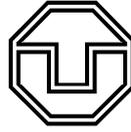




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University of Natural Resources and
Life Sciences (BOKU), Vienna

Three research positions leading to PhD degrees: Two in the joint PhD programme offered by UNU-FLORES & TU Dresden (Dresden, Germany), and one at BOKU (Vienna, Austria)

Adaptive land uses as a preventative element for soil and water conservation are gaining importance. Planning of adaptation strategies is often based on the application of hydrological models. Previous studies have shown that soil structure changes significantly as a result of land use and soil management. If dynamics of soil structure are neglected, the uncertainty of model results increases. This could lead to incorrect planning, and greater or misdirected resource consumption in land use. To measure changes in soil structure and hydraulic properties as a result of different land use practices (soil tillage, crop rotation, afforestation) and implement newly developed functions into hydrological models, the following joint DFG/FWF-funded research project will be implemented:

Development of models to predict land-use-induced soil pore-space changes and their hydrological impacts

The project will be carried out by the Institute for Integrated Management of Material Fluxes and of Resources, United Nations University (UNU-FLORES), Dresden, the Institute of Soil Science and Site Ecology, TU Dresden, and the Institute of Hydraulics and Rural Water Management, University of Natural Resources and Life Sciences (BOKU), Vienna. We are currently seeking qualified candidates for three PhD positions. Duration of all offered positions: October 1, 2015 to September 30, 2018 (36 months).

Position Details and Main Responsibilities

- **Position 1 at UNU-FLORES:** Quantification of temporal variations of soil hydraulic properties and water repellency by periodic field and laboratory measurements (hood infiltrometry, evaporation method, sessile drop method) at selected field sites in Germany (focus on **mid and long-term changes in soil hydraulic properties**). Successful candidate will be offered a stipend to conduct the research.
- **Position 2 at UNU-FLORES:** Characterization and mathematical description (focus **model development**) of temporal and management-induced soil hydraulic property changes and implementation of new model concepts into existing hydrological models. Successful candidate will be offered a stipend to conduct the research.
- **Position 3 at BOKU Vienna:** Quantification of temporal variations of soil hydraulic properties by periodic field and laboratory measurements (hood infiltrometry, evaporation method, dye tracer tests) at selected field sites in Austria (focus on **short-term changes in soil hydraulic properties**). This is a 0.75 part-time position at the salary scale B1 according to the collective agreement for university staff (gross salary at least € 1,997.20).

Required skills and qualifications

- All applicants must have an undergraduate degree in natural sciences or engineering (MSc in Agriculture, Forestry, Geoecology, Geosciences, (Environmental-)Physics or equivalent)
- Graduate level knowledge in soil physics and hydrology.
- Excellent proficiency of English language (oral and written) is required for all three positions. For positions 1 and 2 the applicants must present evidence for IELTS 7.0 or TOEFL 600(PBT) or TOEFL 100(IBT) with the application. This requirement can only be waived, if documented evidence is presented to prove that English was the language of instructions for at least one of the degree programs.
- Applicants for positions 1 and 3 must be fluent in German (oral and written) and possess driving license valid in Germany and Austria.



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Desirable skills and qualifications

- Experience in scientific writing
- Willingness to work independently in the field
- Knowledge of programs as HYDRUS, COUPMODEL, or BROOK90
- Computational skills (programming language as R, Fortran, Matlab, C, etc.)
- Willingness to travel and work in an international team
- Reliability, self-organization, preciseness
- Experience with the required experimental methods is advantageous.

How to apply

UNU-FLORES (Germany)

The successful candidate will occupy a paid PhD position based in Dresden, Germany and will not hold international civil servant status nor be a “staff member” as defined in the United Nations Staff Rules and Regulations. Successful candidates will be enrolled in the joint PhD program in Integrated Management of Water, Soil, and Waste, which is jointly offered by UNU-FLORES and TU Dresden.

Applications from suitably qualified woman candidates and those from developing countries are particularly encouraged.

Electronic applications will be accepted until **August 10, 2015**. All applications should clearly focus on one of the offered positions and should include: (1) a letter of motivation, (2) a CV with copies of *ALL* university transcripts, (3) copy of TOEFL/IELTS or evidence to prove that English was the language of instructions for at least one of the degree programs in the form of a letter issued by the relevant university officials, (4) an electronic copy of the MSc thesis or equivalent or any existing scientific publications, (5) 2 reference letters, and (6) a completed and signed joint PhD programme application form, downloadable from UNU-FLORES website at <https://flores.unu.edu/phd/>.

Interested applicant should send their application material in one single pdf file to pgapp_flores@unu.edu. Questions relating to the position at UNU-FLORES should be sent to pginfo_flores@unu.edu.

BOKU Vienna (Austria)

The University of Natural Resources and Life Sciences Vienna seeks to increase the number of its female faculty and staff members. Therefore qualified women are strongly encouraged to apply. In case of equal qualification, female candidates will be given preference unless reasons specific to an individual male candidate tilt the balance in his favour.

Electronic applications will be accepted until **August 10, 2015**. All applications should clearly focus on one of the offered positions and should include: (1) a letter of motivation, (2) a CV with copies of *ALL* university transcripts, (3) an electronic copy of the MSc thesis or equivalent or any existing scientific publications, and (4) full contact information of three referees.

Please send your electronic application (1 single PDF file) to kerstin.buchmueller@boku.ac.at (**reference code: 62**).

Questions about the position can be directed to: Dr. Andreas Schwen, andreas.schwen@boku.ac.at.

General remark: Selection for all offered positions will be made after personal interviews of invited candidates in Dresden. We regret that we cannot reimburse applicants travel and accommodation expenses incurred as part of the selection and hiring process.