

Vacancy for

PhD position in Experimental Karst Hydrology

within the research project “Global Assessment of Water Stress in Karst Regions in a Changing World (GloW)” funded by the Emmy-Noether Programme of the German Research Foundation (DFG).

We invite applications for a TV-L 13 position, 65% for 3 years, starting August 2017.

In the framework of this position, an extensive monitoring network will be established in three karst areas in Germany, Spain and the UK with the purpose of exploring the spatial variability of the flow pathways and water storage in the shallow subsurface of the different karst regions (soil & epikarst). Combining observations of soil moisture and soil water isotope dynamics at a large number of measurements points will allow to simulate the spatiotemporal variability of shallow subsurface hydrological processes and consequently of the generation of groundwater recharge. The findings of the PhD project will contribute to the development and improvement of a large-scale karst hydrology model.

The PhD candidate will be responsible for the sampling and analysis of the temporal and spatial distribution of soil moisture and stable isotopes of water in the soil and epikarst at the three karst areas. The PhD candidate will use observed soil moisture and stable isotope patterns to derive long-term flow pathways (matrix/macropore), flow velocities, mixing patterns and downward percolation. This will require the installation of the soil moisture probes at the three sites, the frequent sampling of soil cores for soil water isotope analysis (equilibrium method), and the application of a physically-based 1D model for variably saturated conditions.

All applicants should have a MSc degree in hydro(geo)logy, soil science or environmental science or in a closely related field. We encourage applications from enthusiastic dedicated individuals with strong quantitative skills as well as good writing skills in English (German and Spanish are an asset) who enjoy working in the multi-disciplinary team of the GloW project (in total 5 researchers). Strong experimental background and willingness to travel frequently to the field sites and work in the field is essential (field campaigns of several weeks are to be expected). Knowledge of stable isotope hydrology and tracer techniques is an asset. A driving license (class B) is required.

We offer an interdisciplinary, international work environment within a formal PhD program (<http://www.gs.esgc.uni-freiburg.de>). An intensive exchange of the PhD students between Freiburg and the research teams at Spain (Center of Hydrogeology of the University of Malaga) and the UK (Department of Civil Engineering of the University of Bristol) is foreseen.

The University of Freiburg is an equal opportunity employer and is committed to increasing the proportion of women scientists. Consequently, we actively encourage applications from qualified women. We also welcome applications from candidates with severe disabilities who will be given preferential consideration in case of equal qualification.

Please send your application including a cover letter, CV, an example of your own scientific writing (if available), a statement of research interests, certificate & transcript of your highest degree earned and the names and contact details of at least two potential references in one pdf-file to Andreas Hartmann (andreas.hartmann@hydrology.uni-freiburg.de). Application deadline is June 1st 2017.