

JOB DESCRIPTION

Vacancy reference:	SRF29805
Post Title:	Research Scientist in understanding Indian monsoon teleconnections for coupled seasonal prediction
Grade:	Grade 6 (SP27-32)
School/Department:	National Centre for Atmospheric Science / Department of Meteorology
Reports to:	Dr Andrew Turner
Responsible for:	N/A

Purpose

STIMULATE (Seasonal Teleconnections to the Indian Monsoon: Understanding the Large-scale Atmospheric Tropical Environment) is a collaborative project led by the National Centre for Atmospheric Science (NCAS) at the University of Reading and funded under the Met Office Weather and Climate Science for Services Partnership (WCSSP) India programme. The project Principal Investigator is Andrew Turner, working at Reading with Co-Investigators Nicholas Klingaman and Kevin Hodges. The post-holder will join a team of researchers in the STIMULATE project at University of East Anglia, University of Edinburgh and University of Leeds.

The Indian monsoon supplies around 80% of annual rainwater to more than a billion people in South Asia and as such, understanding seasonal variations in the monsoon is vital for society. In part, interannual variations can be explained in terms of teleconnections to drivers in remote ocean basins and from across the Eurasian continent. The post-holder will use observation and reanalysis datasets to understand how seasonal variations of the monsoon are controlled in the real world. These results will be compared with the latest Met Office models to judge their performance. STIMULATE will also determine the impact of model errors on the prediction of seasonal variations in the monsoon.

Main duties and responsibilities

The post-holder will use combinations of the latest reanalysis products and long-term coupled model experiments of the Met Office and other global centres, and in collaborative work on production and analysis of a hierarchy of model experiments towards the following activities:

- Assist project partners in generating a new description of observed teleconnection pathways between drivers such as ENSO or the IOD and the Indian monsoon;
- Use a hierarchy of models to determine the monsoon response to imposed forcing in known teleconnections and assess performance of the latest MetUM climate models at simulating the monsoon response to these teleconnections;
- Diagnose the relative role of SST biases in different ocean basins on Indian monsoon simulation;
- Use long-term reanalysis products and integrations of MetUM coupled models to determine the influence of decadal modes of variability on monsoon teleconnections.

The post-holder will also:

- Report on progress and results through appropriate methods, including papers for scientific journals and presentation of results at conferences/workshops;
- Maintain awareness of current progress in relevant research areas, to ensure that the research remains at the cutting edge;
- Collaborate with project partners elsewhere in the consortium, in the UK and India;
- Contribute to the maintenance of an active scientific environment through group meetings, departmental seminars etc.;
- Contribute to activities such as training, public engagement, knowledge exchange and policy advice, where appropriate.

Supervision received

The post-holder will report to and receive guidance and direction as required from Andy Turner (line manager) and other STIMULATE investigators, typically in face-to-face meetings on a weekly basis.

The post-holder will also be expected to work with other members of NCAS, particularly in the tropical research group, as well as participating in WCSSP India project meetings in the UK and India.

Supervision given

The post-holder is not expected to supervise other members of staff; however, opportunities may become available for supervision of postgraduate dissertation projects.

Contact

While the post-holder will be based in the National Centre for Atmospheric Science within the Department of Meteorology at the University of Reading, occasional contact, including through reciprocal visits, will be expected with WCSSP India project partners and at the Met Office (Exeter, UK). Visits for project meetings are also planned with partners at University of East Anglia, University of Edinburgh and University of Leeds.

Terms and conditions

Full time, fixed term for up to 19 months, to start 1 September 2019 or as soon as possible thereafter.

There are no specified hours of work, but you will be required to work such hours as are necessary to carry out the duties associated with the post. Overtime is not payable.

The post-holder will be expected to present results of work at national and international conferences, as well as participate in project meetings as required.

This document outlines the duties required for the time being of the post to indicate the level of responsibility. It is not a comprehensive or exhaustive list and the line manager may vary duties from time to time which do not change the general character of the job or the level of responsibility entailed.

Date assessed:

PERSON SPECIFICATION

Job Title	School/Department
Research Scientist in understanding Indian monsoon teleconnections for coupled seasonal prediction	National Centre for Atmospheric Science / Department of Meteorology

Criteria	Essential	Desirable
Skills Required	<ul style="list-style-type: none"> Strong scientific analytic ability and high capacity for problem solving Good oral and written communication skills Good programming skills (e.g. knowledge of Python or other appropriate data processing and visualization language such as R or IDL) 	
Attainment	<ul style="list-style-type: none"> Have or shortly expect to attain a PhD or equivalent in mathematical or physical sciences Publication record appropriate to experience 	<ul style="list-style-type: none"> A PhD in weather/climate model evaluation or understanding of atmospheric dynamics for climate variability
Knowledge	<ul style="list-style-type: none"> Evidence of good understanding of physical processes relating to weather and climate 	<ul style="list-style-type: none"> Atmospheric dynamics and teleconnections Tropical meteorology and climate, including monsoon systems
Relevant Experience	<ul style="list-style-type: none"> Research in relevant atmospheric or climate sciences Experience of analysing output of weather or climate models 	<ul style="list-style-type: none"> Demonstrated experience of analysis of large multi-model datasets or large ensembles
Disposition	<ul style="list-style-type: none"> Self-motivated, conscientious, and creative Ability to maintain productive collaborations 	<ul style="list-style-type: none"> Previous collaborations across institutes

Completed by: Andy Turner	Date: 22 July 2019
---------------------------	--------------------