

69th International Conference
on Agricultural Engineering

LAND-TECHNIK 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



The most important
event for the international
community of agricultural
engineers

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*

Preface

The 69th international conference "LAND.technik - AgEng 2011" will take place in Hanover on November 11th and 12th, according to the tradition of odd years. It is a prelude to AGRITECHNICA, the world's most important fair for agricultural machinery, which starts on November 13th with the preview days.

The conference is organized in cooperation with the Max Eyth Society for Agricultural Engineering (VDI-MEG), a technical division of the VDI, and the European Society of Agricultural Engineers (EurAgEng). This concept is successfully accepted both by academia and industry, national and international. During recent years, the number of participants grew up to 700 in 2009, when visitors from 16 nations were registered. Therefore, this conference is the most important event for the international community of agricultural engineers.

The conference is themed "Solutions for intelligent and sustainable farming". The motto underlines the significance of future challenges regarding to the production of food and bio-energy under different perspectives. Ecological and economical aims have to be fulfilled without negative outcomes to following generations. The productivity of machines and processes has to increase with less input of energy, better availability and extended machine life to enhance the customers benefit and total economic efficiency.

The conference will offer 72 technical presentations of the latest innovations, machine developments, and technical concepts and methods as a foretaste of the firework of impressions at AGRITECHNICA. The technical lectures will be framed by top-class plenary presentations, the award ceremony and a get-together dinner.

The conference will be an excellent meeting point to discuss the possibilities of addressing future global challenges together. You are invited and are very welcome to participate in the international agricultural engineering community. We are looking forward to meeting you at LAND.technik - AgEng 2011 in Hannover, Germany!



