

**Faculty of Science
School of Environmental Sciences**

Senior Research Associate - Climate Dynamics • Ref: RA1399

The Post

Climate models have significant biases in their simulation of present-day tropical and subtropical precipitation and circulation, many of which are linked to errors in high-frequency processes (e.g. the diurnal cycle, mesoscale weather systems), and often arise in the first day of a weather forecast due to fast processes such as atmospheric convection. These biases then lead to further errors in simulating the global circulation and climate, so understanding them is of paramount importance in making better climate projections. The post holder will contribute to quantifying the effects of model biases on different physical drivers of climatic change by running and analysing a hierarchy of models from those that simulate the atmospheric global circulation to full climate models.

The precise duties will be agreed in discussion with the Manager/PI.

The Project

The post holder will conduct climate modelling experiments, assist in the interpretation and presentation of results for journal publications and at scientific conferences, and engage with our project partners and stakeholders to ensure close cooperation. The research will be carried out under the supervision of the UEA investigators, Manoj Joshi and Adrian Matthews.

These duties, tasks and responsibilities include:

- Assist in the design of simulations with the IGCM4 and HadGEM climate models and lead their execution and analysis, using scientific computing tools and by developing bespoke computer programs.
- Analyse simulations to identify climate variability and to explore its behaviour over timescales from years to multiple decades, using scientific computing tools and by developing bespoke computer programs.
- Liaise with the Real Projections consortium led by U. Exeter, UEA, with funded partners in U. Reading, U. Oxford, ensure optimal work plans and collaborations with other groups. This will be via project meetings (which may need to be organised) and electronic communication.
- Work jointly with our collaborative partners to develop new methods of better constraining future climate projections
- Undertake training (including experiential training) in the use of scientific computing and statistical tools as required for the project.

- Present these results and contribute to the preparation and writing of research papers.
- Any other duties commensurate with the grade of the post as directed by the Principal Investigator.

The School

The School of Environmental Sciences is one of the largest and longest established academic departments in Europe to focus on the study of the global environment. We have 240 research, teaching and support staff in the fields of geosciences, marine and atmospheric sciences, climate sciences, environmental biology, social sciences and economics. Our success is built on high achievement within these disciplines, coupled with enthusiasm for collaboration between them and high ambitions for deepening integration.

In line with its strong interdisciplinary ethos, the School has no formal sectors or subdivisions by discipline, and research collaborations occur within and between the subject groupings mentioned above, together with common membership. Some elements of the School are organised into centres, which also have strong collaborations and joint membership across their loose boundaries. The School's outreach activity includes the weather forecasting company, WeatherQuest, the Community Carbon Reduction Project, CRed, and the HEIF-funded Carbon Connections programme, promoting technological innovations for carbon reductions. These latter organisations have recently combined to form the Adapt Low Carbon Group

The School has a range of geophysical equipment for use in gravity, magnetic, electrical and seismic survey work. Computing facilities available to the university research community include: the High Performance Computing Cluster; Linux support and provision of standardised Linux Desktop OS.

The School runs a number of Master's degree programmes, including MSc programmes in Environmental Sciences, Climate Change, and Environmental Assessment and Management (full-time and part-time). BSc programmes include Environmental Sciences, Environmental Earth Sciences, Environmental Geophysics, Geography, and Meteorology and Oceanography (with variants offered with a year in a number of other countries, or with a year in industry). One BSc degree programme, Environmental Geography and International Development, is taught jointly with other Schools.

Research Excellence Framework

In the 2014 Research Excellence Framework national assessment, the Faculty of Sciences at UEA submitted most of its staff to six units of assessment. Overall, 86% of our outputs, 83% of our research impact, and 96% of our research environment were judged to be internationally excellent or world leading.

The School of Environmental Sciences retained its world-leading reputation following the findings of the 2014 Research Excellence Framework national

assessment, in which it was ranked in the top ten, and achieved the highest score in the UK for the quality of its research impact. 100% of the School's research environment was judged to be world-leading or internationally excellent.



The University of East Anglia is proud of the increasing diversity of its campus and works with staff, students and organisations around Norwich, Norfolk, regionally and nationally, to achieve its aim of being an inclusive place for study and work. The University is strongly committed to the Athena SWAN principles and is the proud holder of an institutional Bronze Athena SWAN award. This Award recognises and celebrates good practice in recruiting, retaining and promoting women in science, technology, engineering, mathematics and medicine (STEMM) in higher education.

In May 2015 the charter was expanded to recognise work undertaken in arts, humanities, social sciences, business and law (AHSSBL), and in professional and support roles, and for trans staff and students. The charter now recognises work undertaken to address gender equality more broadly as well as barriers to progression that affect women.

The School of Environmental Sciences is committed to the principles of the Athena SWAN charter; and we have obtained our own School level Bronze Award.

Further information about Equality and Athena SWAN at the University of East Anglia can be found here <http://www.uea.ac.uk/equality/athenaswan>

Our School aims to provide the facilities and the working environment that allows all staff and students to contribute fully, to flourish and to excel. Our School of Environmental Sciences Athena SWAN Committee is committed to recognising and addressing inequality and to promoting a culture that supports diversity and encourages women's wider participation and representation across the School's portfolio of activities. We recognise the importance of supporting women at all stages of their careers, and we proactively support women in applications for promotion, pay awards, flexible working, training and career development in both research and teaching.

