

## **A1 - “Scale Dependent Process Representation and Sensitivity Analysis for Most Extreme Events” (SEVERE)**

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The Institute of Meteorology and Climate Research (IMK) at the Karlsruhe Institute of Technology (KIT) offers PhD position within the ClimXtreme initiative of the German Ministry of Education and Research (BMBF). KIT is a distinguished research university that combines three core tasks — research, education and innovation — into a single mission. With 9,400 employees and 25,000 students, it is one of the largest institutions of research and higher education in natural sciences and engineering in Europe. KIT was awarded the title "University of Excellence" within the German Excellence Strategy launched by the federal and state governments on 19 July 2019. In the area of Atmospheric Science KIT was ranked #1 in Germany and #8 worldwide in the last Shanghai Ranking.

The sub-project SEVERE is the coordination project of ClimXtreme Module A, with Hendrik Feldmann as scientific coordinator. The main objectives for the associated PhD position are to analyse and evaluate the scale dependent representation of extreme (convective) precipitation events for the typical GCM/RCM scales by comparing and evaluating the frequency, intensity and regional foci of such events at different resolutions. Large existing climate ensembles will be used for this task (e.g. CORDEX, CMIP5/6, decadal hindcasts). Furthermore, episode downscaling will be performed at the convection permitting scale for selected cases to assess the contributions from synoptic scale processes to local processes and their sensitivity and physical constraints w.r.t climate change. There will be a close collaboration with the other ClimXtreme projects at KIT and several other German research institutions.

The ideal candidate holds an MSc in Meteorology, Physics, or a closely related discipline and has a strong background in atmospheric dynamics or climate-change related research. Experience with scientific programming (e.g. linux, python, fortran, ncl, cdo, R) is required. Experience with (regional) climate modelling and the handling of large data sets would be beneficial.

The position offer is subject to the reception of the formal approval letter by BMBF. The position is remunerated according to TV-L E13 75% for three years starting on 01 October 2019. Applicants are asked to provide two academic referees. Please send applications including a motivation letter, a CV, BSc and MSc transcript of records, and other qualifications to Hendrik Feldmann ([hendrik.feldmann@kit.edu](mailto:hendrik.feldmann@kit.edu)) and Joaquim Pinto ([joaquim.pinto@kit.edu](mailto:joaquim.pinto@kit.edu)). The position can be upgraded to 100% Post-Doc positions given an adequate qualification.

KIT actively supports equality, diversity and inclusion, and as an equal opportunity employer, KIT explicitly encourages applications from women as well as from all others who will bring additional diversity to the university's research and teaching. KIT provides support for dual career couples and families. Applicants with disabilities will be preferentially considered if suitably qualified.