

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 department of Biogeochemical Signals we are looking for a

## **PostDoc in Global Ecosystem Modelling (m/f/d)**

(Full-time, initially limited to 2 years with the possibility of extension)

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

The aim of the Biogeochemical Signals Department (BSI) is to integrate observations and models to better understand present and future interactions between the terrestrial biosphere, land-use and climate. The selected candidate (m/f/d) will contribute to ongoing development and evaluation of an advanced terrestrial biosphere model to simulate biogeochemical cycles on local to global scales (QUINCY, Thum et al. 2019). The Post Doc position is offered within the framework of two EU-H2020 funded projects (4C and ESM2025), dedicated to improve understanding and predicting future biosphere dynamics using the next generation of Earth System models. Specifically, the task in these projects is to make progress in providing quantitative estimates of effects of nutrient limitation on the terrestrial carbon balance and terrestrial N<sub>2</sub>O emissions. We are looking for a creative and innovative applicant (m/f/d), who will contribute own ideas and skills to improve theoretical understanding and model representation of terrestrial nutrient limitation and N<sub>2</sub>O-climate feedbacks at large scales through a combination of observational data synthesis and modelling studies.

### **Your tasks:**

- Conduct research in and development of predictive biosphere modelling using the QUINCY/ICON-Land model
- Contribute to BSI's terrestrial biosphere modelling group by designing and implementing novel model components, analysing simulations and/or developing model evaluation strategies
- Document research by publishing papers in peer-reviewed journals and conferences
- Develop and pursue independent research and interact with researchers within the department as well as the European land-surface modelling community through the EU-H2020 projects

### **Your profile:**

- Successfully completed scientific university studies and PhD-thesis in environmental science or environmental engineering, bioinformatics, climate or Earth system science, environmental physics, or comparable fields
- Background in terrestrial biogeochemical cycles, terrestrial ecology, land-atmosphere interactions and numerical modelling

- Experience in the development and application of (preferably global) process-based ecosystem models and high-performance computing systems is highly desired
- Experience in at least one higher programming languages (e.g. FORTRAN, c++), and scripting language (e.g. Python, R) is required
- Ability to work independently as well as in a team
- Demonstrated record of publishing scientific results
- Very good written and spoken English

### **Our offer:**

The full-time position as PostDoctoral Researcher (m/f/d) is to be filled as soon as possible; 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. Sönke Zaehle ([szaehle@bgc-jena.mpg.de](mailto:szaehle@bgc-jena.mpg.de)) will be happy to answer any questions you may have. 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 **September, 6 2021**, quoting the reference number **18/2021** (BSI-ESM2025) 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 „PostDoc Globale Ökosystemmodellierung“  
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!