



# PostDoc agroecosystem/land surface modelling

The Biogeophysics group of the University of Hohenheim is seeking for highly motivated PostDoc for a VwW Invest BW – Innovation II research project. We offer a full-time contract (100 %), initially for the duration of the project (24 months). The remuneration follows TV-L EG 13.

In the project „DeepBluSky“, sbp sonne and the University of Hohenheim will develop a model to comprehensively describe the energy balances of a combined agri-photovoltaic system (APV). The simulations will predict crop growth shaded by the photovoltaic system as well as the produced electricity. A resulting software will enable to calculate the investment costs of APV while considering the impact on crop productivity. In particular, the software will be developed to include the strong coupling of light, energy and water fluxes within the APV. This project will make an important contribution to the energy transition and to greater resilience of agriculture with regard to climate change.

## Your tasks:

As part of the project "DeepBluSky - Development of a comprehensive APV simulation tool for agriculture and power generation", funded by the Baden-Württemberg Ministry of Economics, Labour and Tourism, you will work in a motivated team together with the industrial partner sbp sonne on the topic of the effect of shading by agri-photovoltaics on the energy and water balance of the land surface, in particular plant growth and yield formation of field crops.

Your activities will include, among other things, the scientifically sound development of new findings and methods in the above-mentioned areas, the writing of scientific publications, as well as independently organised and agile project work in the research network.



**Your profile:**

- A doctorate in physics, meteorology, geoecology, environmental sciences or a closely related subject completed.
- Knowledge of the energy, water and material balance of the vegetated soil surface.
- Ideally with a focus on process modelling of dynamic plant growth or land surface modelling, as well as in the methods of model-data integration.
- Programming skills with C or a comparable programming language are a distinct advantage, as well as knowledge of scripting languages such as R or Python.
- Knowledge of iterative numerical solution of differential equations is advantageous.
- A secure knowledge of spoken and written English is required and a very good knowledge of German is an advantage.
- Relevant experience in publishing scientific papers in peer-reviewed journals, documented by at least one first authorship, is expected.
- Strong organisational and communication skills complete your profile.

**Application deadline:** 22 September 2022

Please enclose the following documents with your application: Letter of motivation, your CV, a current list of publications, as well as references and any certificates you may have.

For further questions, please contact Dr. rer. nat. Sebastian Gayler ([sebastian.gayler@uni-hohenheim.de](mailto:sebastian.gayler@uni-hohenheim.de)) or Dr. rer. nat Tobias KD Weber ([tobias.weber@uni-hohenheim.de](mailto:tobias.weber@uni-hohenheim.de)). Please send your application to the above mentioned email addresses.