Thorsten Lang
Technische Universität Braunschweig, Germany
Scientific Chairman

10:00	Registration			
12:00	Plenary Session I, Room 2			
13:00	Coffee Break			
	Room 2	Room 3A	Room 3B	Room 15/16
	Electric Drives Thomas Herlitzius , Agricultural Systems and Technology, Technische Universität Dresden, Germany	Harvesting Technology I - Cereals Thomas Barrelmeyer , Head of Engineering LEXION, CLAAS Selbstfahrende Erntemaschinen GmbH, Harsewinkel, Germany	Automation and Control Axel Munack , Institute of Agricultural Technology and Biosystems Engineering, Johann Heinrich von Thünen Institute, Braunschweig, Germany	Product Development I Emmanuel Hugo , Technologies and Information Systems for Agrosysteme, Cemagref, Aubière Cedex, France
13:30	Multi-Functional PTO Generator for Mobile Electric Power Supply of Agricultural Machinery Heinrich Prankl , Head of Research and Innovation, HBLEA Francisco Josephinum Wieselburg, BLT - Biomass, Logistics Technology, Wieselburg, Tino Colle, High Tech Drives GmbH, Scheibbs, Manfred Schroedl, TU Wien, Austria	Systematic Alignment of Straw to Optimise the Cutting Process in a Combine's Straw Chopper Ralf Kattenstroth , Hans-Heinrich Harms, Thorsten Lang, Institute of Agricultural Machinery and Fluid Power, Technische Universität Braunschweig, Germany	Rubber Track Control on Combine Harvesters Michael Baranski , Project Engineer Electronic Applications, Ismail Barbouty, Sascha Rackow, CLAAS Industrietechnik GmbH, Paderborn, Germany	Cross-Company Development of Virtual Mobile Machines Using a Standardized Co-Simulation Andreas Rüdener , Song Han, Marcus Geimer, Mobima - Chair of Mobile Machines, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany
14:00	Electrification of a Tractor and Implement - The ZF Project ElecTra Manuel Götz , Project Manager Hybrid Systems, Axel-Michael Müller, Marc Abele, ZF Friedrichshafen AG, Friedrichshafen, Germany	Development of an Integrated Chopper and Spreader Component for Combine Harvesters Jens Fehrmann , Christian Korn, Andreas Acimas, Chair of Agricultural Systems and Technology, Technische Universität Dresden, Germany	Front Loader Automation Karl Pfeil , Control Engineer, Andreas Wehle, John Deere Werke Mannheim, Germany	Efficient and Compact Development of a Combine Harvester Cleaning System Waldemar Schulz , CLAAS Selbstfahrende Erntemaschinen GmbH, Harsewinkel, Theo Wember, Ofjen, Michael Schwarz, Universität Hohenheim, Stuttgart, Germany
14:30	Development of a PTO Driven Generator for Electrical Drives in Agricultural Machinery Manuel Thiel , Product Development Engineer, Andreas Sarfert, GKN Walterscheid GmbH, Lohmar, Günther Mair am Tinkhof, GKN Driveline Bruneck AG, Germany	Studies on Threshing Devices - Fundamentals for Describing the Concave-Clearance Adjustment for Further Research Philipp Mümken , Stefan Böttinger, Institute of Agricultural Engineering, Universität Hohenheim, Stuttgart, Joachim Baumgarten, CLAAS Selbstfahrende Erntemaschinen GmbH, Harsewinkel, Germany	Customer Benefits of Tractor-Implement Automation and Electrification Martin von Hoyningen-Huene , Global Manager Engineering, Claire B.E. Rogge, John Deere Werke Mannheim, Germany	Increase of Homogeneity and Energy Efficiency of Mixed-Flow Grain Drying Fabian Weigler , Jochen Mellmann, Leibniz Institute for Agricultural Engineering Potsdam-Bornim e.V., Potsdam, Harald Kuhlmann, NEUERO Farm- und Fördertechnik GmbH, Melle, Germany
