication	**D**	**A**
Experience of dissemination of scientific results at conferences	**D**	**A**
Experience of working with external partners	**D**	**A/I**
Experience of developing and maintaining a network of contacts throughout own work area	**D**	**A/I**
Experience of reviewing individual/team progress and performance and embedding organisational strategy into individual performance planning.	**D**	**A/I**
Skills and Knowledge:		
Knowledge specific to project/area	**E**	**A/I**
Ability to conduct original research in the subject area	**E**	**A/I**
Excellent written and verbal communication skills, including the ability to write reports and research outputs and deliver presentations	**E**	**A/I**
Ability to prioritise own workload and work to specified deadlines under pressure	**E**	**A/I**
Ability to communicate complex subjects to students	**E**	**A/I**
Excellent customer service skills with experience of responding efficiently and effectively to phone and email enquiries	**E**	**A/I**
Ability to analyse and solve problems with an appreciation of longer-term implications	**E**	**A/I**
Ability to assess and organise resources, and plan and progress work activities	**E**	**A/I**
Competencies and Personal Attributes:		
Flexible approach to workload	**E**	**I**
Ability to work on own and as part of a team	**E**	**A/I**
Enthusiasm and commitment	**E**	**I**
Experience in adapting own skills to new circumstances	**D**	**A/I**

Ability to develop creative approaches to problem solving	**E**	**A/I**
Have a strong interest in weather- and climate-related research	**E**	**A/I**
Be a clear scientific thinker	**E**	**A/I**
Have good skills of prioritisation	**E**	**A/I**

Essential Requirements are those, without which, a candidate would not be able to do the job. **Desirable Requirements** are those which would be useful for the post holder to possess and will be considered when more than one applicant meets the essential requirements.

Author	EH	**PBP**	GPH