

Recent scientific advances in precision livestock farming

Abstract

Animal agriculture is under intense pressure to become more sustainable across the planet. Future-oriented animal production must find a way to maximize resource efficiency while at the same time carefully attending to the health and welfare of the humans and animals involved. Precision livestock farming (PLF) is a science- and data-driven approach to the monitoring and management of farm animals by integrating sensors, modelling and artificial intelligence with knowledge from the fields of animal genetics, physiology and behaviour. In particular over the last years there has been enormous progress in development of remote monitoring solutions, given the advantages that these can bring the farmer. This presentation will discuss the latest developments in the field of computer vision applied to livestock production and how these can be developed in the future to help make a step change in farm sustainability.



Professor Tomás Norton
Department of Biosystems
Katholieke Universiteit Leuven

RESEARCH AREAS AND EXPERTISE

- General area: Biosystems Engineering
- Specific area: Precision Livestock Farming

AWARDS AND RECOGNITION

- Editor-in-Chief, Computers and Electronics in Agriculture, 2021-
- Chair of Section II and Technical Board of CIGR
- Series editor for Springer Nature Book Series: Smart Animal Production and Springer Nature Encyclopedia of Smart Agricultural Technologies
- Vice Chair COST Action European Livestock Phenomics

Tomás Norton holds a PhD in Biosystems Engineering from University College Dublin, Ireland. He is a fellow of the Institute of Agricultural Engineers (FIAGR), International Academy of Agricultural and Biosystems Engineers (FIAABE) and Royal Society of Biology (FRSB). He is currently leading a research group in Precision Livestock Farming (PLF) at KU Leuven's Division of Animal and Human and Health Engineering (research group of M3-BIORES), where they focus on modelling and monitoring of animal responses to different stressors. He is co-author of 90+ SCI publications and has given over 30 keynotes/invited presentations. He is co-coordinator of courses on Modelling Biosystems and Sustainable Precision Livestock Farming (PLF). Since 2018 he is Chair of Section 2 of International Commission of Agricultural and Biosystems Engineering (CIGR) and chair of the Technical Board. Since 2021 he is an Editor-in-Chief at Computers and Electronics in Agriculture (IF 6.7).