

The Leibniz Institute for Agricultural Engineering and Bioeconomy is a pioneer and a driver of bioeconomy research. Our work is aimed at creating the scientific foundation to transform agricultural, food, industrial and energy systems into a comprehensive bio-based circular economy. Objectives are to develop and to integrate techniques, models, processes and management strategies, effectively converging technologies to intelligently crosslink highly diverse bioeconomic production systems and to control them in a knowledge-based, adaptive and largely automated manner. We conduct research in dialogue with society - knowledge-motivated and application-inspired.

For the, HORIZON-funded project on **“High throughput real-time monitoring and prediction of fruit cracking by utilizing and upscaling sensing and digital data technologies (CrackSense)”**, we are seeking for a

### **Scientist (Postdoc) (m/f/d) (100 %)**

The three-year "CrackSense" project is working with partners from Israel, France, Germany, Greece, Lithuania, etc. working on risk models in fruit production considering global warming. The overall approach will allow fruit to be characterized directly on the tree and enable fruit producers to implement short-term countermeasures. Some input variables for the bigger risk models will be provided by ATB using close-range remote sensing technology. The ATB team provides the hardware and raw data processing workflow, and develops concepts to use the data in physiological models.

You will be responsible for ATB's task in the H2020 project CrackSense considering the data analytics in cooperation with international project partners and publishing the results. The focus of the work is on sensor data evaluation with regard to the measurable fruit properties. For this purpose, you should have experiences in the analytics of 3D point clouds. Furthermore, there should be a strong interest in extracting plant information from the data. Experiences in the publication of research results is a prerequisite.

#### **Your responsibilities**

- Measurements with a terrestrial 2D LiDAR sensor and a thermal camera in a mobile field setup
- Analyzing 3D point clouds considering fruit variables
- Implementing fruit data in physiological models, e.g. analyzing the fruit growth at the tree
- Publish results in peer-reviewed scientific journals

#### **Your qualification profile**

##### **Your professional qualification profile:**

- Excellent university degree (PhD mandatory) in Environmental, Forestry, or Agricultural Sciences
- Knowledge on 3D point cloud processing
- Experiences with mechanistic models
- Some experience in collaboration with international partners is welcome
- Confident command of the German and English languages, both written and spoken
- Proven ability to write scientific publications

##### **Personal qualification:**

- Reliable and result-oriented way of working
- Team working abilities
- Willingness to travel, occasionally across Europe
- Cross-cultural competence

#### **We offer**

- An attractive, interdisciplinary working environment in a mixed team of experienced and young scientists and technicians
- Excellent infrastructure for carrying out scientific work
- Access to national and international networks for your scientific career
- Family-friendly working conditions that promote the compatibility of work and family life
- Company-owned electric bicycles for business trips
- Participation on the VBB company ticket

- Our institute is located on the edge of a picturesque park-like landscape and is easy to reach by public transport or by bike

This full-time position (100 %) is limited until December 31, 2026 according to the end of the project. Follow-up financing is being considered. Please indicate your earliest availability.

The remuneration is based on your qualification and professional experience according to TV-L up to salary group 13.

For further information, please contact **Dr. Manuela Zude-Sasse** (E-Mail [mzude@atb-potsdam.de](mailto:mzude@atb-potsdam.de)) and visit our website [www.atb-potsdam.de](http://www.atb-potsdam.de).

If you would like to contribute your professional competence to our interdisciplinary research, please apply by the following deadline **March 15, 2024** using ATB's online application form for the job advertisement, **code 2024-4-2**, at <https://www.atb-potsdam.de/en/career/vacancies>.

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

By submitting an application, you agree that your job application documents will be stored for a period of six months, even in the case of an unsuccessful application. Further information on the processing, storage and protection of your personal data can be found at <https://www.atb-potsdam.de/en/services/data-protection-declaration-for-the-application-process>.

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