Two Post-Doc positions at KIT within “A Coming Decade - Decadal climate predictions for Europe” consortium

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.


One of the large projects where we are involved in is BMBF “A Coming Decade - Decadal climate predictions for Europe” (“Coming Decade”). The goal of the project is to significantly improve the German decadal climate prediction system by integrating the latest scientific findings and developing application-oriented and regionalized climate predictions. Moreover, climate services will be developed to support decision-making for the coming years. The “Coming Decade” ensemble decadal prediction system will be based on the ICON model and is planned to be delivered to the German Weather Service by the end of the project. Our team is involved in several work packages, partly in a leading role.

We have two open position for postdoctoral candidates for a period of 3 years within the project.

Duties Position #1 - Development and Testing for an Optimized Nesting Strategy for Europe and Benchmarking: As a Post-Doc, you will work in “Coming Decade”, Work Package 2.4. The aim is to systematically test the options for a nesting configuration over the European target region and assess their added value. Therefore, we will develop a strategy for dynamical downscaling the atmospheric component of ICON, considering both the choice of the nesting steps and the optimal position of the higher resolution domains, including feedbacks from the finer to the coarse scales. The results will act as a reference for a further statistical downscaling step to the kilometer scale, and lead to a recommendation for future perspectives regarding the operational system.

Duties Position #2 - Added Value of Global Multi-Model-Predictions for User-relevant variables: As a Post-Doc, you will work in “Coming Decade”, Work Package 2.6. The aim is to use decadal predictions from multiple modelling centers (WMO Lead Centre for Annual-to-Decadal Climate Prediction) as a reference to test the robustness and skill of the “Coming Decade” prediction system, and to provide robust basic and user-oriented climate information on multi-year timescales. In particular, the associated reliability and uncertainty of the “Coming Decade” prediction system will be assessed, thus overcoming some of the limitations of the single model approach. The results will facilitate the recalibration and verification of the new system and the development of user specific products.

The KIT PIs are Prof. Dr. Joaquim Pinto, Dr. Patrick Ludwig, and Dipl.-Geophys. Hendrik Feldmann.
**Requirements:** A PhD in Meteorology, Climate Science, Earth Sciences, or related disciplines. The applicant must be proficient in spoken and written English.

**Additional qualifications (Position #1, WP 2.4):** For this position, extensive experience with numerical modelling is required. Experience with ICON would be advantageous. The candidate should also be experienced in scientific programming (e.g., linux, python, fortran, ncl, cdo, Matlab, R). German language skills are helpful but not mandatory.

**Additional qualifications (Position #2, WP 2.6):** For this position, extensive experience in statistics, extreme event diagnostics and scientific programming (e.g., linux, python, fortran, idl, ncl, cdo, Matlab, R) are required. 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:** 01-03-2024 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: 100%**

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

Please send the documents requested above for the application all in one pdf file by 11 December 2023 to the PIs to the above e-mail, clearly stating in the subject which position you are applying to.

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.