

Post-Doc position at KIT in postprocessing and bias correction of wind gusts associated with European windstorms.

Karlsruhe Institute of Technology (KIT), Institute of Meteorology and Climate Research

KIT is a distinguished research university that combines three core tasks – research, education and innovation – into a single mission. With 9,300 employees and almost 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 2019 Shanghai Ranking.

The Institute of Meteorology and Climate Research (IMK) participates in the KIT Centers "Climate and Environment" and "MathSEE (Mathematics in Sciences, Engineering, and Economics)" and contributes significantly to the program "Changing Earth" of the Helmholtz Association. The department "Troposphere Research" IMK-TRO (<http://www.imk-tro.kit.edu/english/index.php>) focuses on troposphere research, climate variability and change, water cycle and trace substance budgets. The Working Group "Regional Climate and Weather Hazards" (<http://www.imk-tro.kit.edu/english/7144.php>) focusses on an integrated analysis of extreme weather and climate events, climate change, climate variability and risk assessment. This includes both fundamental and applied research. Particular attention is given to the links between the weather, climate, regionalisation and risk assessment perspectives associated with extreme events.

We have an open **30 months position for a postdoctoral candidate.**

Duties: As a Post-Doc, you will focus on the postprocessing and bias correction of wind gust fields generated with high resolution regional windstorm simulations with the ICON model. Both traditional approaches (e.g. multi-linear regression, quantile mapping) and novel methods (e.g. machine learning) will be tested. The objective is to develop a downscaling tool that can be applied both Reanalysis and regional climate model data to generate a consistent windstorm dataset. The project is run in close collaboration with Impact Forecasting, the catastrophe modellers division of Aon.

Requirements: A PhD in Meteorology, Climate Science, Earth Sciences, or related disciplines. The applicant must be proficient in spoken and written English.

Additional qualifications: For this position, extensive experience with diagnostics of model data, statistics, extreme events are required. Previous experience with postprocessing / bias correction of model data is a strong advantage, as well as with machine learning approaches. The candidate should also be experienced in scientific programming (e.g., linux, python, fortran, ncl, cdo, Matlab, R). Experience in insurance sector related projects would be advantageous. German language skills are helpful but not mandatory.

The application should contain:

- A Curriculum Vitae.
- A cover letter stating your scientific interests and what motivates you to apply for this position.
- A list of scientific publications.
- Contact details (incl. email and telephone number) of two references.

The candidates will be short-listed based on the materials in the application, the top ranked candidates will be interviewed digitally and the references will be collected.

Salary: The remuneration is based on the collective agreement of the public service in the remuneration group TVL E13.

Starting date: 01-04-2023 or as otherwise agreed.

Terms and conditions of employment: The group is based on the research campus of KIT located about 10 km to the North of Karlsruhe city centre.

Scope of employment: 100%

For further information about this position please contact: Prof. Dr. Joaquim Pinto, e-mail: joaquim.pinto@kit.edu, and Dr. Alexandre Ramos, e-mail: alexandre.ramos@kit.edu

Please send the documents requested above for the application all in one pdf file by **6 February 2023** under the above e-mails: joaquim.pinto@kit.edu, alexandre.ramos@kit.edu

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. Applicants with disabilities will be preferentially considered if suitably qualified.

Are you considering moving to Germany to work at KIT? If so, you will find a lot of information about working and living in Germany at <http://www.intl.kit.edu/ischolar/index.php>. You are also welcome to contact the International Scholars & Welcome Office at scholar@intl.kit.edu.