15:00	Electric Driven Implement Axles Florian Reinmuth , Advanced Engineering, Nicolai Tarasinski, John Deere Werke Mannheim, Germany	New Test Rig for Cleaning Units and First Results of Parameter Variation on a Series Preparation Floor Michael Schwarz , Stefan Böttinger, Institute of Agricultural Engineering, Universität Hohenheim, Stuttgart, Waldemar Schulz, CLAAS Selbstfahrende Erntemaschinen, Harsewinkel, Germany	Development and Optimization of a Device for Automated Attachment of the Supporting Wires in High-Trellis Hop Gardens Zoltan Gabor , Team Leader Mechanical Engineering and Design, Georg Fröhlich, Bavarian State Research Center for Agriculture, Freising, Johann Mair, Mitsubishi Electric Europe B.V., Hallbergmoos, Germany	Integration E&E Component Development in PDP Peter Degen , Head of R&D Planning, Reinhard Laing, CLAAS Selbstfahrende Erntemaschinen GmbH, Harsewinkel, Germany
15:30	Coffee Break			
	Power Train	Tractors I - Chassis & Use	Field Robotics	Product Development II
	Heinrich Prankl , Head of Research and Innovation, BLT Wieselburg, Austria	Heinz Böhler , Functional Group Manager Strength Test, Technical Calculation, AGCO GmbH, Marktoberdorf, Germany	Aad A. Jongebreur , Wageningen University, The Netherlands	Peter Schulze Lammers , Institute of Agricultural Engineering, Universität Bonn, Germany
16:00	New Torque Measurement in Agriculture Machines Andreas Roth , Engineering, GKN Walterscheid GmbH, Lohmar, Michael Linz, Rauch Landmaschinenfabrik GmbH, Sinzheim, Germany	Improved Driving Stability of an Agricultural Tractor-Trailer Combination Hermann Buchner , Martin Mederer, Andreas Wimmer, Knorr-Bremse Systeme für Nutzfahrzeuge GmbH, München, Germany	Swarm Intelligence Algorithms for Agricultural In-Field-Logistics Markus Robert , Thorsten Lang, Institute of Agricultural Machinery and Fluid Power, Technische Universität Braunschweig, Germany	Highly Improved Seed Placement Based on New Metering, Powering and Control Concepts for Planters Matthias Rothmund , Jens Thomsen, Philipp Horsch, HORSCH Maschinen GmbH, Schwandorf
16:30	Operator Model for Simulation of Tractor with Front-end Loader Used in Earth Moving Operation Thorsten Stamm von Baumgarten , Hans-Heinrich Harms, Thorsten Lang, Institute of Agricultural Machinery and Fluid Power, Technische Universität Braunschweig, Germany	Development Process of the New High Visibility Tractor Cab Andreas Stieglitz , Functional Group Manager Cabs and Hoods, Alexander Barzen, AGCO GmbH (Fendt), Marktoberdorf, Germany	Towards Master-Slave Navigation via Hardware in the Loop Simulation Tijmen Bakker , Eldert J. van Henten, Jan Bontsema, Tyker Technology, Wageningen, The Netherlands	Development of a Highly Flexible, Extra-Load Capacity Tyre for Agricultural Sprayers Istvan Matyas , Tyre Designer of Agricultural Tires, Michelin, Clermont-Ferrand, Cedex, France, Adrie Kunst, AGCO Netherlands BV, Grubbenvorst, The Netherlands
17:00	Electrically Supported and Continuously - Modern Drive System on Telescopic Loaders Ralf Schrempp , Managing Director, Sauer Bibus GmbH, Neu-Ulm, Wolfgang Adamek, GKN Walterscheid GmbH, Lohmar, Angela Squeri, Cluster Nutzfahrzeuge Schwaben (CNS), Ulm, Germany	Improving Operators Vibration Insulation by Intelligent Semi-Active Cab Suspension Christian von Holst , Team Lead Suspension Systems, John Deere Werke Mannheim, Germany	Multilayer Controller for Field Robots Hans W. Griepentrog , Head of Section, Claes Lund Jaeger-Hansen, Institute of Agricultural Engineering, Universität Hohenheim, Stuttgart, Ole Ravn, Technical University of Denmark, Lyngby, Denmark	Functional Draper Header Technology Improvements Steve Tippery , Program Manager, CLAAS Omaha, Inc., Omaha, NE, USA
17:30	Break			
17:45	Plenary Session II, Room 2			
19:00	Get-together Dinner			

