

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 Hydrosiences, the Institute of Groundwater Management** 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 **February 1, 2026**. The position is limited to 36 months until January 31, 2029, with 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 DFG project HydroSIGNS is being carried out jointly by TU Dresden (Institute for Groundwater Management) and the Helmholtz Centre for Environmental Research – UFZ. It investigates how resilient different hydrological systems worldwide are to climatic changes and extreme events. To this end, hydrometric event signatures are linked to isotope-based signatures, global datasets on runoff in streams and springs are merged, precipitation-runoff events are identified and classified, and selected systems are sampled with high-frequency isotope measurements. The aim is to determine the most reliable hydrometric signatures for recording water sources and to derive robust statements on functional resilience across spatial scales. The candidate will also be expected to collaborate with the other doctoral student of the HydroSIGNS project at the UFZ. A corresponding job advertisement will be available shortly at <https://www.ufz.de/index.php?en=34276>.

Tasks: You will work on the TUD part of the DFG project HydroSIGNS. You will curate and analyze global source data sets (hydrometric and isotopic) and derive catchment areas. You will plan, install, and operate high-frequency isotope observatories at locations in southern Germany and Austria and carry out sampling and quality analysis. Based on the measurement series, you will develop and test methods for event identification for sources and derive hydrometric event signatures. In addition, you will compare hydrometric and isotopic signatures over different time scales and investigate scale and resilience effects from the source to the catchment area. You will work closely with project partners at the UFZ and the observatory sites, prepare data sets, write scientific publications, and present results at workshops and conferences.

Requirements:

- scientific university degree in hydro/environmental sciences, environmental engineering, hydro(geo)logy, physical geography, or a comparable field of study
- good programming skills (Python, R, Matlab, Julia, or alternatives)
- initiative, ability to work in a team, very good communication skills, ability to work independently and organize, keen interest in scientific work
- very good English skills
- high motivation to work in a closely networked, international, and interdisciplinary team
- experience in working with large data sets is an advantage
- experience in working with stable water isotopes (field sampling and analysis) is an advantage
- class B driver's license desirable

We offer:

- participation in an exciting, highly topical, and interdisciplinary research project
- participation in an inspiring, collegial, interdisciplinary, and international team at the Institute for Groundwater Management

- attractive working conditions and opportunities for further training, flexible working hours, and the possibility of mobile working, as well as the opportunity to balance family and career
- working environment with state-of-the-art hydrological and isotope analytical measuring instruments

For any questions, please contact Prof. Dr. Andreas Hartmann (andreas.hartmann@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. 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 **November 11, 2025** (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 jobs-igw@tu-dresden.de or to:

TU Dresden, Institute for Groundwater Management, 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.

TUD is a founding partner in the DRESDEN-concept alliance.

DRESDEN
concept



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>.