UNIVERSITY OF BIRMINGHAM

THREE POSTS IN WATER SCIENCE AT THE UNIVERSITY OF BIRMINGHAM, UK

CLOSING DATE: 10 AUGUST 2011

The University of Birmingham is making a major strategic investment across its research base in the School of Geography, Earth and Environmental Sciences (http://www.gees.bham.ac.uk/), including **three new appointments** (below) **to strengthen further and expand the expertise of the Water Sciences research group**. The Water Sciences research group aims to advance fundamental understanding of surface-water and groundwater processes by undertaking interdisciplinary research at multiple scales that spans hydrology, hydroclimatology, biogeochemistry, geomorphology, hydrogeology and (hydro)ecology. To achieve this aim, the group develops new approaches to monitor, analyse and model water-dependent system dynamics and processes.

Lecturer/Senior Lecturer in Water Sciences: Surface water environments and processes (post reference 14586)

This appointment seeks to develop the Water Sciences research group's capacity in the particular area of **surface water environments and processes**. It is expected that the successful candidate will have expertise in one or more of: surface water hydrology, hydroclimatology (climate-hydrology interactions), macro-scale hydrology, and/ or river catchment processes. Potential to link with our research strengths in hydroecology and/or biogeochemistry would be considered favourably. The appointee will have technical skills to deliver innovative science by using state-of-the- art methods (e.g. numerical modelling, remote sensing, statistical tools, laboratory and/or field experimentation).

In addition to demonstrating a track record of, or potential for, internationally excellent research, applicants must have a commitment to delivering high quality teaching and learning in physical geography and the environmental sciences at all levels (i.e. undergraduate, postgraduate, and higher research degrees). The successful candidates will be involved in administrative tasks (appropriate to their appointment grade) to support delivery of research and teaching within the School of Geography, Earth and Environmental Science

A full job description is available in PDF format:
http://www.download.bham.ac.uk/vacancies/jd/14586.pdf

Lecturer/Senior Lecturer in Water Sciences: Physical Hydrogeology (post reference 15407)

For this post, we seek a **groundwater specialist with a first-rate understanding of the physical processes underlying groundwater flow and contaminant transport** to develop innovative international research in this field. Within this broad remit, many types of research could be pursued, for example: saturated flow in porous and/or fractured rocks; unsaturated water and/or gas flow; unreacting and/or reacting solute transport in groundwaters; movement of non-aqueous phase liquids through rock; movement of nanoparticles and/or larger particles through porous media. This research requires the ability to develop mathematical and numerical models to describe the appropriate processes at the appropriate scales. Research will be undertaken in the context of an important water issue, eg urban water resources, river/aquifer interactions, developing country water resources, climate

change, engineering issues, or radioactive waste disposal, or be aimed at underpinning a range of these areas.

In addition to research, the appointee will be expected to contribute to teaching at MSc and BSc/MSci levels within GEES. In particular, much of the teaching associated with this post will be to students on the MSc Course in Hydrogeology, the oldest and largest groundwater MSc course in the UK and one with an excellent international reputation.

A full job description is available in PDF format:
http://www.download.bham.ac.uk/vacancies/jd/15407.pdf

Lecturer/Senior Lecturer in Radioactive Waste Disposal and Remediation (post reference 47282)

The successful candidate will be expected to drive forward research in the area of **nuclear waste disposal and remediation primarily through the application of numerical models of groundwater flow and contaminant transport**. He/She will be expected to expand current understanding of the interdependent thermal, hydraulic, mechanical, chemical and biological processes that can impact radionuclide transport in the environment, particularly in the context of subsurface nuclear waste remediation and storage. The post-holder will join the Water Sciences research group within the School of Geography, Earth and Environmental Sciences, but will be expected to integrate activities in the field of nuclear waste disposal and remediation between the College of Engineering and Physical Sciences and the College of Life and Environmental Sciences. In this role, he/she will also be a core member of the Birmingham Centre for Nuclear Education and Research.

The post-holder will be expected to contribute to teaching on the new postgraduate taught Masters course in Nuclear Decommissioning, in particular covering the environmental and quantitative aspects of safety assessment for waste disposal, and on the established Masters Course in Hydrogeology. Additionally, the post-holder might contribute to undergraduate teaching on other courses within the School of Geography, Earth and Environmental Sciences.

A full job description is available in PDF format:
http://www.download.bham.ac.uk/vacancies/jd/47282.pdf

FOR INFORMAL DISCUSSION PLEASE CONTACT:

- Professor Paul Smith (Head of School) by email at m.p.smith@bham.ac.uk or call +44 (0)121 414 4173
- Dr David Hannah (Head of Water Sciences research group) by email d.m.hannah@bham.ac.uk or call +44 (0)121 414 6925;
- Professor John Tellam (Hydrogeology) by email j.h.tellam@bham.ac.uk or call +44 (0)121 414 46138

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