The project V-FOR-WaTer aims to create a virtual research environment (VRE) which will combine research data gathered in universities, research centres and from continuous monitoring of state offices in the federal state of Baden-Württemberg into one comprehensive system. Facilitating access to all these different data sources in one system greatly reduces pre-processing time of complex analyses and enables the study of this extensive dataset towards the development a unified environmental system theory. Apart from merging the available multifaceted data in an innovative data management system linked to a suitable GIS application and interfaces to further data analysis software, the VRE will also include built-in tools such as scaling in space or time, aggregation and disaggregation in order to streamline preprocessing and usability of the data. The project is a co-operation between the Institute of Water and River Basin Management and the Steinbuch Centre for Computing (SCC).

The successful candidate will work in close co-operation with the colleague from SCC. The tasks for this position include researching state-of-the-art methods for transformation and analysis and testing their suitability and implementation for the VRE. One challenge will also be to ensure the correct preparation, quality control and integration of the diverse datasets, identifying appropriate metadata and interfaces to already existing systems. Furthermore, the tools which will be made available in the VRE need to be thoroughly tested and evaluated for performance to avoid limitations in processing time for the whole system.

Qualification:
You have a MSc or PhD in hydrology, geocology, geoinformatics or a related subject with a focus in the analysis of large multidimensional datasets and have published your research in peer-reviewed journals. You have experience in data base management, GIS applications and data analysis environments such as R, Matlab or Python as well as the appropriate programming skills. You are interested in efficient methods of complex data analysis and in creating comprehensive data resources for the development of holistic systems understanding. You can work independently, but you are also able to co-operate closely with the developer at SCC. You are fluent in English: verbal and written.

Salary:
The remuneration occurs on the basis of the wage agreement of the civil service in TV-L, E 13.

Institute:
Institute of Water and River Basin Management (IWG)

Contract duration:
limited to 2 years with possible option for extension
Starting date: 01.05.2016
Application up to: 05.04.2016
Contact person in line-management: For more information please contact Prof. Dr.-Ing. Erwin Zehe e-mail: erwin.zehe@kit.edu or Dr. Sibylle Hassler e-mail: sibylle.hassler@kit.edu
Application: Applications (One PDF with cover letter (motivation, research interests), curriculum vitae, relevant certificates, publication list) should be sent by email to Prof. Dr.-Ing. Erwin Zehe e-mail: erwin.zehe@kit.edu

KIT is an equal opportunity employer. Women are especially encouraged to apply. Applicants with disabilities will be preferentially considered if equally qualified.