

EU-PLF

EAAP 2014 - PLF sessions Monday 25 August Tivoli Congress Centre, Copenhagen, Denmark

Programme

Participants must have paid registration fees (www.eaap2014.org/registration-now) either for the whole EAAP meeting or as one day participant (Monday 25).

A plenary session (05) is organised in the morning while three parallel sessions (10-11-12) will take place in the afternoon

Posters associated with the sessions are listed at the end of this document.

Session 05a: PLF – applications of automatic lameness detection

Chair : Ilan Halachmi (EU-PLF)

- 08.30-09.00 Smart Farming for Europe – Value creation through Precision Livestock Farming. *Berckmans D., EU, invited*
- 09:00–09:15 Detecting lameness in sows using acceleration data from eartags. *Scheel, C.; Traulsen, I.; Krieter, J.*
- 09:15–09:30 Usage of tri-axial acceleration of the hind leg for recognizing sheep behaviour. *Radeski M.; Ilieski V.*
- 09:30–09:45 Effect of cow traffic on an implemented automatic 3D vision monitor for dairy cow locomotion. *Van Hertem, T.; Steensels, M.; Viazzi, S.; Bahr, C.; Romanini, C.E.B.; Lokhorst, C.; Schlageter Tello, A.; Maltz, E.; Halachmi, I.; Berckmans, D.*
- 09:45–10:00 Development of Kinect based Self calibrating System for Movement Analysis in Dairy Cows. *Salau, J.; Haas, J.H.; Junge, W.*
- 10:00–10:15 Panel Discussion: PLF - application of automatic lameness detection. *Halachmi I.*

10:15–10:45 Coffee break

Session 05b: How PLF deliver added value to farmers

Chair: Jorg Hartung (University of Veterinary Medicine Hanover)

- 10:45-11:15 Precision Dairy Monitoring: what have we learned? *Bewley J.M., USA, Invited*
- 11:15-11:30 Characterization of dairy farms with and without sensor technology. *Steenefeld, W.; Hogeveen, H.; Oude Lansink, A.G.J.M.*

- 11:30-11:45 Economic modelling to evaluate the benefits of precision livestock farming technologies. *Kamphuis C.; Hogeveen H.*
- 11:45-12:00 Developing Smart Farming entrepreneurship - first year results EU-PLF. *Lehr, H.; Van Den Bossche, J.; Roses, D.; Mergeay, M.*
- 12:00-12:15 Practical problems associated with large scale deployment of PLF technologies on commercial farms. *Banhazi, T.; Vranken, E.; Berckmans, D.; Rooijackers, L.; Berckmans, D.*
- 12:15-12:30 Panel discussion: How PLF deliver added-value to farmers. *Banhazi, T.*

12:30–14:00 Lunch break

Session 10a: PLF in Genetics & health of beef, calves & heifers

Chair: Bernadette Earley (EU-PLF)

- 14:00–14:15 The effect of gradual weaning on leukocyte relative gene expression levels in dairy calves. *Johnston, D.; Kenny, D.A.; Rubio Contreras, R.; Waters, S.M.; McCabe, M.; Kelly, A.; Mcgee, M.; Earley, B.*
- 14:15–14:30 Monitoring the physiological and behavioral stress response of calves following pre-marketing mixing. *Weyl-Feinstein, S.; Orlov, A.; Yshay, M.; Agmon, R.; Sibony, V.; Steensels, M.; Itzhaki, I.; Shabtay, A.*
- 14:30–14:45 Investigating the use of rumination sensors during the peripartum period in dairy cows. *Liboreiro, D.N.; Machado, K.S.; Endres, M.I.; Chebel, R.C.*
- 14:45–15:00 Monitoring stress behavior in grazing beef cows. *Gabrieli R.*
- 15:00–15:15 Using real time cow information for daily grazing management. *Ipema, A.H.; Holshof, G.; De Mol, R.M.*
- 15:15–15:30 The potential of using sensor data to predict the moment of calving for dairy cows. *Rutten, C.J.; Steeneveld, W.; Kamphuis, C.; Hogeveen, H.*
- 15:30–15:45 Panel discussion: PLF in Genetics & Health of beef, calves and heifers. *Earley B.*

Session 11a: PLF for automatic detection of animal health- poultry and pigs

Chair: Marcella Guarino (EU-PLF)

- 14:00–14:15 Facilitation of assessment of technical measures in implementing the Broiler Directive (2007/43/EC). *Butterworth, A.; Richards, G.; Vranken, E.*
- 14:15–14:30 Monitoring the hatching time of individual chicks and its effect on chick quality. *Tong, Q.; Demmers, T.; Romanini, C.E.B.; Exadaktylos, V.; Bergoug, H.; Roulston, N.; Berckmans, D.; Guinebretière, M.; Eterradossi, N.; Verhelst, R.; MCGonnell, I.M.*
- 14:30–14:45 The use of vocalisation sounds to assess responses of broiler chicken to environmental variables. *Fontana, I.; Tullo, E.; Butterworth, A.*
- 14:45–15:00 Three clinical field trials with the Pig Cough Monitor: an overview. *Hemeryck, M.; Finger, G.; Genzow, M.; Berckmans, D.*

- 15:00–15:15 Detecting health problems of individual pigs based on their drinking behaviour. *Adriaens, I.; Maselyne, J.; Huybrechts, T.; De Ketelaere, B.; Millet, S.; Vangeyte, J.; Van Nuffel, A.; Saeys, W.*
- 15:15–15:30 Continuous surveillance of pigs in a pen using learned based segmentation in computer vision. *Nilsson, M.; Herlin, A.H.; Åström, K.; Ardö, H.; Bergsten, C.*
- 15:30–15:45 Panel discussion: PLF for automatic detection of animal health - poultry and pigs. *Guarino, M.*

