



SMART 2004

**3rd International workshop on smart sensors
in livestock monitoring**
Leuven, Belgium, September 10-11 2004

Final programme (version 09/09/2004)

Friday, September 10

08:30 – 09:00 Arrival, hand shaking and registration

09:00 - 09:15 Welcome (Daniel Berckmans)

Session 1 (Chair: Daniel Berckmans)

09:15 - 09:40 Lecture 1

Enabling technologies of biosensors and opportunities for the on-line monitoring of biological species

Laureyn W.

09:40 – 10:05 Lecture 2

Biosensors applied to physiological monitoring

Eigenberg R., Brown-Brandl T., Nienaber J.

10:05 – 10:30 Lecture 3

Development and testing of on-line biosensors for automated fertility management of dairy cows

Mottram T. T., Velasco-Garcia M. N.

10:30 – 10:55 Coffee break

Session 2 (Chair: Gerhard Jahns)

10:55 – 11:20 Lecture 4

Giving essence to monitoring animal welfare

Metz J. H. M.

11:20 – 11:45 Lecture 5

Sensors and applications in dairy and beef cattle industry

Maltz E.

11:45 – 12:10 Lecture 6

Sensor networks for monitoring in automatic milking systems

Bak T., Oudshoorn F.

12:10 – 13:00 Lunch

Session 3 (Chair: Andy Frost)

13:00 – 13:25 Lecture 7

Intelligent monitoring systems in aquaculture

Cubitt K. F., Rowsell D., Churchill S., Scruton D. A., McKinley R. S.

13:25 – 13:50 Lecture 8

Measuring the conductance of eggshells using acoustic resonance technique and optical transmission spectra

Bamelis F. R., De Ketelaere B., Mertens K., Kemps B. J., Decuyper E. M., De Baerdemaeker J. G.

13:50 – 14:15 Lecture 9

Convective heat transport between chicken eggs and their micro-environment

Van Brecht A., Hens H., Degraeve P., Berckmans D.

14:15 – 14:40 Lecture 10

A mobile imaging system for live pig weight estimates

Rydberg A., Gilbertsson M.

14:40 – 15:05 Coffee break

Session 4 (Chair: Christopher Wathes)

15:05 – 15:30 Lecture 11

A vision guided robot for tracking a live, loosely constrained pig

Frost A. R., French A. P., Tillett R. D., Pridmore T. P.

15:30 – 15:55 Lecture 12

Use of computer vision to assess and control thermal comfort of group-housed pigs

Xin H., Shao B.

15:55 – 16:20 Lecture 13

Algorithm for extracting bird feeding behavior

Gates R., Xin H.

16:20 – 16:45 Lecture 14

A real-time computer vision system for the quantification of animal behaviour and motor function

Leroy T., Aerts J.-M., Vranken E., Berckmans D.

Session 5: Poster session (Chair: Jean-Marie Aerts)

16:45 – 18:00 Posters

19:30 – .. : .. Dinner

Saturday, September 11

Session 6 (Chair: Jos Metz)

09:00 – 09:25 Lecture 15

Critical evaluation of indoor animal tracking systems
Umstatter C.

09:25 – 09:50 Lecture 16

Recognition of psychological condition of cow by her voice
Ikeda Y., Ishii Y.

09:50 – 10:15 Lecture 17

The use of image vision to study milking cow's behaviour
Souza S. R. L., Moura D. J., Naas I. A.

10:15 – 10:40 Lecture 18

Identification algorithm of the cattle with their faces
Kim H., Ikeda Y., Nishizu T.

10:40 – 11:05 Coffee break

Session 7 (Chair: Ephraim Maltz)

11:05 – 11:30 Lecture 19

Safer oestrus detection with sensor aided ALT-pedometer
Brehme U., Stollberg U., Holz R., Schleusener T.

11:30 – 11:55 Lecture 20

Detecting bloodstained surfaces of udders with an image processing system
Ordolff D. W.

11:55 – 12:20 Lecture 21

Improved udder health by a controlled milk removal process?
Ipema A. H., Hogewerf P. H.

12:20 – 12:45 Closing session (Daniel Berckmans)

13:00 – .. : .. Lunch