

Job Vacancy

Reg.-Nr. 382/2018
Fristende 31.12.2018



**FRIEDRICH-SCHILLER-
UNIVERSITÄT
JENA**

The Friedrich Schiller University Jena is a clearly defined classical university with over 17,500 students. It is one of the oldest and most traditional universities in Germany. At the Institute of Geosciences, Chair of Applied Geology (Faculty for Chemistry and Earth Sciences) a position is open to be filled by 01.02.2019 for a

Research associate/Postdoc in the field of μ CT / XRM

High-resolution X-ray tomography (μ CT) or X-Ray Microscopy (XRM) is an increasingly popular tool for the non-destructive internal and external visualization of objects, materials and pore structures in 3D with high detail going to sub- μ m resolution. Recently, the possibility to perform 4D- μ CT imaging, i.e. imaging a dynamic process in-situ, has attracted interest in numerous research domains, including the field of geo-, biogeo-, environmental and material sciences.

The Applied Geology group at the Friedrich Schiller University of Jena is setting up a new XRM laboratory, which will be part of the joint Institute for Geosciences (IGW) – Otto Schott Institute for Material Sciences (OSIM) correlative microscopy platform. The 3D and 4D XRM is one of the analytical tools beside AFM, SEM-EBSD, FIB-SEM, TEM and LA-ICP-MS contributing to this platform. Research projects cover inter alia water-rock interaction, mineral reaction kinetics, the influence of natural organic matter and/or microorganisms on mineral reactivity, nucleation, nanoparticle and secondary phase formation in open or confined systems, the influence of real pore/fracture geometry on reactive transport processes and material corrosion including bioactive materials such as glasses. Due to the low absorption contrast expected for most systems to be investigated, many challenges remain in imaging and image analysis.

Your tasks:

- Setting up and operating a new μ CT / XRM system at the Department of Applied Geology including a tensile cell
- Independent research in the field of Applied Geology, Geochemistry and / or Materials Sciences
- Independent lectures (LV), especially LV for the use of μ CT / XRM and post-processing / evaluation of the obtained 3D/4D data.
- Other tasks include participation in application for third-party project funding, supervision of doctoral, master and bachelor theses, the presentation of scientific results at international conferences, as well as the publication of scientific results.

Requirements:

- We are looking for an independent and well-organized self-motivated scientist, demanding high quality of his own work.
- You love to work interdisciplinary, and want nothing more than advancing the field of dynamic X-ray microscopy imaging, reconstruction and processing with your skills, creativity and novel solutions.
- You really like to put your findings into practice and want to tell the world about your findings with sparkling presentations.
- You are willing to work in a multidisciplinary team of scientists in a newly equipped and established X-ray imaging facility.
- You hold a PhD in the field of Physics, Computer Science, Geosciences, Engineering or a related field.
- An asset is experience with X-ray tomography and/or X-ray microscopy and expertise in image reconstruction and simulation software packages.
- Good to excellent English language skills (verbally and written).



We offer:

- A full position with a gross-salary according to TV-L (initially for 3 years with an elongation option)
- Opportunity for research on an innovative and worldwide unique research platform
- A communicative atmosphere within a scientific network providing top-level research facilities and training program, including participation in international and national conferences, summer schools and workshops
- The place of work is the city of Jena, Germany, a young and lively university town with dynamic business activities, successful scientific centers of innovation, and a vibrant cultural scene.
- Severely disabled applicants with equal qualification and aptitude are given preferential consideration.

Applications with complete application documents (curriculum vitae, certificates) must be sent to regina.piechnick@uni-jena.de by stating the registration number 382/2018 until 31 December 2018. For further information on the position, please contact Prof. Dr. Thorsten Schäfer (thorsten.schaefer@uni-jena.de).