

Welcome to the

AGROMEK AND NJF JOINT SEMINAR 24-25 NOVEMBER 2014 Future arable farming and agricultural engineering

Innovation	Sensors	Robotics	Precision agriculture	Data communication	Environment
Design	Future arable farming and agricultural engineering				Climate neutral
Ergonomics	24 and 25 th of November, 2014, Herning, Denmark				Energy efficiency
Soil compaction					
Safety	For more information, please visit www.njf.nu				Plant protection
Logistics	Advisory service	Management	Education	Networking	Post harvest
					Horizon 2020

Target group

- Engineers & industrial employees with interest within arable farming and agricultural engineering.
- Researchers, advisors, students & farmers.
- Exhibitors & employees from the exhibiting companies at Agromek.

Please visit: <http://njf.nu/477.htm> for registration

Travel information Address: MCH Herning Kongrescenter, Østergade 37, DK-7400 Herning

By train:

Travel with Arriva directly to MCH. Arriva has daily departures from Århus. Take the connection called: Århus-Silkeborg-Herning-Skjern.

Arriva office: Tel. +45 7230 2500 or www.arriva.dk

National train connections with DSB. Plan your trip to MCH Herning Kongrescenter with the Journey Planner www.rejseplanen.dk/. The Journey Planner covers all train connections in Denmark and greater international connections to and from Denmark. DSB will take you to the train station in Herning city, from where you can walk to MCH Herning Kongrescenter or a taxi will take you directly to MCH Herning Kongrescenter. DSB booking office: Tel. +45 7013 1415 or www.dsb.dk

By car

GPS: enter Østergade 37, 7400 Herning.


By plane

- Nearest international airport: Billund. From there a taxi takes approx. 55 min.
- Nearest domestic airport: Karup. from there at taxi takes approx. 30 min.

Preliminary PROGRAM

Monday 24th of November



From 10.00	Registration desk is open	
12.00 – 13.00	Plenary session	
12.00 - to 12.20	Opening and welcome, some basic information	Nils Bjugstad, NMBU, conference chairman
	Agromek Fair and agricultural engineering conference. Some statistics and welcome to Fair	Allan Pedersen, CEO for Agromek & Danish Agroindustry
	What is NJF?	Snorri Sigurdsson, chair of NJF section technology
12.20 – 13.00	Future farming; Is robotics the answer? (preliminar title)	 <p>1'st Key note speaker: Professor Simon Blackmore, Head of Engineering at the Harper Adams University, UK (precision farming, Agricultural robots and smart machines, farm management information systems and decision support)</p>
13.00 – 14.00	LUNCH	
14.00 – 17.40	Parallel sessions (please see next pages)	
19.30 – 22.00	Seminar dinner	

There will be some posters and exhibition in the coffee room during the whole seminar, please also see page 4.

