

The Institute for Geography at the Augsburg University in collaboration with the professorship for Ecosystem Dynamics and Forest Management in Mountain Landscapes at the TUM School of Life Sciences invites applications to a

PhD position in Forest Ecology and Modeling

(TV-L E13, 65%, 36 months)

The project

Mountain forest ecosystems provide multiple ecological services but are currently threatened by climate change and increasingly frequent and severe natural disturbances. In this context, future forest refugia may play a fundamental role to sustain long-term population prosperity, avoiding regional species extinctions and thus ensuring the continuation of ecosystem services and preserving unique biodiversity. To conserve these refugia under climate change, it is essential to anticipate the evolution of these ecosystems. However, the complexity of the environmental processes that govern their vegetation and disturbances dynamics in such diverse environments makes this exercise a challenge.

The scientist will use a state-of-the-art forest modelling approach to capture the distinct local environmental conditions in the mountains of Central Europe that are involved in forest refugia occurrence and maintenance. The key objectives will be to:

- Determine the environmental characteristics ensuring the resistance of future forest refugia to climate change and quantify the vulnerability of future forest refugia in the face of projected increasing disturbance regimes (windthrow, insect outbreak), using a spatially explicit forest landscape model in three National Parks in Germany and Austria,
- Apply the results to map the potential future forest refugia and associated risks due to disturbances by the end of the present century in Central European mountains, and
- Disseminate results to the scientific community via peer-reviewed publications and communications in international conferences.

Your profile

- M.Sc. degree in environmental sciences, ecology, forestry, landscape or disturbance ecology, or related fields
- Fluent in English
- Training or experience in ecosystem modelling and/or programming skills
- Good abilities in quantitative and statistical data analysis
- Great interest regarding interdisciplinary forest research (modeling, forest ecology, climate science, plant biology, ecology of disturbances...)
- Motivation for working with several teams at several locations

Our offer

The Chair for Physical Geography and Climate Science carries out a broad spectrum of fundamental and applied research on the human impact on climate. It investigates climate

variability and land surface-atmosphere interactions from regional to global scales and emerging ecosystem responses under climate change. While the group tries to enhance our understanding of the role of the biosphere in the Earth system, a special focus lies on plant responses and associated feedbacks under climate change. The candidate will integrate a multi-disciplinary team composed of researchers working at the University of Augsburg and Technical University of Munich.

We offer a PhD position with a payment in accordance with TV-L E13 65%, limited to three years and starting January or later. The conditions of employment follow the rules of the German tariffs of public services (TV-L). Please attach written evidence of the required qualifications. Do not hesitate to ask for explanations concerning the salary if you are not familiar with these tariff rules.

The University of Augsburg promotes the professional equality of women. Female candidates are explicitly invited to submit their application. The University of Augsburg stands up for compatibility of family and professional life. For more information, please contact the women's representative office. Severely disabled applicants are given preferential consideration in the event of equal qualification.

Application

Please send your application only in English, including a cover letter, a curriculum vitae, copies of scientific degrees, and the names and contact information of two referees, as a **single PDF document** until **December 9th 2022** by email to Dr. Cécile Remy (cecile.remy@geo.uni-augsburg.de). For further inquiries please contact Dr. Cécile Remy (cecile.remy@geo.uni-augsburg.de).