



The **Rheinische Friedrich-Wilhelms-Universität Bonn** is an international research university with a broad spectrum of disciplines. 200 years of history, around 32,000 students, more than 6,000 employees and an excellent reputation at home and abroad: The University of Bonn is one of the most important universities in Germany and is recognized as a university of excellence.

The research group **Hydrology** (Prof. Julian Klaus) of the Department of Geography is looking for a

Scientific researcher (PhD student) in hydrological modeling (TVL 13, 75%)

Ideally the position starts on 1st May 2025 or later upon agreement. The position is available for a period of three years in the DFG funded research project *Unveiling drivers of catchment water balance partitioning from stable water isotopes, hydrological modeling, and machine learning across landscapes*.

The Hydrology research group at the Department of Geography at the University of Bonn is internationally recognized for its research on fundamental hydrological processes at catchment and hillslope scales. We investigate the impacts of climate change, land use, and other drivers on hydrological and eco-hydrological systems using a combination of field observations, advanced modeling techniques, and data science approaches.

The PhD position will address a better understanding of how different landscapes in different hydro-climatological regions partition precipitation into streamflow, transpiration, and evaporation. This project will utilize existing and newly collected stable water isotope data, coupled with isotope-enabled hydrological models and machine learning techniques. Key research catchments are located in the Eifel Mountains in Germany and in Alberta, Canada. This project involves close collaboration with the University of Calgary (Prof. Tricia Stadnyk) and provides opportunities for research exchanges to Calgary.

Your tasks:

- Research in hydrological modeling and isotope hydrology
- Carrying out field and lab work to address the project objectives
- Hydrological data analysis and modeling to address the project objectives
- Writing of peer-reviewed publications for leading journals in the hydrological sciences
- Presentation of research results at (inter)national conferences and workshops
- Preparation of your PhD thesis

Your profile:

- Master degree in Hydrology, Physical Geography, Environmental Science/Engineering or similar,
- Demonstrated expertise in at least one of the following areas: Hydrological modelling, Data science in hydrology (e.g., machine learning), Isotope hydrology
- Ability to work collaboratively within a team, contributing positively to a dynamic and supportive team environment
- A high-quality master thesis
- Robust experience in programming (e.g., R, Python)
- Interested in pursuing your PhD education
- Committed, flexible, and team-oriented
- Fluency in written and spoken English, with excellent scientific writing skills
- Driving license class B to carry out field work

We offer:

- A vibrant working group with Master and PhD students and Postdocs

- Extensive training opportunities for career development in the framework of university's graduate education
- Collaborative, international work environment that fosters cross-disciplinary exchange
- company pension scheme (VBL)
- numerous offers of university sports,
- Centrally located workplace in Bonn with excellent public transport connections
- Salary according to salary group 13 TV-L.

The University of Bonn is committed to diversity and equal opportunities. It is certified as a family-friendly university. Its aim is to increase the proportion of women in areas in which women are underrepresented and to promote their careers in particular. It therefore strongly encourages applications from women with relevant qualifications. Applications are handled in accordance with the Land Equality Act. The applications of suitable persons with proven severe disabilities and persons of equal status are particularly welcome.

If you are interested in this position, please send your complete and meaningful application documents (motivation letter, CV and publication list (in case this applies), contact of two references, certificates) in **one** PDF file (max. 5 MB) by e-mail to julian.klaus@uni-bonn.de. Applications are being accepted on a rolling basis until 28.2.2025. However, we may fill the position before that date. For further information regarding the position please contact Julian Klaus by mail.