



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 250 people, celebrated 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. We are looking for a

Data Scientist in the field of geospatial data and/or remote sensing (f/m/d)

(Full-time, fix term position 3 years with possible extension)

Background and position description:

The Global Diagnostic Modelling group at MPI-BGC leads the FLUXCOM initiative (www.fluxcom.org, Jung et al. 2020, Nelson, Walther et al. 2024) which develops approaches to integrate satellite remote sensing data, eddy-covariance flux observations, and machine learning to generate global products of land-atmosphere carbon and energy fluxes. FLUXCOM is developed by a diverse team with backgrounds in ecophysiology, data science, machine learning, and remote sensing. We are looking for an enthusiastic scientist to complement our team efforts in tackling current challenges and research questions that require improved and extended integration of satellite and in-situ data streams.

We are looking for a team member who can integrate new and high spatial resolution observational datasets into the existing FLUXCOM workflow. This involves developing and applying methodologies to reduce spatial mismatches of flux tower and satellite observations by integrating high-resolution satellite products (e.g. Sentinel-2) and explicit flux tower footprints. Additionally, there are ample opportunities of exploring novel data streams from e.g. hyperspectral, LIDAR, or SAR remote sensing to improve the FLUXCOM approach. Our new colleague will also have space to complement the research activities of the FLUXCOM team by developing and realizing own research ideas. These may focus on more technical or applied questions according to the applicant's interests.

Our colleague will be embedded in the FLUXCOM team with ample additional opportunities to collaborate within the Department of Biogeochemical Integration, and with a network of external partners of a large European project that brings together a wide range of experts on carbon cycle modelling and observational data streams.

Your tasks:

- Developing and applying methodologies for improved integration of flux tower measurements and remote sensing observations
- Analysing and synthesizing respective results on the accuracy of the data-driven flux estimates
- Authoring or contributing to scientific publications of the group

Your profile:

- A masters degree or preferably a PhD in remote sensing, geoinformatics, environmental sciences, geoecology, computer science, physics, meteorology or related field
- Experience with quantitative data analysis and processing using a programming language, preferably Python

- A good understanding of remote sensing, the terrestrial carbon cycle, and machine learning is advantageous
- Being familiar with technology currently used by the FLUXCOM team is an asset, i.e.: HPC computing, GIT version control, zarr data cubes
- Very good written and spoken English is required
- Enjoy working collaboratively

Our offer:

This position is full-time and is to be filled as soon as possible, with initial funding for two years and the possibility of extension. 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:

Dr. Martin Jung (mjung@bgc-jena.mpg.de) will be happy to answer further questions. 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 **February 07, 2025**, quoting the reference number **01/2025** by e-mail to bewerbung@bgc-jena.mpg.de or to the

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

We ask that you do not use application folders, but only submit copies, as your documents will be destroyed in accordance with data protection regulations after the application process has been completed.

We look forward to receiving your application!