

TUD Dresden University of Technology, as a University of Excellence, is one of the leading and most dynamic research institutions in the country. Founded in 1828, today it is a globally oriented, regionally anchored top university as it focuses on the grand challenges of the 21st century. It develops innovative solutions for the world's most pressing issues. In research and academic programs, the university unites the natural and engineering sciences with the humanities, social sciences and medicine. This wide range of disciplines is a special feature, facilitating interdisciplinarity and transfer of science to society. As a modern employer, it offers attractive working conditions to all employees in teaching, research, technology and administration. The goal is to promote and develop their individual abilities while empowering everyone to reach their full potential. TUD embodies a university culture that is characterized by cosmopolitanism, mutual appreciation, thriving innovation and active participation. For TUD diversity is an essential feature and a quality criterion of an excellent university. Accordingly, we welcome all applicants who would like to commit themselves, their achievements and productivity to the success of the whole institution.

At the **Faculty of Environmental Sciences, Department of Hydro Sciences**, the **Institute of Groundwater Mangement** offers a position as

**Research Associate (m/f/x)**

(subject to personal qualification employees are remunerated according to salary group E 13 TV-L)

starting **October 1, 2024**. The position is limited until September 30, 2027 and comprises 75 % of the full-time weekly hours. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz - WissZeitVG). The position offers the chance to obtain further academic qualification (usually PhD).

**Background:** The international research project "Climate Collaboratorium: Co-creation of Applied Theatre Decision Labs for Exploring Climate Change Adaptation and Mitigation" brings together researchers from Canada, the USA, the United Kingdom, and Germany to examine the impacts of climate change on water security and develop sustainable, locally relevant solutions. The German subproject, funded by the German Research Foundation (DFG), focuses on the Sorbian community of Rietschen in the Görlitz district and is conducted in collaboration with local stakeholders as well as scientists from TUD and the Helmholtz-Centre for Environmental Research Leipzig (UFZ). The aim is to formulate well-founded recommendations for water management and climate adaptation by combining natural and social science insights with theater-based methods. Groundwater resource modeling plays a central role in this, allowing for the evaluation of adaptation measures and the development of realistic scenarios for water availability.

**Tasks:** The PhD candidate will develop a numerical groundwater model for the community of Rietschen and conduct simulations to analyze the impacts of various climate and socio-economic scenarios on groundwater availability. Current methods for sensitivity and uncertainty analysis as well as multivariate model calibration will be applied in the model development. The PhD candidate will work closely with local stakeholders, including the mayor, citizens, Lausitz Energie Bergbau AG (LEAG), and the lower water authority of Görlitz. The tasks also include fieldwork to supplement available data and to collect model-relevant parameters on-site. The simulation results will be incorporated into workshops organized by project partners at the Helmholtz Center for Environmental Research Leipzig (UFZ) with local stakeholders. These workshops will be used to develop socio-economic scenarios and link them with climate scenarios to provide well-founded strategies for climate adaptation of local water use and supply.

**Requirements:** university degree (at the start of the position) in the fields of hydro or environmental sciences, environmental engineering, hydro(geo)logy, physical geography, or a comparable program;

special interest and ideally experience in groundwater modeling, GIS, (Python) programming, and hydrogeological field investigations.; willingness to participate in project workshops with international partners in Canada, the USA, and the UK; very good English skills. Knowledge of German and a Class B driver's license are desirable.

**We offer:** participation in an exciting, highly topical, and interdisciplinary research project at the interface between research and application. You will work in an international team at the Institute for Groundwater Management while maintaining close collaboration with project partners both domestically and abroad. Attractive working conditions and training opportunities are offered at the TUD; flexible working hours and the possibility to balance family and career.

For any questions, please contact Prof. Dr. Andreas Hartmann ([andreas.hartmann@tu-dresden.de](mailto:andreas.hartmann@tu-dresden.de)) or Dr. Zhao Chen ([zhao.chen@tu-dresden.de](mailto:zhao.chen@tu-dresden.de)).

TUD strives to employ more women in academia and research. We therefore expressly encourage women to apply. The University is a certified family-friendly university and offers a Dual Career Service. We welcome applications from candidates with disabilities. If multiple candidates prove to be equally qualified, those with disabilities or with equivalent status pursuant to the German Social Code IX (SGB IX) will receive priority for employment.

Please submit your detailed application with the usual documents by **July 29, 2028** (stamped arrival date of the university central mail service or the time stamp on the email server of TUD applies), preferably via the TUD SecureMail Portal <https://securemail.tu-dresden.de> by sending it as a single pdf file to [grundwasser@mailbox.tu-dresden.de](mailto:grundwasser@mailbox.tu-dresden.de) or to: **TU Dresden, Fakultät Umweltwissenschaften, Fachrichtung Hydrowissenschaften, Institut für Grundwasserwirtschaft, Herrn Prof. Dr. Andreas Hartmann, Helmholtzstr. 10, 01069 Dresden, Germany**. Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

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**Reference to data protection:** Your data protection rights, the purpose for which your data will be processed, as well as further information about data protection is available to you on the website: <https://tu-dresden.de/karriere/datenschutzhinweis>.