Monday 24th November		Parallel sessions		
		Safety Chairman: Hannu Haapala, ProAgria, FI	Soil compaction Chairman: Trond Børresen, NMBU, NO	Precision Farming Chairman: Nils Bjugstad, NMBU, NO
14:00	14:20	A1. S. Adam: Electronic Implement Control for Safer Agricultural Machines	B1. J. P. Hansen: FarmTracking – context aware tracking and alerts using wearables	C1. H.S. Midtiby: Automatic location of crop rows in UAV images
14:20	14:40	A2. P. Juul: Safety and reliability due to control engineering on agricultural machinery.	B2. A. Gejl: CTF- Controlled Traffic Farming	C2. J. Bligaard: Mobile field record keeping
14:40	15:00	A3. J. Leppälä: Risk assessment and safety management regarding agricultural machinery	B3. M. Naveed: Soil Structure and Transmission of Vertical stress under Partially Confined Uniaxial Compression	C3. K. Gustavsson: Sustainable agriculture through precision farming
15:00	15:10	Break		
		Robotics Chairman: Claus Aage Sørensen, AU, DK	Soil compaction Chairman: Trond Børresen, NMBU, NO	Precision Farming Chairman: Nils Bjugstad, NMBU, NO
15:10	15:30	D1. A. L. Jensen: Risk assessment for field robots in practice	B4. J. Arvidsson: Soil stresses under tracks and tyres – measurements and model development	C4. K. Nissen: Three examples of success that have increased the interest in and acceptance of variation in the field
15:30	15:50	D2. D. Pham: Flexible compact agricultural robot.	B5. J. Arvidsson: Determination of soil surface properties with laser and 3D-camera	C5. K. Kusnierek: Testing the accuracy of tractor's satellite-based auto-guidance system
15:50	16:10	D3. J. R. Köster: An autonomous field robot for laser-based N ₂ O measurements	B6. T. Jensen: Intelligent Soil Tillage	C6. T. Katkevicius: Analysis of soil electrical conductivity in situ with mobile machine.
16:10	16:40	Coffee break		
		Robotics Chairman: Claus Aage Sørensen, AU, DK	Climate emission Chairman: Per Anders Hansson, SLU, SE	Imaging & sensors Chairman: Morten Lillemo, NMBU, NO
16:40	17:00	D4. L. B. Larsen: A novel low-cost mobile robot for rapid prototyping of precision farming applications	E1. H. H. Pedersen: Assessment of Green House Gas emission and Gross Margin when introducing Wide Span tractors and Controlled Traffic Farming	F1. M. Dyrmann: Weed detection by UAV with camera guided landing sequence
17:00	17:20	D5. M. Christiansen: Design of collaborative models of automated and robotic agricultural vehicles in the Crescendo Tool	E2. R. H. Aguiar: Evaluation of anaerobic reactors in sunflower crop.	F2. K. Steen: Multi-sensor system for ensuring ethical and efficient mechanical weeding
17:20	17:40	D6. M. Christiansen: Pre-planned route based obstacle detection classifier for agricultural vehicles	E3. G. Larsson: Optimal methane share in biogas upgraded for use in agricultural tractors	F3. G. K. Silva: Moiré supported spatial coordinates determination of vegetative bodies.
19:30	22:00	Seminar dinner		


Tuesday 25th of November 2014		Parallel sessions		
		Plant protection Chairman: Eskil Nilsson, Visavi GL AB , SE	Indoor mechanization Chairman: Snorri Sigurdsson, VFL, DK	Imaging & sensors Chairman: Morten Lillemo, NMBU, NO
08:00	08:20	G1. E. Nilsson: Regulations and standards influencing sprayer design, maintenance and use	H1. M. Hellstedt: The effect of new environmental technologies on odour annoyance from animal production units	F4. G. K. Silva: Indirect determination of moisture using biospeckle technique.
08:20	08:40	G2. J. Nikander: Semantic Cereal Disease Pressure Service	H2. T. Kivinen: Positive pressure tube ventilation for calf barns.	F5. M. Gilbertsson: Establish an oil rape seed crop in growing winter wheat
08:40	09:00	G3. N. Bjugstad: Optimized calibration of crop sprayers and orchard sprayers by simple means	H3. J. Frandsen : NorFor Feed ration Optimizer	F6. M. Laursen: Improving the segmentation for weed recognition applications based on standard RGB cameras using optical filters
09:00	09:20	G4. P.A. Algerbo: Integrated Weed Management by row hoeing and row spaying in annual crops	H4. J. Frandsen : KPI tool in DMS	F7. A. K. Mortensen: Estimating the content of clover and grass in the sward using a consumer camera and image processing
09:20	09:30	Break		
		Management Chairman: Nils Bjugstad, NMBU, NO	Indoor mechanization and strip tillage Chairman: Snorri Sigurdsson, VFL, DK	Innovation Chairman: Hannu Haapala, ProAgria, FI
09:30	09:50	I1. M. Bilde: Machine and data connectivity in crop production	H5. J. Frandsen : Benchmarking in Dairy Production	J1. H. Haapala: The role of advisory in agricultural innovations
09:50	10:10	I2. C. Lundström: Cognition and farmers´ decision making in the adoption of new agricultural technologies	H6. K. Venlauskas: Energy balance of anaerobic treatment of fish industry co-streams	J2. I. Zukovskis: Agriculture Machinery Industry in Latvia
10:10	10:30	I3. M. Nørremark: Data interchange between Web client based task controllers and management information systems using ISO and OGC standards	B7. J. Iversen: Strip-Till of Winter Rape – 10 years´ experience	J3. C. Sørensen: Designer Slurry
10:30	11:00	Coffee break		
11:00	12:00	Plenary session , please see next page		
12:00	18:00	SIG groups and visit to the Agromek Fair , please see next page		

