

International Max Planck Research School for Global Biogeochemical Cycles

The IMPRS-gBGC located in Jena, Germany, offers fellowships to outstanding students interested in research on biogeochemical cycles in the Earth system. The school provides excellent research possibilities for students to obtain a PhD degree in a 3-years graduate program.

The elements key to life such as carbon, oxygen, hydrogen, and nitrogen are continuously exchanged among the land, ocean and atmosphere in what are known as global biogeochemical cycles. Research in the IMPRS-gBGC discovers how these cycles function, how they are interconnected, and how they can change with climate or human activity. Students participate in ongoing research comprising field observations, method development, experiments, and modeling. Students will also benefit from a three-month external research visit, specialised courses in e.g. statistics, Earth observation, modelling and analytical techniques, as well as in soft skills. The school is thus an excellent starting platform for a successful career in a field related to global biogeochemical cycles and Earth System Science.

Individual PhD projects deal with various aspects of global biogeochemical cycles. These projects are currently open for application:

Atmosphere

- ▶ The carbon cycle of northern Eurasia studied at the Zotino Tall Tower Observatory, central Siberia
- ▶ Spatial variability of carbon cycle processes in permafrost landscapes
- ▶ Detailed analysis of high latitude carbon cycle flux components
- ▶ Novel Theoretical Approaches for Global Biogeochemical Cycles

Biosphere & Ecosystems

- ▶ One million years of carbonate alteration and mobilisation, modified by microbial activities
- ▶ Isotopes as tracers of the terrestrial carbon cycle
- ▶ Data-driven modeling of global carbon and water cycles
- ▶ Carbon and water relations from ecosystem to global scale
- ▶ Global functional classification of biogeochemical and biophysical ecosystem behavior
- ▶ Combining remote sensing and in situ data for biosphere model improvement
- ▶ Evaluating the feasibility and consequences of desert greening to meet future food and energy needs
- ▶ Data-based models to understand biogeochemical cycles: Accounting for temporal autocorrelation

Soils, soil microbiology & soil hydrology

- ▶ Role of geogenic CO₂-exhausts for the formation and stability of soil organic matter
- ▶ Interactions between polysaccharides and mineral surfaces
- ▶ High-latitude soil carbon dynamics modelling

Paleoclimate

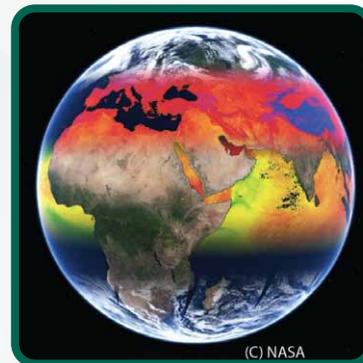
- ▶ Transfer of environmental and climatic signals into volcanically influenced lake sediments
- ▶ Timing of long-term carbonate mobilisation in a limestone aquifer

We accept applications for PhD scholarships until January 07, 2012.

Find out more and apply online: <http://www.imprs-gbgc.de>

Applications for the program are open to well-motivated and highly-qualified students from all countries. A prerequisite is a diploma or master of science degree in geophysical sciences, environmental sciences, biological sciences, physics, chemistry, computer sciences or related fields, including a corresponding thesis. Proficiency in English is required since English is the official language of the program.

Successful applicants are expected to join us in spring 2012 and will be offered financial support of roughly 1200 Euros/month to cover their basic living expenses. There are no tuition fees. Handicapped persons with comparable qualifications receive preferential status.



contact: coordinator:
Anna Görner

Hans-Knöll-Str. 10
07745 Jena
Germany

+49 3641 576260
www.imprs-gbgc.de
imprs-gbgc@bgc-jena.mpg.de

