69th International Conference on Agricultural Engineering

LANDTECHNIK AgEng 2011
Solutions for Intelligent and Sustainable Farming

Attend innovative presentations and participate in discussions with experts from the fields of engineering, product design, management and science:

- Electrification of tractors, machines and implements
- Hydraulics and drivetrain
- Robotics, automation and machine control
- Innovative product development
- Data processing and IT technology
- Harvesting technology

Time and venue
November 11–12, 2011
Hannover, Germany
Exhibition Ground

Opening Event of

With plenary speeches by:

Heinrich Flegel,
Daimler AG, Stuttgart, Germany

Gabriele Irmgard Stangl,
Martin-Luther-Universität Halle Wittenberg, Germany

Markwart von Pentz,
President, Agriculture & Turf Division, Deere & Company, Moline, IL, USA

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The most important event for the international community of agricultural engineers
### Electric Drives

**Thomson Reichelt**, Agricultural and Food Technology, Technische Universität Düsseldorf, Germany

- Development of an Integrated Chopper and Spreader Component for Combine Harvesters
- Presentation: "Electric Drives in Agricultural Machinery - Opportunities and Challenges""}

### Harvesting Technology I - Cereals

**Thomas Heumann**, Head of Engineering, LECRAV, CLAAS Selbstfahrende Erntemaschinen GmbH, Harsum, Germany

- Systematic Alignment of Straw to Optimize the Combining-Chamber’s Straw Chopper
- Development of an Integrated Chopper and Spreader Component for Combine Harvesters
- Presentation: "Electric Drives in Agricultural Machinery - Opportunities and Challenges"

### Automation and Control

**Emmanuel Mischke**, Head of Agricultural Technology and Biosystems Engineering, Johannes Heinrich von Thünen Institute, Braunschweig, Germany

- Rubber Track Control on Combine Harvesters
- Development of an Integrated Chopper and Spreader Component for Combine Harvesters
- Presentation: "Electric Drives in Agricultural Machinery - Opportunities and Challenges"

### Product Development

**Cross-Company Development of Virtual Machine Tools**: A unique collaboration between manufacturers for sustainable farming. Andrea Rödermann, Song Han, Marcus Geimer, Maximilian – Chair of Mobile Machines, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany

### 12:20 Plenary Lecture

**MANUFACTURE’S Pathways Towards Future (Industrial) R&D in the EU – Opportunities and Challenges of Upcoming CSF (FP9)**

Heinrich Floyd, Member of the Supervisory Board Daimler AG, Chairman of the Management Representative Committee, Director Manufacturing Research, Chairman ETP "manufacture", Daimler AG, Stuttgart, Germany

### 13:30 Technical Lectures

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- Development of an Integrated Chopper and Spreader Component for Combine Harvesters
- Presentation: "Electric Drives in Agricultural Machinery - Opportunities and Challenges"

### PowerTrain

**Torsten Lang**, Technische Universität Braunschweig, Germany: Scientific Chairman

- Portable Drives for Wheel-Checked Tractors
- Development of Electric Drives for Agricultural Machinery
- Integration of Electric Drives in Agricultural Machinery
- **Power Train I - Chassis & Coupling**
- **Power Train II - Automated and Autonomous Applications**

### Field Robotics

**Axel-Steinbock, Wageningen University**, The Netherlands

- Development of Autonomous Devices for Automated Attachment of the Supporting Wires in High Trellis Hop Gardens
- Development of Embedded Devices for E/E Systems in Agricultural Machinery
- **Field Robotics**

### Product Development II

**Peter Schulze Lammer**, Institute of Agricultural Engineering, Universität Bonn, Germany

- Development of Electric Drives for Agricultural Machinery
- Integration E/E Component Development in PDP
- **Product Development II**

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Germany
Peter Schulze Lammers,
Peter Pickel, Germany
Franz Handler,
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Roland Hörner, DLD e.V., Frankfurt, Germany
Peter Hilleroyenius, Claas Selbstfahrende Erntemaschinen GmbH, Harsewinkel, Germany
Thomas Hoffmann, Lehr-Institut für Agrotechnik Potsdam-Barnim e.V., Potsdam, Germany
A. A. Jongeheer, Nieuwegein University, The Netherlands
Karlien Keselis, Universität Hohenheim, Stuttgart, Germany
Thorsten Lang, Technische Universität Braunschweig, Germany
Hennings Meyot, Technische Universität Berlin, Germany
Axel Munack, Johann Heinrich von Thünen-Institut, Braunschweig, Germany
Peter Pickel, John Deere Europe Technology Innovation Center, Kaiserslautern, Germany
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Heinz Otto Steinhauser, John Deere Werke Mannheim, Germany
Peter Michael Synych, WMD e.V., Frankfurt/M., Germany
Scientific Chairman
Thorsten Lang, Technische Universität Braunschweig, Germany
Technical Chair
Max Eyth Society for Agricultural Engineering (VDE) European Society of Agricultural Engineers (EurAgEng)

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Saturday 12 November 2011
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**5th Workshop of the MANUFUTURE AET-Community – Agricultural Engineering Strategies for EU FP8**

**AET Workshop will be held in cooperation with the International Conference LAND.TECHNIK AgEng**

**Friday, 11 November 2011**

**Convention Center (CC), Deutsche Messe AG, Hannover**

**Room 13/14**

09:00  Registration for 5th Workshop

**Schedule**

09:00  Registration in Room 13/14

09:00–11:30  Session 1

11:30  Lunch

12:00–13:00  Joint Plenary Session with LAND.TECHNIK AgEng 2011

13:00  Coffee Break

13:30–15:30  Section 2

15:30  End of the Workshop

Program will be sent out electronically about 2 months before workshop.

