Centre for Ecology & Hydrology
NATURAL ENVIRONMENT RESEARCH COUNCIL

Research Associate, Hydrological - Mathematical Modeller
Based in Wallingford
Band 6 - £28,000-30,000 per annum (depending on skills and experience)

Description of work area
Mathematical modeller, researching and developing hydrological modelling

Description of specific work to be undertaken and skills to be gained

We are offering a comprehensive 3-year Research Associate traineeship within the Hydrological Modelling & Risks Group of CEH Wallingford. The role will focus on the development of spatially-distributed hydrological models for a range of environmental applications (including climate change, hazard forecasting, nutrient modelling and water resources) at local, regional and global scales.

The ideal candidate will have a mathematics or physics background with experience of scientific code-development (in FORTRAN, Python, R), with an interest in development and application of deterministic models of the environment. Good working of knowledge of ArcGIS and/or visualization software is highly desirable. Some knowledge of hydrology and / or experience of stochastic approaches to flow regime and flood estimation would be desirable. We are particularly interested in individuals who have applied their modelling skills overseas, especially in China, India or sub-Saharan Africa, and have a track record of attracting funding for their work.

Skills and qualifications required on appointment
- You will have at least a 2.1 degree and either a PhD or a Masters with relevant postgraduate experience in a numerate science subject.
- You should have a strong interest in researching, developing and implementing modelling systems of the natural environment.
- You should have experience of developing and using mathematical models.
- You will be able to demonstrate excellent team working skills providing examples of how you work independently and within a team.
- You must be able to demonstrate through examples how you would communicate effectively with different audiences, including colleagues, senior managers, external scientists and the public (non-experts).
- You should have established programming skills (Fortran, C/C++, Python, R)
- Some experience of ArcGIS and/or visualization software is highly desirable.
- You should be prepared to work overseas as projects demand it.

Training and skills you will acquire
- Development of understanding of science areas (e.g. hydrology and water resources, flood modelling, forecasting and impacts, ensemble forecasting, model performance assessment).
- IT skills to develop and run distributed hydrological models, and analyse and present the outputs. These include scientific programming, GIS and data management skills.
- Knowledge of available datasets and their characteristics for use in driving and testing models.
- Presentation and scientific writing skills

The NERC Research Associate Programme

The NERC Research Associates' Programme is an initiative which is intended to offer individuals the opportunity to gain practical experience of working within a Research Institute, whilst acquiring specialist and wider skills that will be valuable in a range of careers.
The programme is aimed particularly at those who have recently completed postgraduate studies, but is open to individuals from other backgrounds and of all ages. Individuals will work on highly topical research projects, both important for future research within the environmental research community and appropriate to their backgrounds. Research Associates are given specific, measurable objectives which will be intended to develop their skills as a researcher and to demonstrate their suitability for a research career.

Appointments above the minimum salary would be based on the appointee's skills and experience.

Towards the end of the Research Associate traineeship consideration is given to availability of open ended employment opportunities with CEH. We have successfully appointed most of our recent Research Associates to open ended roles.

Eligibility to apply

To work for CEH, you must be eligible to live and work in the UK without the requirement for a work permit. CEH can only apply for a work permit in cases where there are no suitably qualified or experienced resident workers; otherwise applicants should normally be resident in the UK or a national of the European Union.

Status Changes

From April 2018, Centre for Ecology and Hydrology, a component part of the Natural Environment Research Council, will be part of UK Research and Innovation. UK Research and Innovation will bring together the seven Research Councils, Innovate UK and a new organisation, Research England. The vision for the new organisation is to be the best research and innovation organisation in the world. More information can be found online at http://www.ukri.org. From April 2018, you will be employed by UK Research and Innovation.

Associated with this change is the plan for CEH to subsequently move outside the public sector to become a not for profit research organisation with charitable status. We will continue to be funded as now by a mixture of NERC and competitively won income.