Vacancy for

PhD position in Comparative 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 February 1st 2018.

This position will deal with developing a framework to assess the degree of karstification of various karst systems around the globe with the aim to apply this framework within large-scale hydrological modeling. A previously established karst data base with hundreds of observed karst spring discharge time series will be analyzed to extract proxies for karstification at karst basins within different climate regions and to understand factors that control the springs’ dynamics. Later on, process-based modeling will explore different possibilities to incorporate the new knowledge into karst hydrological simulation. 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 maintenance and use of the karst data base. She or he will extract and pre-process the available (and still growing) data of the karst data base (quality check, statistical analysis). Automatic methods to analyze a large number of time series simultaneously will be developed and applied (in Matlab, R, Python, or similar) and map-based visualizations of the results are planned. The incorporation of the information on karstification will require the application and modification of lumped or semi-distributed karst hydrology models (also in Matlab, R, Python, or similar), the estimation of their parameters, and the evaluation of their uncertainty.

All applicants should have a MSc degree in hydro(geo)logy, environmental engineering/sciences 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 is an asset) who enjoy working in the multi-disciplinary team of the GloW project (in total 5 researchers). Strong experience in programming and hydrological modeling are essential, as well as the willingness to visit collaborating research groups within and outside Germany.

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 University of Victoria (Canada) and the Karlsruhe Institute of Technology (Germany) 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, 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 November 19th 2017.