

**Graduate Student in Dairy Cattle Lameness Detection  
Faculty of Veterinary Medicine, University of Calgary**

In the lameness research team, there is a new position for a PhD student, with sufficient prior experience working with (dairy) cattle, on a collaborative dairy lameness project.

Project description:

Lameness is a severe economic, animal health and welfare problem in dairy cattle throughout North America and globally and identified as a top priority. However, lameness detection using visual appraisal is challenging and lameness prevalence is still high. Visual appraisal of subtle changes in stance and gait as early indicators of lameness are often difficult to identify. Secondly, not all gait changes are related to lameness as individual characteristics (e.g. full udder, body size) can temporarily alter gait. Also, after an intervention like hoof trimming, an individual might not restore normal locomotion for a while. Therefore, identifying cows that benefit from an intervention is challenging and full recovery not always evaluated.

Our team has a funded project to combine advanced automated diagnostic tools (markerless motion capture camera system) to detect early changes in cattle gait over time, compared to producers' visual appraisal of changes in gait and locomotion score. To strengthen the current project, **our objective will be to use multiple detection systems to correctly detect lameness early and study the impact of hoof trimming on both cattle motion** (as captured with the markerless system), **lameness with sensor data** (activity /standing and lying) **and visual appraisal and weight bearing** (force plate) **around the hoof trimming intervention**. This will allow for evaluation of long-term treatment effectivity. Ultimately, this will support the producer in early identification of cows that need to be selected for treatment, and evaluate the treatment effectiveness to

What are we looking for:

The preferred candidate needs to be a good team player with excellent communication skills, both within the academic as well as the non-academic setting. Experience with dairy cattle handling and basic knowledge on hoof health and cow comfort is essential and candidates without prior expertise working with dairy cows will not be considered suitable for this position. Ideally, the candidate has a full drivers license to facilitate regular farm visits. A DVM degree is preferred, however, exceptional applicants with degrees in animal science or a related field will be considered. The graduate program will help the successful candidate develop strong skills in epidemiology, biostatistics, and production animal health. Review of applications will start asap but will be finalized to facilitate a start date of September 2025. Interested individuals should submit a current curriculum vitae, a one page motivational letter (with outline of dairy cattle experience and research interests) along with the names of three references to:

Dr. Karin Orsel, [karin.orsel@ucalgary.ca](mailto:karin.orsel@ucalgary.ca)