

The Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research (AWI) is a member of the Helmholtz Association (HGF) and funded by federal and state government. AWI focuses on polar and marine research in a variety of disciplines such as biology, oceanography, geology, geochemistry and geophysics thus allowing multidisciplinary approaches to scientific goals.

The section Periglacial Research at the Alfred Wegener Institute in Potsdam, Germany, invites applications for the position of a

PhD or Postdoc

(Multispectral Time-Series Analyses with Landsat and Sentinel-2 to Assess Recent Near-Surface Carbon Pool Dynamics in North Siberia)

starting on **October 1, 2017**

The topic: Time-Series Analyses of Multipectral Satellite Imagery

Global warming affects Arctic and Boreal vegetation dynamics and interacts with permafrost and northern high latitude carbon cycling. Above and below ground carbon pools are expected to shift depending on regional environmental trajectories and local disturbance regimes. Remote sensing-based land cover analysis can reveal such decadal trends and may allow detailed assessments over very large spatial domains. Funded through ongoing BMBF KoPF, ERC PETA-CARB, and ESA GlobPermafrost projects, the successful candidate will predominantly work with the full archive of Landsat and Sentinel-2 data to generate and analyze large regional-scale time-series products based on multispectral indices over Siberian high latitudes using Big Data approaches.

Tasks:

Within the research team, the candidate will work on image data acquisition, contribute to processing chain development, and process relevant data. A focus of the position will be on data analysis with respect to regional landscape heterogeneity and temporal variability over Northern Siberia. In connection with available and new ground data, transfer functions between satellite data, biomass, and permafrost carbon pools will then be developed and tested to assess impacts of particular widespread disturbances (thermokarst, erosion, fires) on near surface carbon pools in permafrost regions.

Requirements:

The position requires a MSc or PhD degree, respectively, in Earth Sciences, Remote Sensing, or Geo-Informatics. Strong experience in remote sensing as well as expertise in programming, statistics, temporal data analysis, and geospatial data handling is highly advantageous. Experience in working with geospatial processing environments/systems (e.g. Google Earth Engine) will be beneficial. Participation in multi-week field campaigns in the Arctic to collect additional ground data is important for the position. Prior experience with expedition-based field research and permafrost landscape dynamics is an asset. Fluency in English language (written and spoken) is required. Generally good communication, teamwork, and writing skills are required.

The position is offered for 3 years for a PhD or 2 years for a Postdoc. The salary will be paid in accordance with the German Tarifvertrag des öffentlichen Dienstes (TVöD Bund), salary level 13 (PhD: 66%, Postdoc: 100%). The place of employment will be **Potsdam**.

For further information please contact **Prof. Dr. Guido Grosse** (Guido.Grosse@awi.de),

We offer you a multi-disciplinary, international, and fascinating professional environment with flexible working hours, state-of-the-art research equipment, and a first-rate computing infrastructure.

The position will be embedded within the AWI Permafrost Remote Sensing Lab. As a Ph.D. student at AWI you will be a member of the Helmholtz Graduate School for Polar and Marine Research 'POLMAR' (<http://polmar.awi.de>) or another graduate school.

AWI aims to increase the number of women in the scientific staff and therefore encourages women to apply.

Disabled applicants will be given preference when equal qualifications are present. The AWI fosters the compatibility of work and family through various means. Because of our engagement in the area of work-life compatibility we have been awarded the certificate "Career and Family".

Please forward your applications with the standard documentation (cover letter with motivation, CV, degree certificates, abstracts of the Master/PhD thesis, names and addresses of two references) by **September 8th, 2017**, quoting the reference code **124/D/Geo-P** by e-mail (all documents merged into one PDF file) to:
Sigrun.Graening@awi.de