Plenary Session I

Friday, 11 November 2011
Room 2

12:00 **Welcoming Address and Opening Remarks**
Stefan Böttinger, President of Max Eyth Society for Agricultural Engineering (VDI-MEG), Stuttgart, Germany



Peter Schulze Lammers, President of European Society of Agricultural Engineers (EurAgEng), Bonn, Germany



12:20 **Plenary Lecture MANUFACTURE's Pathways towards Future (Industrial) RD&I in the EU - Opportunities and Challenges of Upcoming CSF (FP8)**
Heinrich Flegel, Member of the Supervisory Board Daimler AG, Chairman of the Management Representative Committee, Director Manufacturing Research, Chairman ETP „manufacture“, Daimler AG, Stuttgart, Germany



13:00 Coffee Break

13:30 Technical Lectures

Plenary Session II

Room 2

Evening Event with Tributes

17:45 **Keynote Address From the Farm to the Fork - Foods for Health**
Gabriele Irmgard Stangl, Institute of Agricultural and Nutritional Sciences, Martin-Luther-Universität Halle Wittenberg, Germany



18:15 **Awarding of the VDI-MEG Prizes Awarding of the EurAgEng Award of Merit**

19:00 Get-together Dinner

Program Committee

Heinz Böhler, AGCO GmbH, Marktoberdorf, Germany
Stefan Böttinger, Universität Hohenheim, Stuttgart, Germany
Herbert Coenen, Uniparts India Ltd., Königswinter, Germany
Claudia Dössereck, VDI Wissensforum GmbH, Düsseldorf, Germany
Franz Handler, BLT Wieselburg, Austria
Andreas Herrmann, Verein Deutscher Ingenieure e.V., Düsseldorf, Germany
Roland Hörner, DLG e.V., Frankfurt, Germany
Peter Hieronymus, CLAAS Selbstfahrende Erntemaschinen GmbH, Harsewinkel, Germany
Thomas Hoffmann, Leibniz-Institut für Agrartechnik Potsdam-Bornim e.V., Potsdam, Germany
Aad A. Jongebreur, Wageningen University, The Netherlands
Karlheinz Köller, Universität Hohenheim, Stuttgart, Germany
Thorsten Lang, Technische Universität Braunschweig, Germany
Henning Meyer, Technische Universität Berlin, Germany
Axel Munack, Johann Heinrich von Thünen-Institut, Braunschweig, Germany
Peter Pickel, John Deere European Technology Innovation Center, Kaiserslautern, Germany
Peter Schulze Lammers, Universität Bonn, Germany
Heinz Stuhmann, John Deere Werke Mannheim, Germany
Peter-Michael Synek, VDMA e.V., Frankfurt/M., Germany

Scientific Chairman

Thorsten Lang, Technische Universität Braunschweig, Germany

Technical Chair

Max Eyth Society for Agricultural Engineering (VDI-MEG)
 European Society of Agricultural Engineers (EurAgEng)

The Conference is Supported by

Deutsche Landwirtschaft-Gesellschaft (DLG), Frankfurt/M., Germany
 Deutsche Messe AG, Hannover, Germany

In Cooperation with

AGRITECHNICA

Official Conference Language

The official language of the conference will be English. Simultaneous translation will not be available.

