

Development of a health and welfare monitor for pigs and poultry based on sound analysis: Leuven, Belgium

Occupation: Full-time

Period: Fixed-term contract

Place: Leuven

Apply no later than: April 10, 2015

For the Division M3-BIORES: Measure, Model & Manage Bioresponses we are looking for a 18 months research position in a project with a clear intention to complete a PhD at the KU Leuven within four years.

Development of a health and welfare monitor for pigs and poultry based on sound analysis

M3-BIORES, the former Laboratory for Agricultural Buildings Research belongs to the KU Leuven, is one of the biggest scientific groups worldwide working in the field of integration of biological responses in the monitoring and control of living organisms (humans, animals, plants).

Website unit: <http://m3-biores.com/>

Project

Project description and tasks

Measuring of animal-based variables can substantially contribute to health and welfare objectives that have been set by EU-legislation. Automated recording and processing of animal-based variables has a number of advantages. Important information about animal behaviour related to health and welfare such as sound can be measured automatically and consequently these measurements can be used in a real time detection of animal health and welfare problems.

This project aims at the development of a health and welfare monitor for pigs based on automatic detection of welfare related behaviour parameters based on sound analysis. The dynamic variation of these parameters shall be related to specific behaviours, such as eating, drinking, resting, locomotion, social behaviour and sickness. The project includes also the detection and removal of background noise events in the recorded signals and aims at using information on the actual acoustic environment to improve the identification and detection accuracy.

Within this project, the candidate shall focus on the recording, extraction and analysis of sound and sound features. The candidate will work in close collaboration with a PhD student, who focuses on the recording and analysis of image based data. The results of both, vision and sound oriented approaches, shall be combined and lead to the development of algorithms to automatically detect health and welfare problems in pig and poultry production.

The research will be conducted at the KU Leuven division M3-BIORES of the Faculty of Bio-Engineering and in collaboration with the 20 partners of the EU-PLF project (www.eu-plf.eu).

Profile

Candidate profile

- The candidate must have a masters or equivalent degree in (bio, agricultural-) engineering (electrical, computer, civil, etc.), physics, mathematics or other relevant field.
- The candidate should be willing to obtain a PhD degree in the field of bio-engineering. Reporting the project results in international peer reviewed journals is a major task.
- The candidate must be able to speak and write English.
- Working knowledge of MATLAB and basic knowledge in signal processing is a must. Knowledge in sound analysis and dynamic mathematical modelling is an advantage.

Offer

We offer a 18 months research position in a project with a clear intention to complete a PhD at the KU Leuven within four years.

Interested?

For more information please contact Mr. Vasileios Exadaktylos, tel.: [+32 16 32 17 30](tel:+3216321730) , mail: m3-biores.jobs@biw.kuleuven.be

You can apply for this job **no later than April 10, 2015** via the online application tool.