European MSCA Doctoral Network PhD Position at KIT "Impact forecasting for European windstorm losses"

The Karlsruhe Institute of Technology (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.

We have an open 3-year PhD position the Doctoral Network project: "Understanding and Predicting Impacts of Climate Extremes under Global Change", funded by the European Union's Horizon Europe research and innovation programme under the Marie Sklodowska-Curie grant agreement (MSCA) No. 101226348, which expected to start on 1st March 2026. The project's international consortium is coordinated by Uppsala University. More information on the project can be found at: https://www.climes.se/climesdn/. You will be part of a leading cohort of early-career researchers studying different aspects of the impacts of climate extremes in Europe, from public health to societal perspectives and agricultural impacts, and will have access to a rich program of training activities and research exchanges. These are designed to enhance your career prospects in both academia and the private sector.

PhD Project 2: Windstorms are one of the costliest natural hazards affecting Europe. Using state-of-the-art weather forecasts and a windstorm catastrophe model, this project will develop a preoperational system for quantitative probabilistic forecasts of windstorm losses in Europe. The objectives are as follows (i) Quantification of the meteorological prediction skill for historical windstorms affecting Europe up to lead times of 3 days, for different state-of-the-art ensemble weather forecasting systems, (ii) Computation of probabilistic loss estimates from the ensemble forecasts for the windstorms, (iii) Development and application of a prototype system integrating the above-mentioned ensemble weather forecasts with a physically-based operational windstorm catastrophe model to provide probabilistic forecasts of windstorm losses, (iv) Analysis of loss forecast biases compared to applying the same methods to observational or reanalysis windspeeds, to optimize model calibration and forecast post-processing. This work will result in a preoperational system providing quantitative probabilistic forecasts of windstorm losses in Europe.

You will be based in Karlsruhe, Germany. As part of your duties, you will be required to complete two in-person international secondments (at University of Cyprus, Cyprus and Aon, Czech Republic) and attend in-person international meetings.

Requirements:

Applicants should fulfil the following requirements:

- In accordance with MSCA rules, applicants must not have resided and not have carried out their main activity (work, studies, etc.) in Germany for more than 12 months in the 3 years immediately before the recruitment date – unless as part of a procedure for obtaining refugee status under the Geneva Convention (MSCA DN Mobility Rule).
- The applicant must hold a Master's or corresponding degree in Climate Science, Earth Sciences, Physics, Mathematics, Meteorology, or related disciplines preferably obtained no later than one month before starting date.
- The applicant must be proficient in spoken and written English.
- The applicant at the time of recruitment must be in his/her first 4 years (full-time equivalent) of research career and must not have been awarded a doctoral degree. The research career is counted from the date when the researcher obtained the degree entitling him or her to embark on a doctorate.

Additional qualifications: The candidate should be experienced in scientific programming (e.g. Python). Experience with weather forecasting and/or large datasets is a plus. The ranking of the candidates will also accord weight to evidence of analytical thinking, the ability to collaborate, as well as creativity, initiative, and independence. Experience in private sector employment in fields relevant to the position will also be positively evaluated.

The application should contain:

- A cover letter stating your scientific interests and what motivates you to apply for this specific CLIMES PhD position.
- A detailed curriculum vitae in English, which includes a list of publications (if any).
- BSc/MSc degrees, with copies of official transcripts including course grades.
- Contact details (incl. email and telephone number) of two references.
- Your degree project/thesis (finished or in draft form).

The evaluation of the applications will begin immediately, on a rolling basis. 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 PhD Scholarship offers a monthly competitive salary to cover living allowance, social and health insurance, mobility plus (if applicable) a family allowance per month, following the European MSCA Doctoral Network rules (see (see MSCA rules: https://op.europa.eu/en/publication-detail/-/publication/031f6ff4-2d20-11ef-a61b-01aa75ed71a1).

Starting date: 01-09-2026 or as otherwise agreed.

Terms and conditions of employment: In accordance to MSCA DN regulations. The research 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 (joaquim.pinto@kit.edu) and Dr. Marie Hundhausen (marie.hundhausen@kit.edu).

Please submit your application (as single PDF file except for the thesis) by **16 March 2026** to both Joaquim Pinto (joaquim.pinto@kit.edu) and Marie Hundhausen (marie.hundhausen@kit.edu), clearly indicating the PhD topic you are applying to in the email title.

We have a second PhD position in CLIMES at KIT (PhD 1) which might also be of interest.

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.