	Room 2	Room 3A	Room 3B	Room 15/16
	Tractors II - Test & Evaluation Marcus Geimer , Mobima - Mobile Machines, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany	Harvesting Technology II - Multicrop Martin Büermann , Combine & SPFH Assembly, John Deere Werke Zweibrücken, Germany	Networking and Communication Peter Hieronymus , Head of Systems Engineering Software, CLAAS Selbstfahrende Erntemaschinen GmbH, Harsewinkel, Germany	Sustainable Energy Thomas Hoffmann , Head of the Department Post Harvest Technology, Leibniz Institute for Agricultural Engineering Potsdam-Bornim, Germany
08:30	Replication of the DLG PowerMix Tractor Fuel Consumption Test in a Laboratory Environment Peter Back , Supervisor Product Engineering, Waldemar Stark, Beatrice Hodel, John Deere Werke Mannheim, Germany	Working Performance of Cleaning Units of Combine Harvesters on Sloped Fields Stefan Böttinger , Institute of Agricultural Engineering, Universität Hohenheim, Stuttgart, Lars Fliege, Agrargenossenschaft Pfiffelbach e.G., Pfiffelbach, Germany	Seamless Data Management for Agricultural Vehicles within the iGreen Infrastructure Christian Bartolein , Advanced Engineering, Sebastian Blank, Axel Meyer, John Deere European Technology Innovation Center, Kaiserslautern, Germany	Additives for Rapeseed Oil Fuel Johannes Kastl , Edgar Remmele, Klaus Thuneke, Subject Group „Biogenic Fuels, Lubricants and Process Materials“, Technology and Support Center (TFZ), Straubing, Germany
09:00	Methodology for the Accelerated Structural Testing of a Tractor Giovanni Molari , Michele Mattetti, Agricultural Economics and Engineering, University of Bologna, Angela Falagario, CNH, Tractor Engineering, Modena, Italy	Concept Study Self Propelled Combine Harvester - Swarm or Modular System? Thomas Herlitzius , Harald Mueller, Chair Agricultural Systems and Technology, Günter Kranke, Center for Industrial Design, Technische Universität Dresden, Germany	Wireless Communication on the Field Following ISO 11783 for Autonomous Process Planning and Controlling of Cooperating Mobile Agricultural Machines Christian Rusch , Systemengineer, Claas Selbstfahrende Erntemaschinen GmbH, Harsewinkel, Germany	Influence of the Fatty Acid Spectrum of Vegetable Oil Methyl Esters as Pure Fuel and Blends on the Emissions from Diesel Engines Olaf Schröder , Axel Munack, Institute of Agricultural Technology and Biosystems Engineering vTI, Braunschweig, Jürgen Krahl, Coburg University of Applied Sciences, Germany
09:30	Study in Benefits of Controlled 4-Wheel Drive Clutch Petri Hannukainen , Technical Specialist, Timo Ruokola, Agco/Valtra, Suolahti, Finland	Current Status and Advanced Solutions for Chamomile Harvesters Detlef Ehler , Head of Department, Leibniz Institute for Agricultural Engineering Potsdam-Bornim e.V., Potsdam, Germany	Development of an ISOBUS Database for Sales, Service and End Customers Norbert Schlingmann , Team Leader, CLAAS Selbstfahrende Erntemaschinen GmbH, Harsewinkel, Germany	Co-generation of Electricity and Heat from Biogas. Efficiency and Exhaust Emission Characteristics Volker Aschmann , Mathias Effenberger, Bavarian State Research Center for Agriculture, Freising, Germany, Andreas Gronauer, University of Natural Resources and Life Sciences, Vienna, Austria
10:00	Agricultural Electromobility Concepts - Green Energy for Agricultural Machinery and Rural Areas Claudia Schrank , Project Manager R&D Projects, Peter Pickel, John Deere European Technology Innovation Center, Kaiserslautern, Nicolai Tarasinski, John Deere Werke Mannheim, Germany	Inline-Sensing of Grain Quality on a Combine Harvester Hilke Risius , Rainer Tölle, Fachgebiet Biosystemtechnik, Humboldt-Universität zu Berlin, Hubert Korte, CLAAS Selbstfahrende Erntemaschinen GmbH, Harsewinkel, Germany	Ensuring Compatibility of Agricultural Electronics - The Agricultural Industry Electronics Foundation (AEF) ISOBUS Conformance Test Jaap van Bergeijk , Manager Product Engineering, AGCO, Hesston, KS, USA	PAR Assessment within an Almería-Type Greenhouse in Integrating a Photovoltaic Roof José Pérez Alonso , Ángel Jesús Callejón Ferre, Manuel Pérez García, Rural Engineering Department, University of Almería, Spain
