

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 Forest Sciences, Institute of Soil Science and Site Ecology**, the **Chair of Site Ecology and Plant Nutrition** offers a position as

Research Associate / PhD Student (m/f/x)

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

starting **December 1, 2023**. The position is limited until October 31, 2027 and comprises 65% of the fulltime 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).

The position is within an interdisciplinary project funded by the Forest Climate Fund (Agency of Renewable Resources), which aims to develop silvicultural recommendations for a transition towards climate change adapted forests. Understanding the site-specific soil water balance in forest stands is key for assessing forests' vulnerability to climate change (e.g. prolonged drought periods, storm risks). The development of forest conversion concepts and the associated promotion of climate change-adapted mixed forest ecosystems represents a significant contribution to various aspects of sustainable forestry and bioeconomy. This project is a joint effort of the Chair of Silviculture (TUD), Chair of Soil Resources and Land Use (TUD), the Chair of Biodiversity and Nature Conservation (TUD), Public Enterprise Sachsenforst and other national and international stakeholders and scientists.

Task: In our part of the project, an intensive soil hydrological monitoring will be carried out at several forest research sites in the state of Saxony to measure water content and soil tension. Soil hydrological measurements will be closely linked to the stand structure created by thinning and site characteristics. The thinning of the existing stand should lead to an improvement of the water balance and thus to more favorable growing conditions for the regeneration plants. Multiple soil sampling campaigns are planned and should be carried out with respect to the analysis of soil physical and biogeochemical characteristics. Based on the measurements, the soil water balance should be simulated with site hydrological models with regard to stand-specific climate change adaptation strategies. These results will be linked to the established stand structure by thinning and the success of the regeneration plants.

Requirements: We are looking for a highly motivated PhD student with a university degree (master or equivalent) in earth or natural sciences (e.g., Hydrology, Soil Sciences, Earth Sciences, Environmental Sciences, Forestry) or related subjects and strong knowledge on water cycling in forested ecosystems. Experiences in field, laboratory and greenhouse work and a driving license are

required. The potential candidate should have experience in soil water related measurements (pF curve, soil moisture and matric potential) and ideally forest ecological knowledge. Knowledge in statistical data analysis and in environmental modeling, preferably soil hydrological modeling, are essential. The position requires very good command of spoken and written English (German desirable), excellent communication skills as well as the ability to work in a team.

We offer: an inspiring international and interdisciplinary atmosphere with state-of-the-art soil hydrological measurement and analytical tools to analyze soil water dynamics from the lab to field scale.

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 (including CV, motivation letter, a summary of your master thesis (if already completed) and the names (affiliation, telephone, e-mail) of two references) by **September 29, 2023** (stamped arrival date of the university central mail service applies) to: **TU Dresden, Fakultät Umweltwissenschaften, Fachrichtung Forstwissenschaften, Institut für Bodenkunde und Standortslehre, Professur für Standortslehre und Pflanzenernährung, z. Hd. Dr. Natalie Orlowski, Helmholtzstr. 10, 01069 Dresden, Germany** or via the TUD SecureMail Portal <https://securemail.tu-dresden.de> by sending it as a **single pdf** file to birgit.zieglmayer@tu-dresden.de. Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

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>.