

Externe Neuausschreibung der Stelle mit der Reg.-Nr. 5-11449/21-D

Martin Luther University Halle-Wittenberg (MLU) invites applications for the following position:

Doctoral Researcher on the project "Heat transport in groundwater and shallow geothermal systems"

starting date: **July 2022 or later**, limited to 3 years, 75 percent of a full-time employment, salary will be up to E 13 TV-L if the personal requirements and tasks are fulfilled, work place will be located at MLU Halle, Germany.

The project is fully funded by the German Research Foundation. The Doctoral Researcher is dedicated to field scale analysis of transient heat flow mechanisms in porous media. This is addressed by using data from high-resolution field experiments with groundwater wells, borehole heat exchangers, and/or ground-source heat pump systems. The insight gained through these experiments will be interpreted by analytical and numerical simulation to validate the concerted role of advection, conduction and dispersion in heterogeneous systems. We will utilize these results to refine existing mathematical description in computer-based models. The project will also contribute to optimized design and control of shallow geothermal systems. Therefore, an optional focus can be set on technological optimization and model-predictive control of geothermal heat supply.

Requirements:

- Master or equivalent degree in a project-related field (e.g. hydrogeology, geosciences, physics, environmental engineering, energy engineering, control theory, applied mathematics)
- Very good knowledge in theoretical aspects of flow and heat transport processes
- Very good quantitative and computer-based simulation skills
- Fundamental knowledge and interest in control theory and application
- Fluent in English communication in writing and speaking. Knowledge of German is an advantage
- A clear drive to do science
- Flexible and well organized, hands-on mentality
- Driver's license

The Martin Luther University Halle-Wittenberg gives priority to applications from severely disabled candidates with equivalent qualifications. Women are particularly encouraged to apply.

Queries concerning the application process and project-related questions should be directed to Prof. Peter Bayer <https://applied.geo.uni-halle.de>

All applications should include:

- Cover letter in English (or German) describing motivation for the project, research interests and relevant experience
- complete curriculum vitae including names and contact details of at least two scientific references
- digital copy of MA/BA/Diploma certificates
- all document should be submitted as one **single pdf file**.

Applicants with a degree that was not obtained at a German university must submit a certificate assessment for foreign university qualifications (Statement of Comparability for Foreign Higher Education Qualifications) from the Central Office for Foreign Education (<https://www.kmk.org/zab/central-office-for-foreign-education>). This can be submitted later when invited for the interview.

Kindly send your application, quoting the reference number 5-11449/21-D to Prof. Peter Bayer (peter.bayer@geo.uni-halle.de). **Submission deadline is 29 May 2022.** Selected candidates will be invited to an interview after this deadline. The position is offered with reservation of possible budgetary restrictions. Application portfolios will not be returned, application costs will not be reimbursed.