The UEA campus has a range of facilities to promote family-friendly working. We have a fully equipped dedicated baby change and feeding room with hand washing facilities, baby changing station, fridge, microwave, bottle and food warmer, and a medical bed for rest purposes. Baby changing facilities are also available in our campus coffee shop. The campus has a medical centre, a dental practice, and a nursery offering Ofsted-rated 'Outstanding' day care for

children from three months until school age in purpose built surroundings with large outside play spaces.

We also support a range of flexible working initiatives, designed to promote a healthy work-life balance as well as supporting staff returning from parental leave and career breaks.

Many other aspects of the University contribute to the overall quality of life and work for our staff at UEA, further details can be found here <https://red.uea.ac.uk/web/working-life/home>

Informal Discussions

For an informal discussion please contact Dr Monoj Joshi, (Tel: 01603 593647 or email: m.joshi@uea.ac.uk).

Person Specification

The person specification for this post is attached as Appendix A.

GENERAL

Salary

Salary will be £32,004 to £38,183 per annum, on Grade 7 on the single salary spine. The normal expectation is that starting salary will be at the minimum of the advertised salary scale.

Starting date

This full-time position is available from 1 July 2017 for a fixed term period of 25 months.

Terms and Conditions of Appointment

Full details of terms and conditions of employment for Research and Analogous Staff will be made available to the candidate to whom the appointment is offered.

Annual Leave Entitlement

There is an annual holiday entitlement of six weeks plus statutory (8 days) and customary (6 days) holidays.

Superannuation

The post is superannuable under the Universities Superannuation Scheme.

Proof of Qualifications

The person specification for this post lists qualifications that are essential and/or desirable and you may hold some or all of these qualifications. Please note that if you are offered the appointment you will be asked to provide original certificates of these educational and professional qualifications. Please **DO NOT** provide these with your application.

Entitlement to Work in the United Kingdom

If you are shortlisted for interview you will be asked to bring to interview original documentary evidence of permission to work in the UK. Candidates invited to interview will be provided with a list of appropriate documents that can be provided as evidence. Please **DO NOT** provide this with your application.

Due to the nature of this role and the level of qualifications required, please note that immigration legislation allows the University to apply for a sponsorship certificate for this post. Where appropriate, the University will apply for a sponsorship certificate from the Home Office UK Immigration and Visa Service on behalf of the candidate offered employment. The individual will be required to supply original documents and certificates to support this application.

Workers from outside of the EU who do not have current residency status within the UK and will require entry clearance or leave to remain approval from the Borders Agency should familiarise themselves with Tier 2 (General) of the Points Based System operated by the Home Office. Details are available at <https://www.gov.uk/government/organisations/uk-visas-and-immigration>.

Occupational Health Assessment

Appointment will be subject to a satisfactory Occupational Health Assessment to be carried out by the University's Occupational Health Service.

APPLICATION AND RECRUITMENT PROCESS

To apply for this vacancy, please follow the online instructions at: www.uea.ac.uk/hr/vacancies/

Your completed application and CV should be submitted by 12 midnight on **19 May 2017**.

Please note that feedback will not normally be provided to those applicants who are not shortlisted for this post

Equal Opportunities Monitoring Form

Please note that the application form contains an Equal Opportunities section which must be completed.

The Equal Opportunities information will not be made available to the selection panel and will not form any part of either the short-listing or decision making process.

Referees

In naming referees in your application, please provide only those who can immediately be approached and one of these must be your current employer, or if not employed your most recent employer.

Interviews

It is anticipated that interviews will take place at the end of **May 2017** and candidates who have not heard by 31 May 2017 should assume their application has been unsuccessful.

Successful shortlisted candidates may be notified of their interview times by telephone and/or email and it is therefore essential you include both of these in your application.

Candidates should note that travel and incidental expenses incurred in attending the interview will not be reimbursed.

This document is available in alternative formats e.g. large print, disc and on-line. If you need this document in an alternative format please contact us on 01603 593034, fax 01603 593522, or email hr@uea.ac.uk

PERSON SPECIFICATION

Post: Senior Research Associate Ref: RA1399 School: ENV		Prepared by: MJ Date: 04/17
Criteria	Essential	Desirable
Education, Experience and Achievements	<ul style="list-style-type: none"> • Either a PhD in a relevant climate science area or equivalent prior research experience in the climate science. • Research experience in quantitative climate research, dealing with running and analysing climate models. 	<ul style="list-style-type: none"> • Track record of authoring/co-authoring climate science publications. • Research experience running climate models (or similar numerical models). • Research experience running the Met Office Unified Model.
Skills and Knowledge	<p>Demonstrable communication skills in English language.</p> <ul style="list-style-type: none"> • Able to develop and test programs in either Fortran, IDL, Matlab, Python or R. • Specialist knowledge and practical skills capable of leading to independent, original contributions to the subject area. • Good time management and organisational skills. • Good interpersonal skills. 	<ul style="list-style-type: none"> • Initiative in planning research. • Able to use scientific computing tools for climate model analysis (e.g. matlab, python), data formats (e.g. netCDF)

<p><i>Personal Attributes</i></p>	<ul style="list-style-type: none"> • Able to work independently and as part of a team to achieve project goals. • Well organised, methodical approach. • Self-motivated with attention to detail. • Under guidance, draft scientific reports/papers for publication and prepare presentations. • Ability to contextualise own findings and to communicate them effectively. 	<ul style="list-style-type: none"> • Ability to give oral presentations at conferences & meetings. • Ability to provide advice to colleagues in their research specialism.
<p><i>Special Circumstances</i></p>		