The Leibniz Institute for Agricultural Engineering and Bioeconomy is a pioneer and a driver of bioeconomy research. We create the scientific foundation to transform agricultural, food, industrial and energy systems into a comprehensive bio-based circular economy. We develop and integrate techniques, 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.

In the **"Engineering for Livestock Management"** competence area, we combine veterinary research on stress parameters and germ contamination with environmental research on emissions and flow processes in and around animal husbandry facilities.

For the **RES4LIVE** an H2020-funded project "Renewable Energy Systems: RES solutions for zero-fossil fuel consumption at the farm level in animal production systems", we are seeking for a

<div align="center">

Scientist (Postdoc) (m/f/d) (100 %)
for the topic
Example RES solutions for zero-fossil fuel consumption at the farm level in animal production systems

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The successful candidate will be responsible for ATB's task in the H2020 Innovation Action project Res4Live. The 4 year project aims at ensuring a wider adoption of RES and energy efficiency technologies, machinery and techniques in livestock farms towards zero-fossil fuel consumption. A great part of its work deals with the adaptation of specific technologies for both energy and fuels to perfectly fit livestock farming and become attractive in terms of cost effectiveness, operational flexibility and with low maintenance efforts. Systems shall be suitable for livestock buildings located in rural areas. The candidate's tasks will include the integration, testing and monitoring of RES solutions on experimental and commercial agricultural farms. The work will be in close collaboration with the German research farm of Lehr- und Versuchsanstalt für Tierzucht und Tierhaltung e.V. Ruhlsdorf/Groß Kreutz (LVAT). In addition, ATB will contribute to the technical, socio-economic and environmental assessment, related to farm application of innovations in order to decrease fossil fuel dependency. All project partners actively participate in Res4Live cluster activities, such as dissemination and communication, and especially close co-operation with stakeholders.

Your responsibilities

- Develop strategies for "dynamic barn climate management" to avoid heat stress and increase animal welfare under conditions of climate change, optimise barn climate by applying self-learning systems
- Develop an on-farm energy management system, using AI and data science technologies, aiming for 100% energy self-sufficiency and greenhouse gas emission reduction
- Integrate new RES technologies (e.g. thermal photovoltaics, electrified mobile drives, biogas/CNG for tractors) into on-farm use
- Optimise the on-farm energy system by flexible use of renewable energy carriers, by energy demand reduction, and by harmonisation of energy generation and demand
- Design, install, test, measure and monitor these integrated systems at the research farm
- Process, analyse and exchange data using statistical analysis, AI and research data management methods
- Contribute to project-related dissemination activities at national and international level and to stakeholder activities in general
- Publish results in peer-reviewed scientific journals
- Support the project coordinator in management tasks and dissemination activities

Your qualifications

Your professional qualification profile:

- Excellent university degree (PhD mandatory) in engineering, such as mechanical engineering, process and environmental engineering, mechatronics, energy engineering & management, renewable energy systems engineering; agricultural engineering with a focus on animal husbandry
- Research experience and knowledge in European livestock systems with a focus on dairy is welcome

- Profound research experience and knowledge in European RES systems in terms of energy generation (e.g. biogas, PVT), energy usage technologies (e.g. electric and CNG-powered drives), energy management systems for optimization of operational energy usage
- Energy flow assessment, smart control and simulation
- AI and data science methodologies are welcome
- Knowledge of methods to assess agriculture in terms of environment, economy, and society is welcome
- Very good knowledge of statistical data analysis and experience in related software (e.g. Python, R, MATLAB)
- Fluent English language proficiency and proven ability to write scientific publications
- Command of the German language is most welcome, interest in learning German is required
- Experience in project management

Personal qualification:

- Independent, self-responsible, reliable and result-oriented way of working
- Ability to analyse complex data and situations
- Strong communication and teamwork skills, ability to cooperate, flexibility, commitment, ability to work under pressure, reliability
- Willingness to travel, occasionally across Europe, valid driving license for use in Europe (min. category B)
- Cross-cultural competence

We offer

- Your participation in a transnational, excellent project consortium
- Your contribution to provide solutions to relevant societal challenges
- Excellent infrastructure for carrying out scientific work
- Attractive, interdisciplinary working environment and very good conditions to develop your own scientific career and your network
- Family-friendly working conditions that foster 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 September 30th, 2024 according to the end of the project. Follow-up financing is being considered. Please indicate your earliest availability.
The salary is based on your qualification and professional experience according to TV-L up to salary group 13.

For further information, please contact **Prof. Dr. Thomas Amon** (E-Mail tamon@atb-potsdam.de) and visit our website **www.atb-potsdam.de**.

If you would like to contribute your professional competence to our interdisciplinary research, please apply by the following deadline **January 15th, 2023** using ATB's online application form for the job advertisement, **code 2022-5-14**, at https://www.atb-potsdam.de/en/career/vacancies. Applications received after the application deadline cannot be considered.

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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