

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 25th 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 a

Postdoctoral UAS (Drones/Wingcopters) Specialist (m/f/d) (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 destabilise 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 with experience in the use of unmanned aircraft system (UAS) for the detection and quantification of regional scale greenhouse gas emissions in Arctic permafrost environments. 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 group at MPI-BGC that is conducting experimental, observational and modelling studies focusing on Arctic carbon cycle processes under global climate change.

Tasks:

The successful candidate (m/f/d) will be responsible for the technical development of sensors and instrumentation on different types of UASs (quadcopter, wingcopter) for greenhouse gas measurements (concentration and fluxes) and related meteorological and land surface parameters. He will help in the design and conduction of UAS based measurement campaigns in permafrost regions of Eastern Siberia. The tasks also include the integration and analysis of the UAS measurements within a local high-resolution surface-atmosphere modelling system jointly with project team colleagues contributing in situ measurements (eddy covariance, flux chambers) and high-resolution remote sensing data of land surface properties.

Qualifications:

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. Demonstrated technical experience in use and application of UASs is a prerequisite, as well as willingness to participate in field work campaigns in Siberia. Experience in scientific programming and modelling is a strong plus. Background in one or more of the following fields is considered beneficial: i) Arctic ecology; ii) carbon cycle science; iii) boundary layer meteorology. 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.

Terms of employment:

This is a full-time post-doctoral position to be filled after October 01, 2021, but starting not later than March 01, 2022, with current funding guaranteed for a duration of 36 months; part-time work is generally possible. Salary will be according to the German TVöD (E13) scale, depending on experience, including social benefits.

The Max-Planck society is committed to increasing the number of individuals with disabilities in its workforce and therefore encourages applications from such qualified individuals. Also, the Max Planck Society seeks to increase the number of women in those areas where they are underrepresented and therefore explicitly encourages women to apply.

Application:

Send your complete application documents until **August 31, 2021** quoting the reference number **16/2021** by e-mail to bewerbung@bgc-jena.mpg.de. Alternatively, submit your portfolio by mail to

Max-Planck-Institut für Biogeochemie
Personalbüro: Kennwort "Postdoctoral UAS Specialist"
Hans-Knöll-Straße 10
07745 Jena

For an application by email, all components should ideally be compiled in one single document in PDF-format. For an application by regular mail, please do not use application folders, but only submit copies, as your documents will be destroyed in accordance with data protection regulations at the end of the application process.

Applications should include CV, publication list, a cover letter outlining qualifications and interest for this position, name and contact information to at least two reference persons, and optional documents such as e.g. copies of selected publications. For more information about this position, please contact Prof. Dr. Martin Heimann (martin.heimann@bgc-jena.mpg.de).

We look forward to receiving your application!