Professorship for Land Surface-Atmosphere Interactions
TUM School of Life Sciences Weihenstephan
Technical University of Munich

In the scope of the interdisciplinary research project “Blick in die Zukunft (BLIZ): Wechselwirkungen zwischen Gesellschaft, Landnutzung, Ökosystemleistungen und Biodiversität in Bayern bis 2100” funded by the Bavarian Climate Research Network “bayklif” of the Bavarian State Ministry, we invite applications for a

PhD position in ecosystem modelling

E13 TV-L, 60 %, limited for 3 years.

Your profile

- Full university degree (Diploma/M.Sc.) in in geo-ecology, environmental/forest science, meteorology, biology or a related discipline.
- Sound knowledge in ecosystem modelling and scientific programming (preferably R and/or C++) is required.
- Basic knowledge of German language is required.
- You should be able to communicate concepts and results in fluent English.
- We expect the candidate to have good communication skills and the ability to work in a team.

Tasks

You will be a team member of the recently started interdisciplinary research project “BLIZ”. Together with partners from the JMU Würzburg, University of Regensburg, FAU Erlangen and partners within TUM, you will develop future scenarios for sustainable management of ecosystems. You will investigate the feedbacks between ecological systems (ecosystem services and biodiversity) and socio-economic systems (land-use change) in a changing climate and their uncertainties. The main goal of the project is to develop adaptation strategies to maintain sustainable ecological systems and to avoid tipping points. The approach is to develop a model-based strategy for identifying and operationalizing risk resilient ecosystem management strategies. Specific tasks of the PhD position are (1) to further develop and apply the process-based forest ecosystem model LPJ-GUESS at the regional scale, (2) to simulate impacts of land-use and climate change on important tree species and crop types, and (3) to evaluate potential risks for ecosystem services and biodiversity and develop sustainable management strategies. In close collaboration with our partners, the PhD student contributes to the integration of LPJ-GUESS with a multi-objective, risk-sensitive optimization model, such that simulated responses of ecosystem services under climate change and alternative management practices inform the economic optimisation and vice-versa.

Our offer

- Stimulating working environment and an interdisciplinary research team. Membership in the Graduate Center Weihenstephan and the TUM Graduate School with an attractive qualification program.
- A salary in accordance to TV-L E13 (60 %). The contract for the position will be limited to 3 years.
- TUM is an equal opportunity employer. Qualified women are therefore particularly encouraged to apply. Applicants with disabilities are treated with preference given comparable qualification.

Contact

- Please send your application, including a cover letter, a detailed CV and contact information of two referees, as soon as possible (latest by June 15, 2018) in the form of a single pdf-file to Sandra Großkopf (grosskopf@wzw.tum.de).
- Appointment date is as soon as possible.
- For further inquiries, please contact Prof. Anja Rammig (Anja.Rammig@tum.de).
- For more information, see www.bayklif-bliz.de or www.lsai.wzw.tum.de