

# **Post-Doc at KIT for “Prototype Workflows for User Relevant Climate Information and Impact Modelling” (ProImpact), “Warmworld” consortium**

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

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 is ranked #1 in Germany by the Shanghai Ranking.

The Institute of Meteorology and Climate Research Troposphere Research (IMKTRO) 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. Our 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, regional climate change, climate variability and risk assessment.

The BMBF-project “Warmworld” ([warmworld.de](http://warmworld.de)) will restructure the Earth-system modelling enterprise to best make use of advances in information technology to compute and evaluate kilometre-scale climate simulations. By further developing an ICON based storm-and-eddy-resolving Earth-system model, “WarmWorld” will develop innovative workflows to ease the extraction of the contained information for climate impact and adaptation research. The subproject “Prototype Workflows for User Relevant Climate Information and Impact Modelling” (ProImpact) aims at transferring climate model evaluation and user-relevant workflows from traditional climate modelling chains into the data streams of “WarmWorld” for more effective and potential operational use. ProImpact is a collaboration between KIT and Hereon, with close links to DKRZ. The overview of the existing workflows, development and implementation of new workflows will be led by KIT. The Hereon contribution focusses on the contact with DKRZ regarding the technical implementation of the workflows in the data streams.

We have **one open postdoctoral position** for 3 years

The goal is transferring climate model evaluation and user-relevant workflows from traditional climate modeling chains into the data streams of “WarmWorld”. This will be done in three steps. Building on knowledge from finished and ongoing projects and activities such as the “Klimakataster” of the BMBF-project “RegIKlim” ([regiklim.de](http://regiklim.de)), a list of user-relevant workflows and other relevant workflows for model evaluation and climate characterization is defined. This will include workflows that could not be realized in the past due to e.g. insufficient temporal resolution or spatial location of certain variables. A sub-set as prototype workflows will be implemented using the data streams of “WarmWorld”. Finally, the prototype workflows will be evaluated against the traditional approach using either “WarmWorld” simulations – if available – or test data sets. Based on the evaluation, recommendations for implementing the remaining workflows will be issued.

The KIT PIs are Prof. Dr. Joaquim Pinto and Dipl.-Geophys. Hendrik Feldmann.

The project is planned to start on June 1st, 2024, pending the formal acceptance letter from the BMBF.

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

**Additional qualifications:** Experience in statistics, extreme event diagnostics and scientific programming (e.g., linux, python, fortran, cdo, R) are required. Ideally experience with global or regional models, decadal prediction, forecast verification. German language skills are helpful but not mandatory.

**The application should contain (all in one PDF):**

- 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:** 01-06-2024 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:** 3 years 100%

**For further information** about this position please contact: Joaquim Pinto (joaquim.pinto@kit.edu), Hendrik Feldmann (hendrik.feldmann@kit.edu).

Please send the documents requested above for the application all in one pdf file by **21 March 2024** to the PIs to the above e-mails.

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](mailto:scholar@intl.kit.edu).