

Wissenschaftliche/r Mitarbeiter/Mitarbeiterin (postdoc) (UNIVERSITÄT LÜNEBURG)
Bewerbungsfrist: 20.02.2018

Leuphana University Lüneburg (foundation under public law), Institute of Ecology (Faculty of Sustainability) is offering a post as: **Postdoctoral Research Associate (m/wf) – Wissenschaftliche/r Mitarbeiter/in**, within the BMBF funded project **“INPLAMINT: Increasing agricultural nutrient-use efficiency by optimizing plant-soil-microorganism interactions - Phase II”** - salary group EG 13 TV-L, full position
Starting 1st April 2018, limited until 31st March 2021.

This is a postdoc EG13 TV-L position within the German standard tariff system, in the Ecosystem Functioning and Services lab of Prof. Dr. Vicky Temperton. Research in this group focuses on interactions between plants (both aboveground and belowground) as well as soil nutrients, and how these interactions affect ecosystem functioning and services, in naturally assembling grassland communities but also in intercropping systems (with a strong focus on nitrogen facilitation). The INPLAMINT project (<https://www.bonares.de/inplamint>) has the goal to better understand key processes governing nutrient turnover and fluxes in the plant-soil-microbial system, and by testing possible management strategies to increase plant nutrient uptake efficiency to thus contribute towards a more sustainable crop production. In the current second three-year phase of the project the main focus now shifts to understanding the functional role of the microbiome and its interaction with plants (using winter barley, canola, fava bean and other crops) in relation to fertilizer addition and stoichiometry. Using soils from opencast mining sites in North-Rhine Westphalia that have had different lengths of time under cultivation after mining (found to harbour very different microbial diversity in phase I), we will perform several plant-soil feedback experiments in the greenhouse, to try to disentangle whether the current cropping system or the microbiome itself (in relation to time in cultivation) plays a larger role in determining the structure and function of the microbiome and plant performance. This will involve close collaboration with microbial subprojects in Berlin, Munich and Cologne. In addition, building up on previous results from Phase I on the effects of N:P stoichiometry of fertilizer addition on root architecture and plant performance, we will study the possible role of N form (ammonium or nitrate) on availability of phosphorus. In a complementary experiment, we will test whether positive facilitative effects of intercropping of maize with fava bean on nutrient availability are transferable to the following crop.

Requirements and responsibilities:

Candidates should have a Ph.D. degree in the fields of either plant ecology, biology, geography, environmental or vegetation science. The successful candidate has practical and theoretical experience in plant science and or plant ecology, particularly in working within a functional, experimental plant biology or ecology approach that includes experience with greenhouse and field experiments. Knowledge of and experience in one of the following is an advantage: plant soil feedback research, plant nutrient research, root biology (root architecture and/or root exudation and its relation to availability of nutrients). This research will include state-of the art methods for studying plant-environment interactions, especially roots, such as the use of rhizotrons (under controlled conditions) to visualize root architecture and pH optodes to assess changes in root physiology, as well as using the invaluable resource of soils from the ex-mining sites that are now under cultivation for the plant soil feedback experiments (PSF).

The successful candidate:

- speaks and writes English well (as illustrated by publication in peer-reviewed journals)
- he/she enjoys communicating and working with others as well as working independently.
- has a good knowledge of statistics, particularly general linear models is an advantage.
- a driver's license (or willing to obtain one)

What we offer:

We offer a stimulating and motivating environment combining both plant biology and ecology with a strong focus on root-root and increasingly (in collaboration with others) root-microbe interactions under controlled and field conditions. This position provides an opportunity to work in an exciting inter-disciplinary setting within a research consortium active across Germany in an innovative research field that combines both basic and applied research. The ecosystem functioning and services group is young and international and works on a diverse range of topics, embedded in an active institute of ecology within a unique sustainability faculty. There are opportunities to co-supervise bachelor and master students within this project.

Leuphana University Lüneburg is an equal opportunity employer committed to fostering heterogeneity among its staff. Disabled applicants with equal qualifications will be given priority consideration. We are looking forward to receiving your application. **Application deadline: 20 February 2018.** Applications should include a cover letter (including a short description of the applicant and why they consider themselves fitting for the position), a curriculum vitae, a list of publications, the names of two referees (references from these two people would be an advantage) and copies of certificates. Please send applications as a single pdf document attached to an email with the subject line **“INPLAMINT”** to bewerbung@leuphana.de or in hard-copy to Leuphana Universität Lüneburg, Personalservice, Corinna Schmidt, Subject: INPLAMINT, Universitätsallee 1, 21335 Lüneburg, Germany