

The **Karlsruhe Institute of Technology (KIT)** and its **Institute of Meteorology and Climate Research / Atmospheric Environmental Research (KIT/IMK-IFU)** at Campus Alpin in **Garmisch-Partenkirchen, Germany**, invites applications for:

- **PhD position “Impact of extreme climate events on agricultural ecosystems in Europe”**

The division of “Terrestrial BioGeoChemistry” at KIT (IMK-IFU) in Garmisch-Partenkirchen is looking for a qualified, creative and motivated PhD researcher with experience in ecosystems modeling and expertise in high-performance computing and data assimilation/visualization. The successful candidate will work within a newly funded research program within the Helmholtz Research Field Earth and Environment (<https://www.helmholtz.de/en/research/earth-and-environment/>), where seven different Helmholtz Centres are collaborating to improve the knowledge how climate change will affect the occurrence of extreme weather events and how those may impact biosphere processes. As part of this research programme the PhD candidate will focus on the impact of extreme events (heat waves, prolonged drought periods, changing precipitation amounts and seasonality) on crop yields and the source and sink strength of agricultural ecosystems for greenhouse gases. The specific role of the PhD candidate will be to (i) adapt and further develop the ecosystem model framework LandscapeDNDC (<http://ldndc.imk-ifu.kit.edu>) for an improved simulation of impacts of heat stress, drought periods and prolonged periods of field flooding on crop performance, yields and soil C and N processes; (ii) assess at regional scale (EU) the impact of extreme weather events on crop production and greenhouse gas emissions using novel climate scenarios; and (iii) identify best management practices for agricultural systems to cope with climate extremes, while allowing to reduce GHG emissions.

The position is available from January, 1, 2022, for 3 years. The candidate will be located at KIT's attractive Alpine Campus in Garmisch-Partenkirchen, Germany. Salary will be equivalent to the public service TV-L EG13 (75%).

Qualifications

You will have a university degree in geosciences, physics, computer science or related fields and experience in computer modeling and data assimilation and visualization. Experience with spatial analysis, GIS approaches, statistical analysis, scenario analysis, and computer programming is desirable. You will need to have proficiency in the English language and proven ability to write scientific publications. Further information can be obtained from Dr. Clemens Scheer (clemens.scheer@kit.edu)

Applications

Applications should be sent by Friday 8 October 2021, via email to Prof Dr. Klaus Butterbach-Bahl (klaus.butterbach-bahl@kit.edu) and/or Dr. Clemens Scheer (clemens.scheer@kit.edu) and should include the following:

- A short (1-2 page) research statement addressing your specific interest, motivation and qualifications for the position. Specifically, the following points should be addressed a) What skill and abilities would you bring to the team? b) What skills and abilities would you hope to gain from working on this position? What is your specific research interest regarding agriculture and climate change?
- Detailed CV, including personal contact information of two references

KIT strives to achieve gender balance at all levels of employment. We therefore particularly encourage female candidates to apply for this position. With appropriate qualifications, applications from persons with handicaps will be treated with preference.