



Conducting research for a changing society: This is what drives us at Forschungszentrum Jülich. As a member of the Helmholtz Association, we aim to tackle the grand societal challenges of our time and conduct research into the possibilities of a digitized society, a climate-friendly energy system, and a resource-efficient economy. Work together with around 7,250 employees in one of Europe's biggest research centres and help us to shape change!

At the Institute of Bio- and Geosciences – Agrosphere (IBG-3) we conduct research to improve our understanding of hydrological and biogeochemical processes in terrestrial systems. A combination of experiments, modelling, and innovative observation technologies is used to bridge the gap between model, process, and management scale. Our 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. Further information on our mission can be found here: <https://www.fz-juelich.de/ibg/ibg-3/EN/>

We are looking to recruit a

Research Associate - Non-invasive imaging of porous media with x-ray computed tomography

Your Job:

- Installation and operation of a high-resolution x-ray computed tomography (XRCT) system that allows to investigate cm-scale soil samples with a resolution down to several μm
- Establishment of a processing workflow to analyse XRCT data, including reconstruction, filtering, segmentation, and registration for time-lapse measurements
- Support with acquisition and analysis of XRCT measurements of ongoing PhD projects dealing with salt precipitation due to evaporation, microbially induced calcite precipitation, and the effects of root exudates on soil penetration
- Development of an independent research agenda using XRCT measurement, for example dealing with soil-root interactions or soil structural characterization, in collaboration with other IBG-3 scientists
- Presentation of results at scientific conferences and in peer-reviewed publications

Your Profile:

- Completed master's degree and PhD in computational geosciences, engineering,

The job will be advertised until the position has been successfully filled. You should therefore submit your application as soon as possible. We look forward to receiving your application via our

Online-Recruitment-System!

Questions about the vacancy?

Get in touch with us by using **our contact form**. Please note that for technical reasons we cannot accept applications via email. www.fz-juelich.de

material science or a comparable field of study

- Experience with the acquisition, processing, and interpretation of XRCT data is essential
- Affinity with porous media research is of advantage
- Ability to work independently as well as collaboratively in an international and interdisciplinary team
- Excellent English communication and writing skills

Our Offer:

We work on the very latest issues that impact our society and are offering you the chance to actively help in shaping the change! We support you in your work with:

- Exciting working environment to perform high-quality research at international level
- Attractive research campus, conveniently located in the Cologne-Düsseldorf-Aachen triangle of cities
- Comprehensive training courses and individual opportunities to support personal and professional development
- Targeted services for international employees, e.g. through our International Advisory Service
- Flexible working hours in a full-time position with the option of slightly reduced working hours
- 30 days of annual leave and an attractive regulation for bridging days
- Extensive company health management
- Ideal conditions for balancing work and private life, as well as a family-friendly corporate policy
- Flexible work (location) arrangements, e.g. remote work to a degree

We offer you an exciting and varied role in an international and interdisciplinary working environment. The position is for a fixed term of 2 years. Salary and social benefits will conform to the provisions of the Collective Agreement for the Public Service (TVöD-Bund), pay group 13, depending on the applicant's qualifications and the precise nature of the tasks assigned.

We welcome applications from people with diverse backgrounds, e.g. in terms of age, gender, disability, sexual orientation / identity, and social, ethnic and religious origin. A diverse and inclusive working environment with equal opportunities in which everyone can realize their potential is important to us.