

Doctoral Candidate (m/f/d) in Soil-Plant Water Relations

Professorship for Soil Biophysics and Environmental Systems

Technical University of Munich

Project Overview: The RhizoTraits project (Phase 2, funded by BMBF) aims to explore the potential of small-scale processes at the root-soil interface (rhizosphere) to improve plant access to water resources under water-limited conditions and increase crop yield resilience to drought. Our subproject, RhizoWater, will focus on soil-plant water relations across a texture and moisture gradient in soils across Bavaria, evaluating the expression and functionality of different rhizosphere traits among several maize varieties.

Key Responsibilities:

- Conduct field and laboratory work on soil physical properties and plant hydraulics.
- Analyze and interpret data from experiments to evaluate plant-soil limitations and potentials for effective plant water uptake.
- Document and present findings in both oral and written form in national and international journals and conferences.

Qualifications:

- University degree in Soil Science, Plant Science, Environmental Engineering, or a related field (Master of Science).
- Interest in soil physical/hydraulic properties, plant hydraulics, and plant drought resilience.
- Proficiency in German and very good knowledge of written and spoken English.
- Keen interest in field and laboratory-scale experimental work.
- B1 driving license.

What We Offer:

- A highly relevant topic that bridges the gap between basic and applied research.
- A friendly and specialized workplace at the TUM School of Life Science in Freising.
- Access to excellent facilities and a wide range of training opportunities in the field of soil and plant sciences.
- Work in interdisciplinary and multinational teams.
- Excellent links to national and international academic networks.

Start Date: 1st May 2024, **Contract Term:** 3 years

Salary: Payment is made according to E 13 (65%) of the collective wage agreement of the federal states (TV-L), provided that the professional and personal requirements are met.

Application Process: Please submit your application, consisting of a cover letter, CV, certificates (BSc and MSc certificate together with a transcript of records), and contact details of two references, as a PDF to moshen.zare@tum.de by **15 March 2024**.

Contact: For further information, please contact Prof. Dr. Mohsen Zare, Tel.: +49 8161-714551, Email: moshen.zare@tum.de.