ATB
Leibniz-Institut für
Agrartechnik und Bioökonomie

The Leibniz Institute for Agricultural Engineering and Bioeconomy (ATB) as nationally and internationally acting institute is researching at the interface of biological and technical systems. Our research is aimed at sustainable intensification. We analyze, model and evaluate bio-economic production systems. We develop and integrate new technologies and management strategies for a knowledge-based, site-specific production of biomass, and its use for food, as biobased materials and fuels - from basic research to application. Thus we are contributing to food security, animal welfare, the holistic use of biomass, and to protect the climate and environment.

Within the department Technology Assessment and Substance Cycles we are developing a bioeconomic system model to assess substance flows, environmental impacts and economic parameters of agricultural production. With this modelling we aim to reveal ecological and economic trade-offs of the production and usage of food, fodder and biomasses for material and energetic use and to identify sustainable production methods. To this end, and in order to support the development of the model we are offering the following position:

PhD Candidate (m/f/d)
for
Modelling Sustainability Trade-offs in the Bioeconomy

Your responsibilities

- Contribution to the development of a model to assess environmental impacts of bioeconomic production systems (e.g. plant production, animal husbandry, biomass usage)
- Design and implementation of modules in the programming language Python, which represent individual production processes and their emissions and costs, and consider site-specific factors (e.g. climate and soil)
- Development of regional material flow analysis and environmental impact assessments for innovative bioeconomic production options
- Review of literature and process data for the model development
- Write and publish scientific articles, participate at conferences

Your qualifications

- Very good master degree in the area of agriculture, environmental sciences or environmental informatics
- Skills and experience in programming with Python, or alternatively in another (preferably object-oriented) programming language and the willingness to learn Python
- Knowledge on the assessment of environmental impacts (e.g. life cycle assessment approach); experience on working with geospatial data would be an asset
- Knowledge on agricultural processes and interest in questions around the bioeconomy
- Fluent written and spoken English
- Self-reliant and team player

We offer

- The ability to contribute to a large extent with own ideas to the thematic definition of the research questions and the model development
- Derive a PhD within a structured programme
- Work in an interdisciplinary team in an attractive professional environment
- Access to national and international networks for your scientific career
- Family-friendly working conditions that foster the compatibility of work and family life

The salary is based on your qualification and professional experience according to TV-L salary group 13.
This part-time position (65%) is limited to 3 (three) years.
For further information please contact **Dr. Ulrich Kreidenweis** (e-mail: ukreidenweis@atb-potsdam.de) and visit our website **www.atb-potsdam.de**.

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If you would like to contribute your professional competence to our interdisciplinary research, please apply by the following deadline **19 April 2020** quoting the **reference number 2020-2-1** by email to **karriere@atb-potsdam.de** (preferably in single pdf-document).

Equality of opportunity is part of our personnel policy. Disabled applicants with adequate qualification will be preferentially considered.

With your application for employment you declare your agreement to store your application documents for at least three months even in case of an unsuccessful candidacy.

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