



Karlsruher Institut für Technologie

As "The Research University in the Helmholtz Association", the Karlsruhe Institute of Technology (KIT) creates and imparts knowledge for society and the environment. The aim is to make significant contributions to global challenges in the fields of energy, mobility and information. More than 9,000 employees at KIT work together on a broad disciplinary basis in research, teaching and innovation.

For the Institute of Concrete Structures and Building Materials in the Applied Clay Mineralogy working group, we are looking for at a fixed-term position for a

PhD student (m/f/d) in the field of hydraulic Sandwich sealing systems

Organizational unit:

The Institute of Concrete Structures and Building Material, Department of Building Materials and Concrete Construction, and the associated Materials Testing and Research Institute (MPA Karlsruhe) as well as the associated Competence Center for Material Moisture (CMM) are headed by Prof. Dr. Frank Dehn and are among the leading German institutions in the field of materials testing and research into building materials and building products. The Applied Clay Mineralogy working group is headed by Prof. Dr. Katja Emmerich.

Job description:

Within the framework of the BMUV-funded Sandwich Main Project, phase 2, (Sandwich-HP2), the hydraulic sandwich sealing system developed by KIT will be tested on a large scale in the Mont Terri Rock Laboratory (CH). The Sandwich-HP2 is a joint project with cooperation with international partners. Laboratory tests for the optimization of materials and parameterization for hydro-mechanical-chemical modeling accompany the in-situ experiment.

Within the scope of the doctoral thesis, the soil physical/hydraulic/mechanical properties of mineral mixtures for equipotential segments in hydraulic sandwich sealing systems are to be investigated on the basis of mineralogical composition. For this purpose, own experiments are to be designed and carried out.

Personal qualification:

We are looking for an enthusiastic and highly motivated applicant. You must have a university degree in geosciences, soil science, environmental engineering or a comparable course of study and be interested in the soil physical/hydraulic/mechanical properties of mineral materials.

A sound knowledge of mineralogy and a very good command of written and spoken English is required. We expect a keen interest in experimental work. Documenting, presenting and publishing scientific results is your strength. Working on this international project requires a willingness to cooperate with other working groups and intercultural skills.

We offer:

We offer you an attractive and modern workplace with access to the excellent facilities of the KIT, a varied job, a wide range of training opportunities, flexible working time models, a subsidy for the BW job ticket and a cafeteria/canteen.

Salary:

Payment is made according to EG 13 (100%) of the collective wage agreement of the federal states (TV-L), provided that the professional and personal requirements are met.

Application deadline:

Please submit your application, consisting of a cover letter, CV, certificates (BSc and MSc certificate together with transcript of records) and contact details of two people who are familiar with your academic skills, as a PDF to the e-mail address by 31 January 2024: katja.emmerich@kit.edu .

Entry date:

1st April 2024

Term of contract:

3 years

Specialist contact person:

For further information please contact Ms. Prof. Dr. Katja Emmerich, Tel.: ++49 721 608 43477, katja.emmerich@kit.edu .

We aim to fill the positions as equally as possible with employees (f/m/d) and would therefore be particularly pleased to receive applications from women. In the case of equal suitability, recognized severely disabled persons will be given preferential consideration.

Further information can be found on the Internet: www.kit.edu.

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