10:30	Coffee Break			
	Tractors III - Motor Luigi Bodria , Department of Agricultural Engineering, University of Milano, Italy	Hydraulics I Peter-Michael Synek , Fluid Power Research Fund, VDMA e.V., Frankfurt/M., Germany	Sensing and Modelling Franz Handler , Head of Department Process Engineering, BLT Wieselburg, Austria	Soil Protection, Tillage and Sowing Karlheinz Köller , Institute of Agricultural Engineering, Universität Hohenheim, Stuttgart, Germany
11:00	Development of Efficient Cooling Systems and Thermal Management Strategies - Challenges for Tier 4 Engines Heinz Petutschnig , Lead Engineer Thermal Management, Andreas Ennemoser, AVL List GmbH, Graz, Austria	Comparison of Different Power Shift Transmission Concepts for Tractors Mark Mohr , Manager, Martin Fellmann, Jürgen Pohlenz, ZF Friedrichshafen AG, Friedrichshafen, Germany	Development of a System for Pattern Operations Matthias Gebben , Embedded SW Engineer, Georg Kormann, John Deere European Technology Innovation Center, Kaiserslautern, Germany	Better no Till Farming with Controlled Traffic Farming? Martin Holpp , Thomas Anken, Forschungsanstalt Agroscope Reckenholz-Tänikon ART, Ettenhausen, Switzerland, Oliver Hensel, Kassel University, Germany
11:30	Intelligent Power Management for High Horse Power Machinery Kai Brandhofe , Head of System Technology Engine, Ludger Hugenroth, CLAAS Selbstfahrende Erntemaschinen GmbH, Harsewinkel, Germany	Continuous Variable Driveline Concept in a Tractor of the Low Power Class Gerhard Bailly , Design Tractor-Transaxles, Jürgen Pohlenz, ZF Friedrichshafen AG, Friedrichshafen, Karl Grad, ZF Passau GmbH, Passau, Germany	Constituents Determination of Crops in the Round Baler Karl Wild , Veit Walther, Karoline Heinrich, Fakultät Landbau/Landespflege, University of Applied Science, Dresden, Germany	Predicting Topsoil Damage from Slip of Tractor Tyres Andrea Battiato , Etienne Diserens, Forschungsanstalt Agroscope Reckenholz-Tänikon, Ettenhausen, Switzerland, Luigi Sartori, University of Padua, Legnaro, Italy
12:00	Methods and Challenges on Implementation of SCR after-Treatment System in New Mid Range Standard Tractor Hans Leistle , R&D Engine and Peripheral, AGCO GmbH, Marktoberdorf, Germany	Development of a Hydraulic System for a New Generation of Self-propelled Forage Harvesters Andreas Brockmann , Design of Hydraulic Systems, AGCO GmbH, Marktoberdorf, Germany	In-Soil Measuring of Root-Crop Properties Using UWB-RADAR Christian Peveling-Oberhag , Peter Schulze Lammers, Institute of Agricultural Engineering, Universität Bonn, Germany	Evaluation of Traffic Intensity in Fields and Technical Possibilities for Machinery Passes Reduction Milan Kroulik , Zdenek Kviz, CULS Prague, Czech Republic
12:30	Consumption of Diesel Exhaust Fluid (DEF) of Agricultural Tractor Engines Using Selective Catalytic Reduction (SCR) System Eugenio Cavallo , Niccolò Pampuro, Institute for Agricultural Mechanization and Earth Moving Machinery, National Research Council of Italy (CNR), Torino, Italy	Aspects of Efficiency Benchmarking Exemplified by the Hydraulic System of a Combine Thomas Fleczonek , Institute of Agricultural Machinery and Fluid Power, Technische Universität Braunschweig, Norbert Strieker, Matthias Dirks, CLAAS Selbstfahrende Erntemaschinen GmbH, Harsewinkel, Germany	Upgrading of the Hohenheim Tyre Model for the Simulation of Obstacle Passages Paul Witzel , Stefan Böttinger, Institute of Agricultural Engineering, Universität Hohenheim, Stuttgart, Germany	Mathematical Modeling and Computer Simulation of Sowing Włodzimierz Keska , Lukasz Gierz, Working Machinery & Vehicles, Poznan University of Technology, Poznan, Poland
13:00	Lunch Break			



