

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 in Biogeochemistry

The division of “BioGeoChemical Cycles” at IMK-IFU has a vacancy for a PhD position to study the effect of climate change and extensive versus intensive management on nitrogen flows in grassland ecosystems of the alpine and pre-alpine region in Southern Germany.

The position is for three years starting **earliest April, 1, 2019** (latest: May, 1, 2019) and is funded by the Federal Ministry of Education and Research (BMBF) within the interdisciplinary SUSALPS (Sustainable use of alpine and pre-alpine grasslands in a changing climate; see www.susalps.de) project.

Alpine and pre-alpine grasslands of S-Germany provide important economic value via fodder used for milk and meat production. Grassland soils also support environmental key functions such as carbon and nitrogen storage, water retention, erosion control and biodiversity. At present, these soils functions are jeopardized by climate change and moreover rapid land use and management changes, which both are likely to be accelerated in coming decades.

SUSALPS aims to provide a holistic, process-focused understanding of the responses of key pre-alpine and alpine grassland soil functions to climate and land management changes. Based on this, we want to develop and implement sustainable climate smart management practices for pre-alpine and alpine grassland ecosystems.

The **focus** of the PhD project will be on

- 1) Assessment of climate change effects on gross soil nitrogen turnover and associated gaseous nitrogen losses (N_2O , NH_3 , N_2);
- 2) Testing of alternative grassland management practices with regard to effects on plant nitrogen use efficiency, gaseous nitrogen losses and nitrate leaching;
- 3) Assessment of effects of re-grazing of long-term abandoned mountain pastures (“Alm” or “Alp”) on soil nutrient cycling and water quality.

Requirements

The candidate should have strong interest in biogeochemistry and ecosystem N and C cycling as well as practical experience in these fields, preferably including the use of stable isotope labelling for quantification of microbial processes in soils. The candidate should hold a MSc degree (or equivalent) in a relevant discipline. Good lab skills and an aptitude for fieldwork in alpine environments are required.

We offer

State of the art technical research infrastructure, advanced training, close cooperation and interaction with interdisciplinary partners, and a vibrant and friendly, international research

environment in the beautiful surroundings of Garmisch-Partenkirchen, Germany. The salary will be equivalent to the public service TV-L13 (65%).

For more information please contact **PD Dr. Michael Dannenmann**
(michael.dannenmann(at)kit.edu)

Applications

Applications should be sent by email to PD Dr. Michael Dannenmann
(michael.dannenmann(at)kit.edu) by **February 15, 2019**.

Applications must be made in the form of a Declaration of Interest including the following:

- A letter stating your specific interest, motivation and qualifications for the project in question (max. two pages)
- Detailed CV, including personal contact information
- Copies of diplomas, Bachelor as well as Master's degree, including transcript of notes/grades
- At least two signed reference letters. Should your referees wish to send their letters directly to us, please have them use the following e-mail: michael.dannenmann(at)kit.edu mentioning your name and the title of the position in the subject line

All information should be made available before the deadline.

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.