

The Max Planck Institute for Biogeochemistry (MPI-BGC) in Jena is dedicated to interdisciplinary fundamental research in the field of Earth system sciences with a focus on climate and ecosystems. The internationally renowned institute, which currently employs around 230 people, will celebrate its 25<sup>th</sup> anniversary in 2022. Jena is known for high-tech industry, internationally renowned research institutions and a modern university, but it also has a beautiful natural setting in the green Saale valley with steep limestone slopes. The city of Jena has an active student scene and a diverse cultural life. For the emeritus group Biogeochemical Systems we are looking for a

## **Postdoctoral specialist (m/f/d) on atmospheric boundary-layer data analysis**

(full time, 3 years limited)

### **Background and position description:**

High latitude ecosystems play a pivotal role in the global carbon cycle. Future climate change threatens to destabilize enormous carbon reservoirs stored in currently northern permafrost soils, with the potential to trigger strong feedback processes between climate and carbon cycle that further amplify climate change. Still, large knowledge gaps remain regarding environmental conditions, and mechanisms, that control the carbon budgets of high latitude ecosystems. A key uncertainty in this context is the role of landscape disturbances and non-linear change processes, triggered e.g. by thawing of ground ice and subsequent surface degradation.

We are seeking a postdoctoral specialist (m/f/d) with experience in the analysis and interpretation of atmospheric boundary-layer datasets to support a project focusing on observations based on unmanned aircraft systems (UAS). The successful candidate (m/f/d) will fill a key position within a multi-disciplinary ERC-synergy project (Q-Arctic, <https://q-arctic.net>) focusing on Arctic permafrost carbon feedbacks with climate change, closely interacting with a large network of international project partners. The position will be embedded within an interdisciplinary research team that is conducting experimental, observational and modelling studies focusing on Arctic carbon cycle processes under global climate change.

### **Your tasks:**

The successful candidate (m/f/d) will be primarily responsible for the processing and analysis of UAS-based datasets to detect and quantify regional scale greenhouse gas emissions in Arctic permafrost environments. An additional focus will be placed on the interpretation of high-resolution aerial imagery for mapping of heterogeneous Arctic landscapes. S/he will help in the design and conduction of UAS based measurement campaigns in both Germany and the Arctic, and contribute to the evaluation of sensors and instrumentation on different types of UASs. The tasks also include the integration and analysis of UAS measurements within a local high-resolution surface-atmosphere modeling system jointly with project team colleagues contributing in situ measurements, high-resolution remote sensing data of land surface properties, and atmospheric simulations.

### **Your profile:**

Candidates (m/f/d) with a higher education degree (PhD) in environmental, natural or computational sciences (e.g. meteorology, geo-ecology or other geo-science, environmental physics, or applied mathematics) are eligible for this position. A background in atmospheric sciences and/or boundary-layer meteorology is required, and the willingness to participate in remote field work campaigns (e.g.

in Siberia) is a prerequisite. Experience in handling UAS-based datasets and scientific programming is a strong plus. Demonstrated insights into technical aspects of UASs application, Arctic ecology or carbon cycle science are considered beneficial. In general, we seek a flexible and proactive person (m/f/d) who is able to work both independently as well as in a larger team. Very good written and spoken English is essential.

#### **Our offer:**

This is a full-time post-doctoral position to be filled from April 01, 2022, but starting not later than July 01, 2022, with current funding guaranteed for a duration of 36 months. Part-time work is generally possible. The position will be evaluated and graded following the collective agreement according to TVöD Bund; in addition, we will provide a pension plan based on the public service (VBL).

The Max Planck Society (MPS) strives for gender equality and diversity. The MPS aims to increase the proportion of women in areas where they are underrepresented. Women are therefore explicitly encouraged to apply. We welcome applications from all fields. The Max Planck Society has set itself the goal of employing more severely disabled people. Applications from severely disabled persons are expressly encouraged.

#### **Your application:**

For more information about this position, please contact Prof. Dr. Martin Heimann ([martin.heimann@bgc-jena.mpg.de](mailto:martin.heimann@bgc-jena.mpg.de)). Are you interested? Please send us your application with cover letter, curriculum vitae as well as names and contact information of two references summarised in a PDF file (max. 10 MB) by **January 31, 2022**, quoting the reference number **35/2021** by e-mail to [bewerbung@bgc-jena.mpg.de](mailto:bewerbung@bgc-jena.mpg.de) or to the

Max-Planck-Institut für Biogeochemie  
Personalbüro: Kennwort "Wissenschaftlicher Mitarbeiter/PostDoc"  
Hans-Knöll-Straße 10  
07745 Jena

We kindly ask you not to submit copies of your application documents only, as your documents will be destroyed in accordance with data protection regulations after completion of the application procedure.

We look forward to receiving your application!