Posters: Experiences from a bachelor study in Agricultural Engineering in Norway (H. C. Endrerud, NO),

Methods for commissioning the ventilation performance of pig houses (I. Heimonen, FI)

Image analysis of dynamic spray distribution to evaluate performance of nozzles used for precision weed control (P. K. Jensen, DK)

Elastic and Viscoelastic Behaviour of Vegetative Materials (G. K. Silva, Brazil)

11.00 – 12.00		Tuesday 25 th of November 2014		Plenary session	
11.00 – 11.40	Research Perspectives in Support of Agricultural Technologies under Horizon 2020		2 nd Key note speaker: Dipl. Ing. Jens Fehrmann, Technische Universität Dresden Germany. Strongly involved in the Agriculture Engineering and Technologies (AET) & Manufature platform and their interaction of H2020 calls and activities		
11.40 - to 12.00	Precision Farming test platform	Anne-Luise Skov Jensen			
	CIGR-EurAgEng 2016 in Aarhus	Claus Aage Sørensen, AU, DK			
	Practical information for the Agromek Fair and SIG groups	Nils Bjugstad, NMBU, conference chairman			
	Summary and some closing remarks				
12.00 – 18.00	Approx. times:				
Visiting the	12.00 - 13.00 Lunch at the Fair				
Agromek Fair	13.00 - 14.30 Visit the Fair on your own				
	14.30 - 16.30 Special Interest Groups (SIG), to be announced in the beginning of the seminar (maximum 120 min)				
	16.30 – 17.00 Visit the Fair on your own				

Departure to the Agromek Fair (for detailed program, please see above)

Following SIG groups are planned;

- Plant Protection
- Safety
- Robotics & precision farming & sensor s& imaging
- Climate emission and soil compaction
- Education and advisory service (discussions and/or visits of selected stands)
- Innovation

At least 5 participants in order to be arranged. Thus, a re-distribution may occur or even two groups for similar topic if too many in one group.

The Agromek Fair closes at 18.00 the 25th of November and continues every day until 28th of November.

Organizing committee

Nils Bjugstad (NO) - chairman

Professor at the Department of Mathematical Sciences and Technology, Norwegian University of Life Sciences

Allan Pedersen (DK). CEO for Agromek & Danish Agroindustry

Claus Sørensen (DK). Head of research unit, Department of Engineering, Aarhus University

Ole Green (DK). Head of Strategic Development at Kongskilde Industries A/S

Eskil Nilsson (SE). Advisor, Visavi God Lantmannased AB

Hannu Haapala (FI). CEO ProAgria South Ostrobothnia

Kestutis Navickas (LT). Assoc. prof. and leader of Institute for Energy and Biotechnology Engineering, Aleksandras Stulginskis University

Per Anders Hansson (SE). Professor, Department of Energy and Technology, Swedish University of Agricultural Sciences

Snorri Sigurdsson (IS). Advisor, Department of Dairy & Cattle Farming, Knowledge Centre for Agriculture

Org. committee assistant:

Mette Johansen (DK). Project coordinator, MCH Messecenter Herning Kongrescenter.

Seminar contact

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