Information and registration for 5th Workshop of the MANUFUTURE AET http://www.manufuture.org/organizing/

For participation at the International Conference LAND.TECHNIK AgEng 2011 please register separately at page 8 of this brochure.

For more information please see the website www.vdi.de/landtechnik-ageng

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**Saturday 12 November 2011**

**Room 2**

**Tractors IV – Machine Management**

Robert Kanzmann, Head of Research Department Agricultural Economics and Engineering, Agroscope Beckenham-Fäni, Research Station ATEP, Switzerland

14:00  Software for Optimizing Tractor Dynamic Weight Distribution with Various Implements

Robert Defrancq, President, LATIFGCE, Gaignoncourt, Christian Rivierre, John Deere, Genes, France

14:30  Realtime Performance and Efficiency Monitoring for Large Tractors

Benoît Pichonnet, Advanced Engineering, AGCO GmbH, Marktzeuln, Karl Theodor Baunis, Technische Universität München, Garching, Germany

**Room 3A**

**Hydraulics II**

Heinz Stuhrmann, John Deere Werke Münchehn, Germany

Power Shift PTO for Tractor Applications – Operating under Load

Stefan Igl, Engineering – Stork Transmission, Karl Grod, Tomas Capuska, ZF Pausa GmbH, Pausa, Germany

15:00  Holistic Optimization of Tractor Management

Tim Kuntzmann, Michael Wünsche, Marcus Gozelnik, Mitora – Chair of Mobile Machines, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany

**Room 3B**

**Precision Farming**

John F. Reid, Director, Product Technology and Innovation, John Deere Mobile Technology Innovation Center, MILUX, IL, USA

Design and Concepts of User Interfaces on a Touch Screen Terminal

Carsten Jochem, Head of Development Department, Jörg Boese, Müllelektronik GmbH & Co. KG, Salzkotten, Germany

14:30  Swash Plate-and Bent-Axis-Design for Higher Efficiency and Reduced Size

Federico Meija, Sales Product Manager, Michael Lohmuth, Bosch Rexroth AG, Ettling, Germany

Cost Efficient Axial Piston Pump for Small and Medium Sized Tractors

Bügel Mair, Product Manager, Bosch Rexroth AG, Hoh am Neckar, Germany

15:00  Electronic Assistance for Straw and Hay Harvesting with Large Square Balers

Jan Herbstmann, Team Leader Product IT, Maschinenfabrik Bernard Krone GmbH, Spelle, Germany

Decision Strategies and Communication Structures for Cooperating Mobile Work Machines in the Agricultural Economy (KOMOBAR)

And Jacob, Diether Breyer, Bernd Johanning, Forschungsprojekt KOMOBAR, Fakultät Wirtschafts- und Sozialwissenschaften, Hochschule Osnabrück, Germany

16:00  Automated Machine Guidance Using Laser Range Data

Olo Peters, Peter Pickel, BMVIT ZEIT EUROPEN Technology Innovation Center, Kaiserslautern, Nikolai Larasinski, John Deere Werke Münchehn, Germany

**Room 15/16**

**Positioning and Navigation**

Eldert J. van Benthom, Agricultural Engineering, Farm Technology Group, Wageningen University, The Netherlands

Next UAS – Precise Relative Positioning Using Low-Cost GNSS Coupled with INS, Optical Flow and Cooperative Localization Methods

Jan Schaatzen, Institute of Agricultural Machinery and Fluid Power, Martin Becker, Institute of Flight Guidance, Technische Universität Braunschweig, Franz Ander, Institute of Flight Systems, Unmannet Aircraft, German Aerospace Center, Braunschweig, Germany

Gin- and Sense-Based Technologies for Individual Plan Agriculture

Erik Wehns, Arno Schick, Ralph Kloss, Competence Center of Applied Agricultural Engineering – COALA, University of Applied Sciences Osnabrück, Germany

**Exhibition Ground**

**Convention Center (CC)**

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**Information**

**Route to the Exhibition Ground**

By car: arrival via expressway to the exhibition center, “Parkhaus Süd 26” basement, (parking free of charge from 8am to midnight). Access to the Convention Center through the “Ost 3” entrance via the “Skywalk” and the Expotec.

By public transportation: from Hannover main railroad station via subway line 8 to terminal station “Han- nover Messe/Nord”, access to the Convention Center through the “Nord 2” entrance.

**Access to the Exhibition Ground**

It is only open to conference participants with the registration confirmation.

**Access to the Convention Center**

Through entrance “Süd”, entrance “Nord” will be closed.

For more information please see the website www.vdi.de/landtechnik-ageng

**AGRITECHNICA Admission Tickets**

*Exklusivtageskarte Plus* Ticket for AGRITECHNICA on 13. and 14. November 2011 will be sold to LAND.TECHNIK AgEng 2011 conference participants during the breaks at the price of EUR 10 (0, regular price EUR 80,00).

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**Saturday, 12 November 2011**

Room 2

15:30  Break

16:30  End of the Conference

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**Closing Remarks**

Thorsten Lang, Scientific Chairman of the Conference
I will be attending the 69th International Conference on Agricultural Engineering, November 11–12, 2011, Hannover (12TA001011)

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