

Overview: The Institute of Geography (www.geo.uni-augsburg.de) at Augsburg University invites applications of an excellent PhD candidate for a three-year position working on the tropical carbon (C) cycle with field sites and experiments in Eastern Africa (DRC, Uganda, Rwanda). We seek a candidate who will use quantitative and qualitative field and laboratory methods to study interactions between biological and geological, geochemical or hydrological processes.

The PhD position is based in DFG research group "TROPSOC" (<http://gepris.dfg.de/gepris/projekt/387472333>) and will be collaborating with several other groups in and outside Germany in the framework of TROPSOC.

Project: The response of soils to disturbance by erosion is one of the great uncertainties in predicting greenhouse gas fluxes from soils to the atmosphere and hence future earth system dynamics. Tropical Africa is a hotspot of land use change and is expected to experience important changes in both soil biogeochemical cycling and ecosystem level C fluxes between soil, plants and the atmosphere in this century. In particular, it is unclear how C dynamics differ in the Tropics compared to the temperate climate zones, from which most of our process and mechanistic understanding about C cycling is derived.

The main objective of the proposed project is to develop a better mechanistic understanding of C sequestration in and C release from soils of Tropical Africa, studied here in the eastern part of the Congo Basin. This region provides a unique combination of (i) geologically diverse parent material for soil formation and (ii) different levels of disturbance by human activity, taking place under a humid, tropical climate regime, where pristine forests are converted into agricultural land at high rates.

Tasks:

- Quantification of soil reactive minerals and stable/labile soil C fractions in tropical soils.
- Quantification of erosional fluxes and soil weathering stages at the hillslope scale.
- Evaluation of novel techniques for large scale soil assessments in tropical systems (FT-IR spectroscopy).
- Participation in several weeks long guided and independent field work in rural environments of Tropical Africa.
- Presentation of scientific results at international conferences and in scientific publications.

Requirements:

- Master-level or equivalent degree in geosciences, physical geography, soil science, environmental sciences or related subjects with excellent grades, including knowledge of multivariate statistical methods.
- Pronounced interest in biogeochemical research questions.
- Strong interest in technical and analytical work (method application, conducting and guiding laboratory experiments).
- Willingness for occasional weekend activities related to monitoring of running experiments.
- Good knowledge of spoken and written English (TOEFL score 95 or higher, C1 certificate or equivalent) is a necessity.
- Knowledge of spoken and written French is a strong asset.
- Knowledge of spoken and written Swahili is a strong asset.
- Experience with traveling and/or working in tropical countries is a strong asset.

Conditions:

- The position is funded for 3 years. Salary and benefits will be according to German Public Service Sector salary group TV-L 13, 65% (approx. EUR 1500 per month/net).
- (optional) Contribution to the teaching curriculum of the host institution.
- The project will start on Jan 1st 2018. A later start for the PhD candidate is possible under exceptional circumstances. Job interviews are tentatively scheduled to take place on Nov 15th 2017.

Application: Augsburg University seeks to increase the number of women in sciences and therefore explicitly encourages women to apply. Applicants with severe disabilities will be favored when having substantially the same qualifications as applicants without severe disabilities. Please send your documents as a single pdf document (letter of motivation, CV, certificates, names of 2 referees) by email to TROPSOC@geo.uni-augsburg.de until **Nov 1st 2017**.

Contact for further information:

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