

ABOUT LOUGHBOROUGH UNIVERSITY

DEPARTMENT OF GEOGRAPHY

RESEARCH ASSOCIATE

REQ16097

FEBRUARY 2016

As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.

Project Description

A 13-month Research Associate is required to work on two exciting RCUK projects. For the first 6-months, the candidate will work on a NERC-funded project which aims to pilot a real-time surface water flood mapping capacity within Cabinet Office's data portal for emergency responders. The project collaborates with the Met Office, Cabinet Office, Department for Communities and Local Government, Leicester Resilience Forum, Leicester City Council, Environment Agency, Transport Scotland and Atkins. The project involves: (i) interfacing with the Met Office precipitation products in real-time; (ii) modelling surface water flow routing within selected urban sites; and (iii) mapping surface water flooding within Cabinet Office's data portal. For this project, the candidate is expected to possess strong programming skills and undertake technical development of the system, linking three platforms. Experience of flood modelling is not essential and training will be provided on the modelling aspect.

For the remaining 7-months, the Research Associate will work on an interdisciplinary EPSRC consortium project on Water-Food-Energy Nexus. The Research Associate will downscale the global climate model outputs to the UK scale using the Decision-Centric (DC) version of a Statistical Downscaling Model to specify how climate variables, including temperature and rainfall, may alter out to 2050 and beyond. Scenarios of daily precipitation and temperature ensembles will be generated, providing inputs into the hydrological and land-use components of an Agent Based Model being developed at partner organizations in the consortium.

JOB DESCRIPTION

Job Grade: Research Grade 6

Job Purpose:

The Research Associate will undertake the specific tasks outlined in the respective projects (see duties), assisted by the project investigators.

Job Duties: The Research Associate is expected to:

Project Specific (management)

- Manage research materials/data and archiving;
- Take responsibility for the analysis and presentation of findings;
- Assist with the development of the research network;
- Attend and contribute to meetings with project partners
- Contribute to, present at and collaborate in dissemination and knowledge transfer exercises.
- Report to the Principal Investigator;
- Report to the NERC and EPSRC projects;
- Share research progress and issues with the Principal Investigator;
- Attendance and input at regular internal meetings;
- Manage and develop online materials, blogs and social media as appropriate;
- Conduct literature based searches and collect background information on the research areas;
- Negotiate and follow up research contacts;
- liaise with the project partners through regular meetings;
- work in partner organizations' hot desks if necessary;

Project Specific (research)

- Collate data pertinent to the project;
- Undertake data processing;
- Interface with Met Office real-time precipitation products with Python;
- Set up real-time ensemble flood simulations on a Linux server;
- Transfer modelling results in real-time to a data portal and undertake flood mapping;
- Use a statistical downscaling tool to generate daily rainfall and temperature ensembles for an agent based model;
- Liaise with project teams and provide inputs to other research activities within a consortium;

Other Related Activities and Functions

- To engage in training programmes in the University (e.g. through Professional Development) which are consistent with your needs and aspirations and those of the School);
- To undertake such duties as may be reasonably requested and that are commensurate with the nature and grade of the post.

Opportunities are available for co-authorship on research papers intended for publication in international peer-reviewed journals.

Other:

All staff have a statutory responsibility to take reasonable care of themselves, others and the environment and to prevent harm by their acts or omissions. All staff are therefore required to adhere to the University's Health, Safety and Environmental Policy & Procedures.

All staff should hold a duty and commitment to observing the University's Equality & Diversity policy and procedures at all times. Duties must be carried out in accordance with relevant Equality & Diversity legislation and University policies/procedures.

The University is committed to enabling staff to maintain a healthy work-home balance and has a number of family-friendly policies which are available at: <http://www.lboro.ac.uk/services/hr/a-z/family-leave-policy-and-procedure---page.html>

We also offer an on-campus nursery with subsidised places, subsidised places at local holiday clubs and a childcare voucher scheme (further details are available at: <http://www.lboro.ac.uk/services/hr/a-z/childcare-information---page.html>). In addition, the University is supportive, where operational needs allow, of flexible working arrangements.

We also strive to create a culture that supports equality and celebrates diversity throughout the campus. The University holds a Bronze Athena SWAN award which recognises the importance of support for women at all stages of their academic career. For further information on Athena SWAN see <http://www.lboro.ac.uk/services/hr/athena-swan/>

PERSON SPECIFICATION

Job Title: Research Associate

Job Grade: Research Grade 6

	Essential	Desirable	Stage to be Assessed
Experience	<p>Software programming experience with python</p> <p>Proven track record of working under Linux environment</p> <p>Significant experience of critically evaluating and analysing geographical/spatial data</p> <p>Experience of Quantitative research skills</p> <p>Experience of presenting research to academic and/or external audiences</p> <p>Team working</p>	<p>Experience with flood modelling and flood risk management</p> <p>Academic conference presentations</p> <p>Experience of writing bids for funding, either within a major organisation or for external support</p> <p>Experience of successfully lead-authoring academic scientific papers and/or comparable consultancy reports</p>	1, 2
Skills and abilities	<p>Confident use of Linux system</p> <p>Self-motivated with ability to prioritise work and meet deadlines</p> <p>Ability to work independently and as part of a team</p> <p>Written communication</p> <p>Organisational and</p>	<p>Working knowledge of gridded data formats (Nimrod format would be useful)</p> <p>Experience with the Iris python library (http://scitools.org.uk/iris/)</p> <p>Experience with Met Office STEPS products</p> <p>Knowledge of web design</p> <p>Experience with</p>	1, 2, 3

	administrative skills A flexible and conscientious approach to work	Ordnance Survey data service Knowledge of GIS Knowledge of computer hardware Experience with urban flood modelling	
Training	Demonstrate evidence of having undertaken further training		3
Education and Qualifications	Strong degree in Geography, Engineering, Computer Science or relevant subject	Relevant PhD (or equivalent experience)	1
Equality and Diversity	Evidence of a good working knowledge of equal opportunities and understanding of diversity in the workplace		1, 3
Other	Commitment to observing the University's Equal Opportunities policy at all times		1, 3

Stages in assessment:

- 1: Application form at short listing,
- 2: Selection test – i.e. presentation, in-tray exercise, data analysis
- 3: Interview

Conditions of Service:

The appointment will be on a full-time fixed term contract for 13 months. Salary is Research Grade 6 £28,982 - £31,656 per annum at a starting salary commensurate with experience and qualifications.

The appointment will be subject to the University's normal Terms and Conditions of Employment for Academic and Related staff, details of which can be found at:

<http://www.lboro.ac.uk/services/hr/a-z/conditions-of-service.html>

Informal Enquiries:

Informal enquiries should be made to Dr Dapeng Yu, Senior Lecturer in Geography by email at: D.Yu2@lboro.ac.uk

Application:

The closing date for receipt of applications is **24 March 2016**.

Interviews

Interviews date TBA