Forschungszentrum Jülich pursues cutting-edge interdisciplinary research on the pressing issues of our time. It helps to solve the grand challenges facing society in the fields of energy and environment as well as information and the brain. With around 5,900 employees, Jülich – a member of the Helmholtz Association – is one of the large interdisciplinary research centres in Europe.

The Institute of Bio- and Geosciences – Agrosphere (IBG-3) conducts research to improve our understanding of biogeochemical and hydrological processes in terrestrial systems. Specific studies focus on environmental controls on biogeochemical cycling of elements, the analysis of exchange processes and nutrient dynamics in the soil-plant-atmosphere continuum. A combination of experiments, modelling and innovative observation technologies is used to bridge the gap between model, process and management scale. Its research contributes to the sustainable and resource-conserving use of soils and water and to the quantification of the effect of climate and land use change on terrestrial ecosystems. We offer a competent and interdisciplinary working environment, as well as an excellent framework in the areas of experiments and modelling.

The Institute is a member of the Centre for High-Performance Scientific Computing in Terrestrial Systems (HPSC TerrSys) of the ABC/J Geoverbund. The Centre applies advanced supercomputing technologies for integrated modelling of terrestrial systems with respect to the hydrologic, energy and biogeochemical cycles.

We are looking to recruit a

2017-158 - Postdoc Subject area land surface modeling and data assimilation

Your Job:

The position is associated with the research unit FOR2131, which has recently been funded by the German Science Foundation. This research unit sets out to

- Design and install a data assimilation framework for catchment-scale terrestrial systems encompassing all compartments from the groundwater to the atmosphere including soil, vegetation, and river networks
- Performing model simulations at a very high spatial resolution in order to analyze the role of land surface heterogeneities on hydrological and atmospheric processes
- You will independently develop methods for the assimilation of land surface information like land surface temperature, soil moisture and leaf area index
- Test the methods on a unique virtual catchment and real data from TERENO-catchments
- Evaluate the value of these data types for improving flood and weather predictions, together with various other German project partners
- Possibility to work in an interdisciplinary team and with state of the art supercomputer facilities

Your Profile:

- PhD degree in geosciences (hydrology, soil science, biogeosciences, meteorology), physics or computer science including scientific publications
- Knowledge in hydrologic modelling preferably in HPC environments
- Experience in data assimilation/inverse modelling
- Experience in parallel programming with C/C++ and/or Fortran is an advantage
- Ability to work in interdisciplinary and international teams
- Very good communication skills
- Excellent command of written and spoken English

Our Offer:

- Exciting working environment on an attractive research campus, ideally situated between the cities of Cologne, Düsseldorf, and Aachen
- A comprehensive further training programme, including English language courses
- Flexible working hours and various opportunities to reconcile work and family life
- Limited for 3 years with possible longer-term prospects
- Full-time position with the option of slightly reduced working hours
- Salary and social benefits in conformity with the provisions of the Collective Agreement for the Civil Service (TVöD).

Forschungszentrum Jülich aims to employ more women in this area and therefore particulary welcomes applications from women.

We also welcome applications from disabled persons.

We look forward to receiving your application, preferably ##OBFLINK## via our online recruitment system on our career site until ##FRIST_DATUM##, quoting the above-mentioned reference number.

Contact at Human Resource Development
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