An der Georg-August Universität Göttingen ist eine Stelle (Postdoc Position Agroecosystems Modeller) ausgeschrieben.

Postdoc position "Agro-Ecosystems Modeller" (all genders welcome)

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Fakultät für Agrarwissenschaften
Herr Prof. Dr. Reimund Rötter
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Zum nächstmöglichen Zeitpunkt
01.09.2023

Postdoc position "Agro-Ecosystems Modeller" (all genders welcome)

The Chair "Tropical Plant Production and Agricultural Systems Modelling" is recruiting a postdoctoral researcher to work on sustainable plant production, agro-ecosystems analysis, modelling and simulation and conduct related teaching - to be filled as soon as possible.

Salary will be paid according to the German grade 13 TV-L. The regular working hours will be 31.84 hours per week (80%). Initially the contract is limited to two years, with the possibility to extend for another four years and to a full time (100%) position upon good performance; the position includes the possibility of habilitation.

Working environment: The division Tropical Plant Production and Agricultural Systems Modelling (TROPAGS) has its focus on the analysis and modelling of globally important plant production systems. TROPAGS aims to deepen the understanding of the functioning of major plant production systems of the tropics (and of temperate regions) in a changing environment. The group conducts controlled-environment and field experiments to improve the mechanistic understanding of the underlying processes in order to improve modelling approaches and tools. Research foci of the group include: assessing climate risks, potential impacts of climate change, designing and evaluating risk management strategies, climate change adaptation and mitigation measures. Special interest is in utilizing genetic diversity for developing resilient crops/cropping systems. Another research pillar is the development of new process-based crop models, data assimilation techniques and the improvement of existing models, in particular to better capture crop impacts of climate extremes (e.g. heat and drought) - also for intercropped and agroforestry systems. The group also contributes to integrated analysis of agricultural systems (food security and other ecosystem services) from farm to global. Core modelling techniques used are dynamic system simulations. Hand in hand with our modelling work we create empirical data sets on selected plant production systems (in Africa, Asia and Europe), i.e. on their genotype by environment by management interactions. Our field experiments, conducted jointly with research partners around the globe are supported by controlled-environment experiments in climate chambers and in our greenhouse at the University of Göttingen.

Your specific tasks: will be to develop, test and apply modelling approaches to quantify productivity, resource use and environmental footprint of tropical (and temperate) crops /cropping systems under current and anticipated future conditions. The work also involves designing /supervising experiments to evaluate existing models for specific purposes, and

extend and improve existing modelling approaches/ tools. In this endeavour you will collaborate with experimentalists and other modelling teams (e.g. in AgMIP) for building synergies in utilizing and improving model capabilities.

What do we expect from you?

- University degrees (M.Sc. and Ph.D.) in Agricultural Sciences, Forestry Sciences, Environmental Sciences or related fields - with a quantitative orientation and knowledge of agricultural and other managed ecosystems.
- Deep understanding of the processes determining crop productivity, resource use and environmental impacts.
- Comprehensive knowledge of theories, concepts and evaluation methods regarding crop growth simulation /agro-ecosystems models.
- Profound experience in modelling agricultural or biological systems, with strong programming skills (R, Python, C++ or Matlab) and, preferably, some experience in crop model development and improvement
- Very good command and operational skills in applying widely used crop simulation models (e.g. APSIM, DSSAT, HERMES).
- Publication record appropriate for the stage of career, with recent first author publications.
- Experience in conducting / supervising and analyzing controlled-environment and field experiments aimed at evaluating and/or improving models
- Experience in analysing large datasets from empirical studies, surveys and GIS
- Experience in teaching and supervising Bachelor and/orMaster students in agronomy / agricultural systems modelling
- Willingness to assist in the supervision of BSc, MSc and PhD work.
- Proven ability to work in a (multi-cultural) team, with effective interpersonal communication skills.
- Interest in improving skills such as writing research proposals and performing project management tasks
- Keen interest in writing peer-reviewed scientific articles
- Good language (written and spoken English) and presentation skills.
- Interest & willingness to learn and communicate in German

We offer: a stimulating, international and interdisciplinary research and work environment in a team of several Senior researchers, Postdocs, PhD students and Technical staff that has extensive expertise in agronomic experimentation and in the design, development, testing and application of agricultural systems models - at different scales and for a wide range of topics (<u>https://www.uni-goettingen.de/en/research/539218.html</u>). Teaching requirements are according to the Lower Saxonian law (4 hours lecturing per week) mainly in modules for MSc students. It is expected that the Postdoc gets involved in various ongoing project activities. New initiatives fitting to the central teaching and research foci are much appreciated. The successful candidate is expected to develop his/her own research profile and to apply for research funding.

Located in a lovely and well-connected town in the centre of Germany, the University of Göttingen is an equal opportunities employer and places particular emphasis on fostering

career opportunities for women. Qualified women are therefore strongly encouraged to apply in fields in which they are underrepresented. The university has committed itself to being a family-friendly institution and supports their employees in balancing work and family life. The university is particularly committed to the professional participation of severely disabled employees and therefore welcomes applications from severely disabled people. In the case of equal qualifications, applications from people with severe disabilities will be given preference. A disability or equality statement is to be included in the application in order to protect the interests of the applicant.

Contact: Please, direct questions and send your application to <u>reimund.roetter@uni-goettingen.de</u> (with cc to: <u>apape2@gwdg.de</u>). Further information on TROPAGS can be found at: <u>https://www.uni-goettingen.de/en/106511.html</u>. Applications should include a cover letter, a short summary of teaching and research interests, CV, list of publications, complete certificates, and the names (with email addresses) of two potential referees. **Send all documents as a single PDF document. Closing date for applications: 1 September 2023.**

Please note:

With submission of your application, you accept the processing of your applicant data in terms of data-protection law. Further information on the legal basis and data usage is provided in the https://www.uni-goettingen.de/en/InformationGeneralDataProtection Regulation