LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

DEPARTMENT OF GEOGRAPHIE
CHAIR FOR PHYSICAL GEOGRAPHY AND LAND USE SYSTEMS

ABOUT US:

The chair for Physical Geography and Land Use Systems (Prof. Julia Pongratz) at LMU's Department of Geography investigates vegetation-climate interactions. Our group develops and applies the latest generation of land and Earth system models and integrates them with observations. Key research questions are the fate of ecosystems under the pressures of land use and climate change, Earth system feedbacks via energy, water and biogeochemical cycles, and the role of vegetation for greenhouse gas emissions reduction and CO_2 removals in support of the Paris Agreement. The team is strongly involved in large international collaborations such as the Global Carbon Project, CMIP and IPCC.

We are looking for you:

Scientific researcher (m/f/x) assessing the risk of Amazon rainforest dieback in models

YOUR TASKS AND RESPONSIBILITIES:

The scientific researcher will be part of the Horizon Europe project "ClimTip". Large-scale Earth system tipping events could have severe consequences for climate, ecosystems and society. ClimTip combines paleoclimate, observational and model data to identify tipping elements and early-warning signals. In close collaboration with Prof. Niklas Boers (ClimTip lead, Technical University Munich) LMU leads the assessment of the risk of Amazon forest dieback. The scientific researcher will

- coordinate a comparison across international Earth system modeling groups to assess the non-linearity of the response of the Amazon rainforest to combined land-use and climate change
- contribute and analyze own simulations with the ICON Earth System Model
- take a leading role in the development of scientific publications.

YOUR QUALIFICATIONS:

- a PhD in a natural or physical science subject (physics, geography, ecology or similar),
- good programming skills (such as fortran, python),
- excellent communication skills in English (our working language), proven also by scientific publications.
- Training or experience in Earth system, vegetation or climate modeling is advantageous, but not essential.

BENEFITS:

- the chance to be part of a dynamic team working at the frontier of Earth system science.
- E13 TV-L position, commensurate with work experience, for three years starting March 2024,
- career development through the LMU qualification program,
- a stimulating working environment at one of Germany's top-ranked universities, in the vibrant and internationally diverse city of Munich. Our institute is located in the centre of Munich with excellent public transport links.

Handicapped persons with comparable qualifications receive preferential status. We encourage female candidates to apply.

CONTACT:

Please send an application outlining your fit for the position (including a cover letter, a curriculum vitae, copies of scientific degrees, and the names and contact information of two references) by e-mail (one PDF-attachment with max. 5MB only including all documents) with subject "ClimTip-2023em" to climate.jobs@geographie.uni-muenchen.de. Deadline for application is November 10, 2023, with job interviews (online or in Munich) of the short-listed candidates scheduled for Nov 20-22. For further information please contact Prof. Dr. Julia Pongratz (julia.pongratz@lmu.de).

ABOUT THE PROJECT:

The likelihood of large-scale Earth system tipping events under ongoing anthropogenic forcing remains uncertain. ClimTip will substantially advance the process understanding of possible Earth system Tipping Elements (TEs). It will provide the methodological framework for characterising and constraining potential TEs from paleoclimate, observational and model data, for identifying unknown tipping potential from observations and models, and for quantifying resilience and changes thereof in climate and ecosystems, including early-warning of forthcoming transitions. Earth system models (ESMs) are the primary tool for projecting the risk of large-scale tipping events and ClimTip will substantially improve their representation of suggested TEs. This will enable the identification of safe operating spaces for a stable Earth system by characterising key Earth system TEs in terms of their critical thresholds and rates, hysteresis and overshoot potential via empirical data and ESMs, taking into account the associated uncertainties.