Session 12: PLF for automatic detection of animal health – cows

Chair: Kees Lokhorst (EU-PLF)

- 14:00–14:15 Hoof lesion detection of dairy cows with manual and automatic locomotion scores. *Schlageter-Tello, A.; Van Hertem, T.; Viazzi, S.; Bokkers, E.A.M.; Koerkamp, P.W.G.; Romanini, C.E.B.; Steensels, M.; Bahr, C.; Halachmi, I.; Berckmans, D.; Lokhorst, C.*
- 14:15–14:30 Early detection of metabolic disorders in dairy cows by using sensor data. *De Mol, R.M.; Van Dijk, J.; Troost, M.-H.; Sterk, A.; Jorritsma, R.; Hogewerf, P.H.*
- 14:30–14:45 Behaviour and performance based health detection in a robotic dairy farm. *Steensels, M.; Bahr, C.; Berckmans, D.; Antler, A.; Maltz, E.; Halachmi, I.*
- 14:45–15:00 Monitoring the body temperature of cows and calves with a video-based infrared thermography camera. *Hoffmann G.; Schmidt M.*
- 15:00–15:15 Panel discussion: PLF for automatic detection of animal health – cows. *Lokhorst, C.*

15:45–16:15 Coffee break

Session 11b: PLF in milk quality and milk contents

Chair: Hans Spoolder (EAAP, Health & Welfare commission)

- 16:15-16:30 Real-time analyses of BHB in milk can monitor ketosis and it's impact on reproduction in dairy cows. *Blom J.Y.; Ridder C.*
- 16:15-16:30 Potential for assessing the pregnancy status of dairy cows by mid-infrared analysis of milk. *Lainé, A.; Bel Mabrouk, H.; Dale, L.-M.; Bastin, C.; Gengler, N.*
- 16:45-17:00 Progesterone profiles to evaluate simultaneous use of multiple oestrus detection technologies, *Kamphuis, C.; Huijps, K.; Hogeveen, H.*
- 17:00-17:15 Panel discussion: PLF in milk quality and milk contents. *Spoolder H.*

Session 10b: Rumen sensing, feed intake & precise feeding

Chair: Marija Klopčič (EAAP, Cattle commission)

- 16:15-16:30 Repeatability of rumination time in individual dairy cows. *Løvendahl, P.; Fogh, A.; Byskov, M.V.*

- 16:15-16:30 Dairy farm evaluation of rumen pH bolus data: identifying the benefits.
Mottram T.T.F.
- 16:45-17:00 Biopara-Milk a whole cow simulation model. Assessment of rumen pH predictions.
Ambriz-Vilchis, V.; Jessop, N.; Fawcett, R.; Shaw, D.; Macrae, A.
- 17:00-17:15 Feeding concentrate in early lactation based on rumination time.
Byskov, M.V.; Weisbjerg, M.R.; Markussen, B.; Aaes, O.; Nørgaard, P.
- 17:15-17:30 Ability to estimate feed intake from presence at feeding trough and chewing activity, *Pahl, C.; Haeussermann, A.; Mahlkow-Nerge, K.; Grothmann, A.; Hartung, E.*
- 17:30-17:45 Precision farming and models for improving cattle performance and economics.
Halachmi I., invited
- 17:45-18:00 Panel discussion- Rumen sensing, feed intake & precise feeding. *Halachmi I.*

Posters

Preliminary comparison of SSN and linear models used for evaluation of meat content in young pigs. *Szyndler-Nędza, M.; Bartocha, K.; Tyra, M.*

Lameness detection in gestating sows using positioning and acceleration data.
Traulsen, I.; Breitenberger, S.; Müller, K.; Krieter, J.

Effect of individualized feeding strategy on milk production of Holstein cows.
Gaillard, C.; Vestergaard, M.; Weisbjerg, M.R.; Sehested, J.

Monitoring the nest building and parturition progress using acceleration data.
Cornou, C.; Kristensen, A.R.

Finding cattle hidden in the bushes and woods by using GPS. *Herlin, A.H.*

Development of an on-farm SowSIS (Sow Stance Information System): hurdles to tackle.
Maselyne, J.; Pluym, L.; Vangeyte, J.; Ampe, B.; Millet, S.; Tuytens, F.; Mertens, K.C.; Van Nuffel, A.

Automated recognition of activity states in dairy cows by combining multiple sensors.
Behmann, J.; Hendriksen, K.; Müller, U.; Walzog, S.; Sauerwein, H.; Büscher, W.; Plümer, L.

Dynamic precision feeding of growing pigs using a new automatic feeder linked to a weighing station. *Massabie, P.; Marcon, M.; Quiniou, N.*

Development of automated calf cough detection: preliminary results. *Vandermeulen, J.; Tullo, E.; Fontana, I.; Johnston, D.; Earley, B.; Hemeryck, M.; Bahr, C.; Guarino, M.; Berckmans, D.*

An exploratory study of the relation of pH data from pens boluses with other sensor data.
De Mol, R.M.; Van Roosmalen, Y.A.H.M.; Troost, M.-H.; Sterk, A.; Jorritsma, R.; Hogewerf, P.H.

Automatically Monitoring Dairy Cows' Body Condition with a Time-Of-Flight Camera. *Salau, J.; Haas, J.H.; Weber, A.; Junge, W.; Bauer, U.; Harms, J.; Bielecki, S.; Suhr, O.; Schönrock, K.*

Creation of universal MIR calibrations by standardization of milk spectra: example of fatty acids.
Grelet, C.; Fernandez Pierna, J.A.; Soyeyurt, H.; Dehareng, F.; Gengler, N.; Dardenne, P.