Friedrich Schiller University is a traditional university with a strong research profile rooted in the heart of Germany. As a university covering all disciplines, it offers a wide range of subjects. Its research is focused on the areas Light—Life—Liberty. It is closely networked with non-research institutions, research companies and renowned cultural institutions. With around 18,000 students and more than 8,600 employees, the University plays a major role in shaping Jena's character as a cosmopolitan and future-oriented city.

The DFG-funded Collaborative Research Centre 1076 "AquaDiva – Understanding the Links between Surface and Subsurface Biogeosphere" is an ambitious research centre at Friedrich Schiller University. Its integrated research training group IRTG AquaDiva is educating doctoral researchers in a structured, interdisciplinary training program (www.aquadiva.uni-jena.de) and invites applications for PhD positions in various fields of research.

The Institute of Biodiversity / Aquatic Geomicrobiology Group at the Faculty of Biosciences seeks to fill the position of a

**Doctoral Researcher in Molecular Microbial Ecology (m/f/d)**

commencing on September 1, 2021 or at the earliest possible date in the project "**From the Forest Canopy to the Aquifer: Role of Microbial Processes in the Origin and Fate of Nitrate in the Earth’s Critical Zone**" (B05).

**Background**

This project aims to explore the interaction and niche differentiation between key microbial players involved in the formation and removal of nitrate in groundwater. Combining molecular approaches with novel cultivation techniques, we will address the role of complete ammonia oxidizers (comammox) in groundwater nitrification, the effect of geologic setting on the preferred nitrate reduction pathway, and how nitrogen loss is supported by linkages between different nitrate reducing processes.

**Your responsibilities:**

- Analysis of microbial groups involved in nitrification, denitrification, anammox, and DNRA by molecular techniques and assessment of process rates using $^{15}$N-based approaches
- Enrichment of microbial consortia involved in groundwater nitrate reduction using novel high-throughput cultivation techniques and bioreactors
- Characterization of enriched consortia by microscopy and metagenomics/-transcriptomics
- Work on a scientific qualification project: doctorate
- Writing and publishing scientific papers in peer-reviewed journals
- Presenting results at national and international conferences

**Your profile**

- M.Sc. degree in microbiology, biogeochemistry, geo-ecology or similar fields is necessary; candidates expected to earn their degree by September 2021 are welcome to apply
- Solid knowledge of microbial ecology of the nitrogen cycle and biogeochemistry of aquatic environments is expected
- Experience with molecular methods to investigate microbial communities in environmental samples are needed (nucleic acid extraction, PCR, qPCR); experience with (anaerobic) cultivation techniques and with the analysis of next generation sequencing data would be desirable but are not mandatory
- Excellent English communication skills, both written and spoken, are desirable
- Enthusiasm to play an active role in the interdisciplinary research team of AquaDiva
- Highly motivated and creative individuals with an interest to shape their own thesis project
Readiness and ability to work in the field

Driver’s license would be advantageous

We offer:

- A doctoral researcher position with generous research funding and the possibility of a three-month research stay abroad
- Participation in a strongly interdisciplinary research project and diverse experimental and theoretical approaches, combined with the opportunity for research on an innovative and unique Critical Zone research platform
- A communicative atmosphere within an international scientific network of universities and research institutes providing top-level research facilities, equipment and infrastructure
- A comprehensive mentoring programme with supervision by a team of advisors and qualification and development measures in the frame of the IRTG AquaDiva and embedded with the Jena Graduate Academy
- A family-friendly working environment with a variety of offers for families, and University health promotion including a wide range of University sports activities
- Remuneration based on the provisions of the Collective Agreement for the Public Sector of the Federal States (TV-L) at salary scale E13 — depending on the candidate’s personal qualifications —, including a special annual payment in accordance with the collective agreement

The position is initially limited to 3 years, with the possibility of extension to end of June 2025. This is a part-time position with 65% of the working hours of a full-time employee (26 hours per week). The project is supervised by Dr. Martina Herrmann; the place of work will be Jena – City of Science.

FSU Jena and CRC AquaDiva seek to increase the number of women in those research areas where they are underrepresented and therefore explicitly encourage women to apply. Candidates with severe disabilities will be given preference in the case of equal qualifications and suitability.

Are you eager to work with us? Then submit your application, addressed to Dr. Martina Herrmann and stating the vacancy ID 174/2021, by 20 June 2021 to our online application portal at https://crc-aquadiva.freshteam.com/jobs.

All applications should be in English and include (in one PDF file, max. size 15 MB) at least the following:
1. Cover letter (max. 1 page, describing your motivation, research interests, and relevant experiences)
2. Curriculum vitae (max. 2 pages, including contact details of at least two scientific references)
3. Scans of certificates, diplomas, and other (e.g., Master’s and Bachelor’s certificate – if not in English or German, please provide a translation)

Selected applicants will be invited for a short presentation and a personal interview with the project leader/s at our online recruitment symposium, presumably in July/August 2021.

Queries concerning the application process should be directed to the IRTG coordinator, Dr. Anke Hädrich (aquadiva-recruitment@uni-jena.de); for project-related questions, please contact Dr. Martina Herrmann (martina.herrmann@uni-jena.de).

More project details can be found at www.aquadiva.uni-jena.de/Open_Positions.html.

For further information for applicants, please also refer to www4.uni-jena.de/stellenmarkt_hinweis.html (in German)
Please also note the information on the collection of personal data at www4.uni-jena.de/en/jobs_information_collecting_personal_data.html