Hydro-JULES

Centre for Ecology & Hydrology
NATURAL ENVIRONMENT RESEARCH COUNCIL

Could you help build the next generation of land-surface and hydrological models?

Hydro-JULES is a NERC-funded research programme which will build a three-dimensional community model of the terrestrial water cycle linked to the JULES land surface model, to underpin hydrological research in the United Kingdom. For more information please visit https://hydro-jules.org/.

Hydro-JULES is delivered by CEH in partnership with BGS and NCAS and will:

1. Address important science questions in the fields of hydrology, land-atmosphere feedbacks, carbon and nutrient cycles, data science and integration with novel instrumentation and Earth observation technologies;
2. Quantify the risks of hydro-climatic extremes (e.g., floods and droughts) in a changing environment to support long-range planning and policy decisions;
3. Improve hydrological forecasting using new sensors and modelling technology.

Vacancies in the Hydro-JULES programme:

Senior Model Integration Scientist | CEH Wallingford, Oxfordshire | £35,222 - £38,000 | Open-ended

The Centre for Ecology and Hydrology (CEH) have an exciting opportunity for a ground-breaking scientist to work at the interface between weather, climate and hydrological science.

You will be responsible for the design and implementation of key interfaces between atmospheric, hydrological and groundwater models and will be required to collaborate with scientists and computational modellers from partner organisations.

You will be responsible for leading the design and development of the Hydro-JULES modelling framework, taking responsibility for code, data and model configurations.

You will also manage the design and implementation of flexible interfaces between model components and between the hydrological model and other Earth system model components.

Further information and how to apply

Research Associate, Hydrological Modeller | CEH Wallingford, Oxfordshire | £28,200- £30,000 | 3 year FTA

The Centre for Ecology and Hydrology (CEH) are looking to recruit a dynamic and innovative hydrologist to develop new approaches for representing soil moisture and runoff generation in large scale hydrological applications.

You will be required to collaborate with atmospheric, hydrological and groundwater scientists from partner organisations.

You will lead the design, development and evaluation of soil moisture and runoff generation modules within the Hydro-JULES programme.

You will also contribute to the development of protocols for testing, evaluating and benchmarking the model and its components, and maintain model documentation.

Further information and how to apply

Software Framework Scientist | NCAS based in Wallingford and Reading | £30,395-39,609 | 3 year FTA

The National Centre for Atmospheric Science (NCAS) wishes to recruit an outstanding computational scientist, to be based at the University of Reading. You will play a key role in the Hydro-JULES programme.

You will contribute to the design of flexible interfaces between Hydro-JULES model components, and between Hydro-JULES and other Earth system models – and be responsible for their development and implementation.

You will be also be involved in the testing and support of this model in the community, and will work with scientists and computational modellers from partner organisations. Although based at the University of Reading, you will spend the bulk of your time at CEH.

This post is expected to be available in summer 2019, at which point it will be re-advertised. Meanwhile, interested parties should contact Grenville. Lister@ ncas.ac.uk.

Research Groundwater / Hydrological Modeller | BGS Nottingham, Nottinghamshire, | £30,357 - 32,997 | 4 year FTA

The British Geological Survey (BGS) have an opportunity for a talented and motivated Research Groundwater / Hydrological Modeller to join their Groundwater Directorate. In collaboration with leading universities and a variety of industrial partners you will principally work on two major new projects:

(i) Hydro-JULES
(ii) Community Water Management for a Liveable London (CAMELLIA)

Your role will be: 1) To improve the representation and parameterisation of groundwater processes in JULES and the Hydro-JULES framework, and its application at a range of space and time-scales; 2) to support the development and application of a community urban hydrological model for London, integrating surface water, groundwater and infrastructure interactions.

Further information and how to apply

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