The Leibniz Institute for Agricultural Engineering and Bioeconomy (ATB) is a nationally and internationally active research and development centre with an interdisciplinaries field of basic and applied research activities at the nexus of biological and technical systems. ATB has multidisciplinary research teams with currently about 230 staff members, 75 of them scientists and PhD students. Research at ATB is aimed at sustainable intensification of bio-economic production. ATB develops and integrates new technologies and management strategies – for a knowledge-based, site-specific production of biomass, and its use for food, as raw materials and fuels – from basic research to application. In this way, we contribute to food security, animal welfare, the holistic use of biomass and the protection of climate and environment.

We are seeking for a

**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**

for a fixed-term employment, starting in February 2021.

The successful candidate will be responsible for ATB’s tasks 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 so that to perfectly fit livestock farming and becoming attractive in terms of cost effectiveness, operational flexibility, and with low maintenance, suitable for livestock buildings located in rural areas. The candidate’s tasks will include the integration, testing and monitoring of RES solutions in experimental and commercial agricultural farms. The work will be in close collaboration with the experimental German case study farm of 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 tasks**

- Develop strategies for dynamic adaptation of barn climate to avoid heat stress and increase animal welfare under climate change scenarios, manage and execute the barn climate optimization by using 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, heat pumps, 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 adaptation of energy generation and demand
- Design, install, test, measure and monitor these integrated systems at the pilot farm
- Process, analyse and exchange data using statistical analysis and research data management methods
- Contribute to project-related dissemination activities at German farm level and to stakeholder activities in general
- Publish results in peer-reviewed scientific journals
- Support the project coordinator in management tasks and dissemination activities

**Our expectations**

- **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, AI systems
  - Profound research experience and knowledge in European livestock systems with a focus on dairy (knowledge of pigs, poultry welcome)
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

The salary is based on your qualification and professional experience, according to German public service salary scale (TV-L E13). This is a fixed-term position, based on the duration of the project and limited to 30.09.2024, and might be suitable for part-time work (>75%). Please indicate your earliest availability.

Further information regarding tasks can be obtained from Prof. Dr. Thomas Amon (e-Mail: tamon@atb-potsdam.de).

If you would like to participate in our interdisciplinary research, please apply until November 20th, 2020 using ATB’s online application form for the job advertisement, code 2020-5-4, at https://www.atb-potsdam.de/en/career/vacancies. Applications received after the application deadline cannot be considered.

Please produce a detailed CV, including personal contact information and three references, only relevant certificates, as well as a two-page research statement addressing your specific interest, motivation and qualifications for the position (please address what skill and abilities would you bring to the team and what would you hope to gain from working on this position).

Please note: Interviews will be scheduled already at the beginning of December, video interviews are possible.

Equality of opportunity is part of our personnel policy. We therefore very much encourage applications from qualified women. Disabled applicants with adequate qualification will be preferentially considered.

By submitting an application, you agree that your job application documents will be kept for a period of six months, even if your application is unsuccessful. 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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