The Association of German Engineers (VDI) is one of the leading engineer's associations worldwide. The Max Eyth Society for Agricultural Engineering represents a technical division of the VDI. It bears the name of the founder of agricultural engineering as a distinct discipline in Germany, Max Eyth (1836-1906). www.vdi.de/meg



The European Society of Agricultural Engineering (EurAgEng) exists to promote the professions of Agricultural and Biosystems Engineering and the people who serve it. The Society is particularly active in conferences, Special Interest Groups, publications, networking, and international lobbying. www.eurageng.net



The VDI Wissensforum organizes and provides seminars and conferences dedicated not only to engineers but also to academics and practitioners from widely diverse branches of the economy. Our activities are backed by the Verein Deutscher Ingenieure e.V. (VDI), a virtually inexhaustible fund of know-how constantly attracting new ideas and suggestions.

5th Workshop of the MANUFACTURE 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

Schedule

- 09:00 Registration for 5th Workshop in Room 13/14
- 09:30-11:30 Section 1
- 11:30 Lunch
- 12:00-13:00 Joint Plenary Session with LAND. TECHNIK AgEng 2011, Room 2
- 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 MANUFACTURE AET http://www.manufacture.org/manufacturing/?page_id=668 or Jens Fehrmann, TU Dresden email: fehrmann@ast.mw.tu-dresden.de


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

	Room 2	Room 3A	Room 3B	Room 15/16
	Tractors IV - Machine Management Robert Kaufmann , Head of Research Department Agricultural Economics and Engineering, Agroscope Reckenholz-Tänikon Research Station ART, Ettenhausen, Switzerland	Hydraulics II Heinz Stuhmann , John Deere Werke Mannheim, Germany	Precision Farming John F. Reid , Director, Product Technology and Innovation, John Deere Moline Technology Innovation Center, MOLINE, IL, USA	Positioning and Navigation Eldert J. van Henten , Agricultural Engineering, Farm Technology Group, Wageningen University, The Netherlands
14:00	Software for Optimizing Tractor Ballasting by Predicting Tractor Dynamic Weight Distribution with Various Implements Hubert Defrancq , President, LAFORGE, Guignicourt, Christian Rivierre, John Deere, Ormes, France	Power Shift PTO for Tractor Applications - Operating under Load Stefan Igl , Engineering - Stepped Transmission, Karl Grad, Thomas Capellaro, ZF Passau GmbH, Passau, Germany	Design and Concepts of User Interfaces on a Touch Screen Terminal Carsten Jochheim , Head of Development Department, Jörg Boese, Müller-Elektronik GmbH & Co. KG, Salzkotten, Germany	Next UAV - Precise Relative Positioning Using Low-Cost GNSS Coupled with INS, Optical-flow and Cooperative Localization Methods Jan Schattenberg , Institute of Agricultural Machinery and Fluid Power, Martin Becker, Institute of Flight Guidance, Technische Universität Braunschweig, Franz Andert, Institute of Flight Systems, Unmanned Aircraft, German Aerospace Center, Braunschweig, Germany
14:30	Realtime Performance and Efficiency Monitoring for Large Tractors Benno Pichlmaier , Advanced Engineering, AGCO GmbH, Marktoberdorf, Karl Theodor Renius, Technische Universität München, Garching, Germany	First Hydrostatic Compact Unit Combining Swash-Plate and Bent-Axis-Design for Higher Efficiency and Reduced Size Federico Mejia , Sales Product Manager, Michael Jachnik, Bosch Rexroth AG, Elchingen, Germany	Electronic Assistance for Straw and Hay Harvesting with Large Square Balers Jan Horstmann , Team Leader Product IT, Maschinenfabrik Bernard Krone GmbH, Spelle, Germany	GIS- and Sensor-Based Technologies for Individual Plan Agriculture Erik Wunder , Arno Ruckelshausen, Ralph Klose, Competence Center of Applied Agricultural Engineering - COALA, University of Applied Sciences Osnabrück, Germany
15:00	Holistic Optimization of Tractor Managements Timo Kautzmann , Micaela Wünsche, Marcus Geimer, Mobima - Chair of Mobile Machines, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany	Cost Efficient Axial Piston Pump for Small and Medium Sized Tractors Jürgen Maier , Product Manager, Bosch Rexroth AG, Horb am Neckar, Germany	Decision Strategies and Communication Structures for Cooperating Mobile Work Machines in the Agricultural Economy (KOMOBAR) Axel Jacob , Diethardt Freye, Bernd Johanning, Forschungsprojekt KOMOBAR, Fakultät Wirtschafts- und Sozialwissenschaften, Hochschule Osnabrück, Germany	Automated Machine Guidance Using Laser Range Data Ole Peters , Peter Pickel, JOHN DEERE European Technology Innovation Center, Kaiserslautern, Nikolai Tarasinski, John Deere Werke Mannheim, Germany
15:30	Break			
15:50	Plenary Session III , Room 2			
16:30	End of the Conference			

Plenary Session III

Saturday, 12 November 2011
Room 2

15:50 **Plenary Lecture**
John Deere - "On our Way to a Global Company"
Markwart von Pentz, President, Agriculture & Turf Division, Deere & Company, Moline, IL, USA



16:20 **Closing Remarks**
Thorsten Lang, Scientific Chairman of the Conference



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 Exponale.

