



The Research Group Isodrones of the Department of Environmental Geochemistry at the Institute of Geoecology, Technical University of Braunschweig offers a

PhD or Postdoctoral position (75%, 36 months, potential extension for 36 months) in the “Future Climate Lab”, Lower Saxony, Germany



Project summary

Climate change directly affects the forests in Central Europe and challenges the way how they are managed under current and future conditions. As forests provide essential ecosystem functions and services to society, solutions are urgently needed to make forests resilient to climate change.

FoResLab – the Future Lab towards Forests Resilient to Climate Change is a consortium of seven Universities, research institutions and practitioners in Lower Saxony addressing the pressing question: **How can we make forests resilient to climate changes in current and future conditions?** **FoResLab** is funded for a duration of six years and constitutes of 12 subprojects.

The position holder will work in the subproject “**Resilience pathways of below-ground and above-canopy water relationships**”. The aim of this subproject is to quantify below- (soil water and groundwater recharge) and above-ground (transpiration) water fluxes by using ecohydrological and UAV (Unmanned aerial vehicle)-based methods. Central to achieving the goals of this subproject will be thermal imaging using UAV for estimating transpiration on the site scale. Therefore, we look for an individual with a strong interest and, ideally, experience in flying UAV and processing UAV data.

Tasks:

- Planning and execution of regular UAV overflights at several experimental sites in Lower Saxony and Thuringia
- Installation and maintenance of soil moisture monitoring stations
- Data processing, analysis and interpretation
- Quantification of water fluxes for the study sites (groundwater recharge, transpiration) and validation with other data sources (sap flow, water isotope data)
- Publication of results in peer-reviewed scientific journals
- Presentation of research results at national/international conferences

Requirements:

This position can be filled either by a PhD student (possessing a Master's degree, or equivalent) or as a postdoctoral research fellow (final decision will be based on the quality of the candidates). Key requirements are:

- A background in remote sensing, soil sciences, ecohydrology, hydrology, ecology or related environmental sciences, electrical engineering or data sciences. Any other discipline utilizing UAV-based methods will be considered.
- Interest and ideally, experience in the operation of UAV and data processing.
- Basic knowledge of German.
- Excellent communication and writing skills in English.
- Eligible to work in Germany.
- Driving license (Class B).

We offer:

- An innovative research topic in a dynamic and highly interdisciplinary research group
- Work in a large joint consortium project
- A highly flexible research group regarding home-office regulations
- Special continuing education programs for young scientists (Graduate school) and a postdoc program.

For further information please contact **Dr. Matthias Beyer**; matthias.beyer@tu-bs.de

The salary is paid according to the collective agreement for the public service (Tarifvertrag für den öffentlichen Dienst der Länder, TV-L13). The place of employment will be Braunschweig. Equal opportunities are an integral part of our personnel policy. The TU Braunschweig aims at a balanced employment and therefore encourages qualified candidates from all social groups to apply. Applicants with disabilities will be given preference if their qualifications are equivalent.

The personal data will be stored for the purpose of processing the application. By submitting your application, you agree that your data may be stored and processed electronically for application purposes in compliance with the provisions of data protection law. Further information on data protection can be found in our data protection regulations at <https://www.tu-braunschweig.de/datenschutzerklaerung-bewerbungen>. Application costs cannot be reimbursed.

The application should contain the following information

- Letter of motivation, CV, contact details of two referees
- Transcripts and certificates
- If you are applying as a PhD student, please attach a copy of your Master's thesis if it is in English, German or Spanish.

Please send your application **until September 30th, 2024** as **one pdf-file to Jasmin Hoppe** jasmin.hoppe@tu-braunschweig.de indicating in the subject: **"TUBS-IGÖ-FoResLab"**.

The ideal starting date would be November 1st, 2024.