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:

Full time PostDoc/ Researcher position:

“Mitigating C and N losses of agricultural soils and development of decision support tools to reduce environmental impacts of agricultural production at farm, regional to national scales”

The division “Terrestrial Bio-Geo-Chemistry” at Karlsruhe Institute of Technology (KIT) IMK-IFU in Garmisch-Partenkirchen is looking for an excellent, creative and motivated postdoc/researcher with experience in modeling plant production and ecosystem carbon (C) and nitrogen (N) cycling of agricultural systems. Previous experience in the development of model based decision support systems is welcome.

The successful candidate will work in a team with a research focus on the analysis and modelling of plant performance and ecosystem C and N transformations in terrestrial ecosystems. Research aims at the identification of sustainable management strategies that reduce the environmental impact of agriculture, while exploring options for adapting agricultural systems to climate change. Work will focus on application and further development of the ecosystem model framework LandscapeDNDC (http://ldndc.imk-ifu.kit.edu) and a linked decision support system for various stakeholder groups. The successful candidate is strongly encouraged to actively participate, bring in and pursue own research ideas that are related to the above or other existing or upcoming projects within the research group.

The position is available from January, 1, 2022, for 3 years. The candidate will be located at KITs attractive Campus Alpine in Garmisch-Partenkirchen, Germany. Salary will be equivalent to the public service TV-L EG13 (100%).

Examples of research approaches

- Calculation of cropland, rice paddy and grassland yields, soil C and N stock changes, GHG balances, and nitrate leaching for site and regional/national applications for past, present, and future land use/ management and climate conditions
- Scenario analysis and accompanying uncertainty analysis of impacts of land management changes on the environmental performance of different land management practices for current and climate change conditions
- Development of model based decision support systems for application at farm to regional scale for facilitating communication with stakeholders (e.g. farmers, authorities)
Your Profile

- University degree in geosciences, physics, computer science or related fields
- Experience in crop/ecosystem modeling, data assimilation/visualization, and development and application of decisions support tools
- Sound programming skills (C/C++, Fortran, SVN, Git, Python, R, Bash) and ability to work with large datasets
- Experience with spatial analysis and GIS approaches
- English language proficiency and proven ability to write scientific publications
- Strong communication and teamwork skills

We offer

- International, interdisciplinary and friendly working environment
- Large international network
- Attractive research campus of KIT at the foot of Germany's highest mountain

Applications

Applications should be sent by **31.10.2021** via email to Prof Dr. Klaus Butterbach-Bahl (klaus.butterbach-bahl[at]kit.edu) and/or PD Dr. Ralf Kiese (ralf.kiese[at]kit.edu) and should include a detailed CV, including personal contact information and three references as well as a two-page research statement addressing your specific interest, motivation and qualifications for the position. Specifically, the following points should be addressed

- What skill and abilities would you bring to the team?
- 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?

We are looking to fill the position by the end of the year but the application will remain open until a suitable candidate has been found.

*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.*