

At the Faculty of Geosciences, Geotechnics and Mining of the TU Bergakademie Freiberg, Institute of Geotechnics, Head of Soil Mechanics and Foundation Engineering, the following position as part of a third-party funded project is to be filled at the earliest possible time

**Research assistant (m/f/d) „Multi-Struktur Materialmodelle“
reference number 35-E/2025**

Remuneration: Pay group 13 TV-L
Scope of position: 1,0 FTE (full time; This job can also be carried out as a part-time position)
Time limit: 36 months



Join our team of experts from universities, research centers, and industry to work on numerical simulations of coupled thermal, hydraulic, and mechanical processes in the field of repository research. You will develop and apply methods to assess geotechnical barriers with regard to establishing their safety functions and maintaining their integrity over long periods. To this end, you will use data from large-scale experiments in underground laboratories.

These are your tasks:

You will use complex physical process models to perform numerical simulations of coupled deformation, flow, and transport processes in geotechnical barriers and host rocks, employing the scientific open-source simulation software OpenGeoSys. A key focus lies in modeling the hierarchical pore space of bentonites (e.g. double-structure models). In addition to these process simulations, you will develop a quality-assured integration of your work into automated workflows. The underlying goal of your research is to describe geotechnical processes in and around geological deep repositories for nuclear waste disposal. Your work will be part of various collaborative projects with national and international partner organizations, and it is therefore expected that you will coordinate closely with them. You will present your results at international conferences and publish in relevant international scientific journals.

What you can expect from us:

- Work at a family-friendly university with flexible working hours
- Remuneration in accordance with the provisions of the collective agreement for the public service of the federal states in line with personal requirements.
- Attractive fringe benefits, e.g. capital-forming benefits (VL), company pension scheme (VBL) Health management.
- Induction training by long-term employees.

What we expect from you:

- University master's or diploma degree in Geophysics, geotechnics, geosciences, civil engineering, mechanical engineering, applied or theoretical physics, computer science or applied mathematics
- You have knowledge in continuum mechanics and in numerical methods (especially the finite element method)
- Proven programming skills (preferably in C++) round off your professional profile
- You work scientifically-methodically, problem-solution-oriented and are characterized by a high degree of commitment and personal responsibility
- You speak and write English fluently. German skills are an advantage
- You are willing to present project results at national and international conferences
- You enjoy communicating with colleagues from various disciplines

**For further information please contact Univ.-Prof. Dr. Nagel,
E-Mail: thomas.nagel@ifgt.tu-freiberg.de.**

Applicants (m/f/d) must fulfil the recruitment requirements for the conclusion of employment contracts for a fixed term in accordance with the WissZeitVG. Applicants (m/f/d) with severe disabilities or equivalent status will be given preferential consideration if they have the same aptitude, performance and qualifications. For appropriate consideration, please enclose proof of severe disability/equal status with your application documents. The TU Bergakademie Freiberg aims to increase the proportion of women in teaching and research and is therefore particularly interested in applications from qualified women.

Please send your application with the usual documents and stating the advertisement **reference number (35-E/2025) by 15.04.2025** (the postmark of the ZPS of the TU Bergakademie Freiberg applies) to:

**TU Bergakademie Freiberg - Department of Human Resources - 09596 Freiberg
or by e-mail: bewerbungen@tu-freiberg.de**

Interview costs will not be covered. The TU Bergakademie Freiberg is also looking for scientific staff from various disciplines. Staff from various disciplines. Information at: <https://tu-freiberg.de/wirtschaft/karriere/stellenausschreibungen>