By public transportation: from Hannover main railroad station via subway line 8 to terminal station "Hannover 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

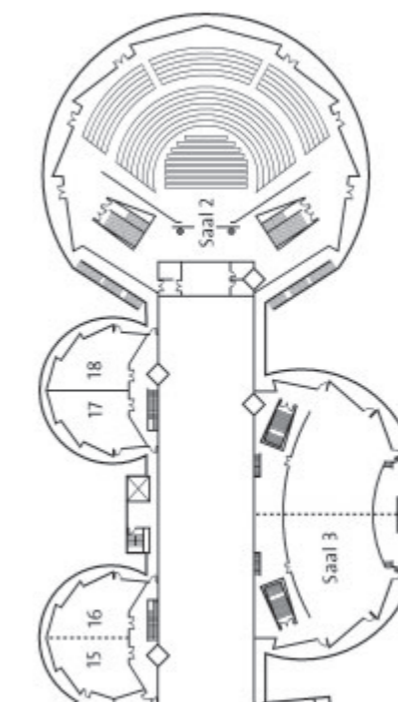
AGRITECHNICA Admission-Tickets

"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 50,00 regular price EUR 80,00)

Exhibition Ground



Convention Center (CC)



○ Access through entrances "Nord 2" and "Ost 3"

69th International Conference on
Agricultural Engineering

VDI Wissensforum GmbH, Postfach 10 11 39, 40002 Düsseldorf

www

VDI Wissensforum GmbH
Customer's Service Centre
P.O. Box 10 11 39
D-40002 Düsseldorf
Fax: +49 211 6214-154
Phone: +49 211 6214-201
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Internet: www.vdi.de/landtechnik-ageng

- I will be attending the 69th International Conference on Agricultural Engineering, November 11-12, 2011, Hannover (12TA001011)

Please select your price category

	Price Group	Price per person + VAT
<input type="checkbox"/> Conference Fee	1	EUR 500,-
<input type="checkbox"/> VDI and EurAgEng Members	2	EUR 450,-
<input type="checkbox"/> VDI and EurAgEng Members of Universities	4	EUR 250,-
<input type="checkbox"/> Doctorial Candidates VDI Members	3	EUR 165,-
VDI/EurAgEng Member No:		

(The VDI/EurAgEng Membership must be specified to be eligible category 2,3 and 4)

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First Name	Title
Department (Abbreviation if applicable)	
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card no.	valid to (MM/YY)
Date	

Applications must be in writing. Registration confirmation and invoice will be mailed out. Please do not pay until you have been billed. For more information please see www.vdi.de/landtechnik-ageng.

Conference location and conference desk

Convention Center (CC)
Deutsche Messe AG
Exhibition Ground
30521 Hannover, Germany

Conference desk at the Convention Center

You can reach the conference desk at the following number:
Phone: +49 151 12236335

The price includes the conference proceedings (VDI report 2124), coffee-break beverages, lunch and the evening event. The proceedings will be handed out at the beginning of the conference.

Room Reservation

List of hotels with VDI preferential rate for the conference participants, please see the website www.vdi.de/landtechnik-ageng

For further individual hotel reservation for AGRITECHNICA visitors please contact

Hotelreservation
Accommodation Service
Hannover Marketing & Tourismus GmbH
Telefon: +49 511 12345-556
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