

Workshop on Developing Strategies for Training Highly Qualified Personnel in Precision Livestock Farming

How do we train the next generation of highly qualified personnel at the interface of animal agriculture, computer science and engineering to develop and implement PLF?

Precision livestock farming (PLF) technology creates an unprecedented ability to collect detailed data on farm from individual animals across their lifetimes. PLF data are increasingly being used for more than capturing animal production and health information. For example, data at the individual animal level provides opportunities for monitoring animal welfare in real time or to perform deep phenotyping on traits, including social behavior, which can be used for genetic selection. However, to design and use PLF effectively towards these ends, personnel are needed that are both familiar with the realities of animal production and comfortable with technology and large data sets.

At present, there is a shortage of highly qualified personnel with these skills. It is unclear if this shortage is due to the persistence of disciplinary silos at universities or a lack of understanding of career or research opportunities in PLF. However, it is hard to recruit students, postdocs and employees to this area that have both interest in and aptitude for work in using PLF for individual monitoring of animals. Training programs (certificates, workshops or degrees) conducted using an interdisciplinary, multi-institution approach are one way to solve this problem and also foster collaborations among universities and industry that result in real world products and people that can use them.

The workshop will begin with short oral presentations on training needs, possible types of interdisciplinary training, and potential funding sources to stimulate thinking of attendees. Following presentations, breakout groups will formulate strategies for training highly qualified personnel in PLF. Groups will present their ideas to everyone and discussion will follow to identify steps to move forward. The goal of this workshop is to foster concrete development of collaborative funding proposals and training programs that will result in personnel grounded in fundamentals of animal science, computer programming and engineering needed to work in PLF. Any questions, including interest in presenting, should be directed to Dr. Janice Siegford (siegford@msu.edu).

A registration link for this workshop will be put in place at the same time as the conference registration system (early 2019).