

# JOB DESCRIPTION

<b>Vacancy reference:</b>	SRF28073
<b>Post Title:</b>	Post-Doctoral Research Assistant in Palaeoclimate Analysis
<b>Grade:</b>	Grade 6, spine 27
<b>School/Department:</b>	Geography and Environmental Sciences
<b>Reports to:</b>	Professor Sandy P. Harrison
<b>Responsible for:</b>	n/a

## Purpose

To make quantitative reconstructions of Late Quaternary climate changes through combining multiple data sets and modelling, including forward modelling of environmental records

## Main duties and responsibilities

- Provision of expertise in relevant areas, including at least two of the following: theoretical palaeoclimatology, statistical reconstruction techniques, data assimilation, process-based environmental modelling
- Collation and processing of palaeodata, including climate model outputs
- Application of multivariate statistical techniques, model inversion and/or data assimilation techniques to reconstruct climate parameters
- Application of process-based forward models to translate between climate and observations, specifically in a palaeoclimate context
- Provision of research support in preparing publications and lectures arising from the project
- Provision of organisational support in developing academic workshops and networking events, and coordinating academic networks
- Assistance in the dissemination of the results, from presenting conference papers to co-authoring relevant publications.

## Supervision received

The appointee will be supervised by Professor Sandy P. Harrison, who will provide scientific supervision and professional mentoring. The School of Archaeology, geography and Environmental science also runs an independent professional mentoring programme.

## Supervision given

Not applicable

## Contacts

The appointee will be part of a team of young researchers at Reading (<https://research.reading.ac.uk/palaeoclimate/>) working within the framework of the GC2.0: Unlocking the Past for a Clearer Future project. They will have the opportunity to work within the Palaeoclimate Modelling Intercomparison Project.

**Terms and conditions**

Full-time, Fixed-term. Percentage of time spent on the project: 100%.

This document outlines the duties required for 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.

# PERSON SPECIFICATION

Job Title	School/Department
Post-Doctoral Research Assistant in Palaeoclimate Analysis	SAGES/Geography and Environmental Science

Criteria	Essential	Desirable
<b>Skills Required</b>	<ul style="list-style-type: none"> <li>• Experience in utilisation of palaeoclimate data and databases</li> <li>• Processing and analysis of climate model output</li> <li>• High-level competence in programming, particularly Fortran, Python and R</li> <li>• Statistical analysis skills, including GLM and mixed-effect models</li> </ul>	<ul style="list-style-type: none"> <li>• Hands-on experience with forward modelling of terrestrial records (vegetation, tree rings, speleothems, lake records)</li> <li>• Experience with data assimilation techniques</li> </ul>
<b>Attainment</b>	<ul style="list-style-type: none"> <li>• Academic qualifications to MSc/MA standard in physics, mathematics and statistics, biogeochemistry, ecology, environmental science or a related subject</li> <li>• PhD in relevant subject area by time of appointment</li> </ul>	<ul style="list-style-type: none"> <li>• Significant research / professional experience</li> <li>• Publications in relevant area</li> </ul>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Palaeoclimatology</li> <li>• Ecology</li> <li>• Statistics and/or data assimilation methods</li> </ul>	
<b>Relevant Experience</b>	<ul style="list-style-type: none"> <li>• Hands-on experience with approaches to quantitative climate reconstruction</li> <li>• Hands-on experience with processing climate model output</li> <li>• A proven track record of publishing research</li> <li>• Ability to generate high quality figures and tables using appropriate software</li> <li>• Experience of presenting and communicating at conferences</li> </ul>	<ul style="list-style-type: none"> <li>• Hands-on experience of analysis of palaeoclimate data sets</li> <li>• Hands-on experience with forward modelling</li> <li>• Hands-on experience with data assimilation</li> </ul>

<b>Disposition</b>	<ul style="list-style-type: none"> <li>• Good organisational and self-motivational skills, including the ability to work to tight timetables</li> <li>• Team working</li> <li>• Flexibility</li> <li>• Ambition to make a significant contribution to the field</li> </ul>	<ul style="list-style-type: none"> <li>• Interest in international collaborations.</li> </ul>
<b>Other</b>	<ul style="list-style-type: none"> <li>• Proven networking ability</li> </ul>	

Completed by: Sandy P. Harrison	Date: 7 January 2018
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