

VDI

International VDI Conference

Automation and Robotics in Agriculture

June 26 and 27, 2019, Berlin

- Automation and Connectivity: The New Way of Farming
- The Use of Robots in Arable Farming anno 2019
- Animal Automation and Livestock Management – Solutions & Use Cases
- Safety for Outdoor Robotics
- How will the Agricultural Robot Market develop over the next Years?
- Start-Ups: Transforming the Agriculture Sector

+ Panel Discussion: Robotics shaping the Future of Agriculture

+ Interactive World Café Discussions

Meet international Experts from:



AGROINTELLI



Keynotes from
CNH Industrial &
Dell Technologies

An event organized by VDI Wissensforum GmbH
www.vdi-international.com/12K0901019



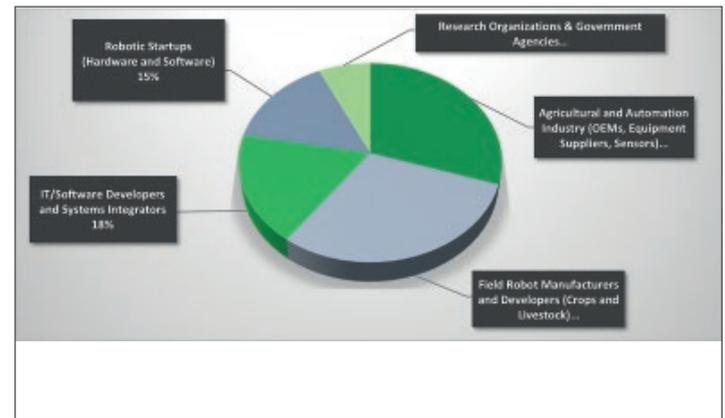


About us

VDI

The Association of German Engineers (VDI) is one of the largest technical-scientific associations in Europe. Throughout the years, the VDI has successfully expanded its activities nationally and internationally to foster and impart knowledge about technology-related issues. As a financially independent, politically unaffiliated and non-profit organization the VDI is recognized as the key representative of engineers both within the profession and in public.

Expected Participants according to Functions



Expected Participants according to Industries



Reasons to attend

- Meet international Agriculture Industry Experts
- Gain insights into OEM's Perspective on the New Way of Farming
- Prepare for Industry-wide Robotics Usage
- Benefit from Case Studies and Practical Insights
- Discuss how Robotics are Shaping the Future of Agriculture
- Network with innovative Startups

08:45 Registration & Welcome Coffee

10:15 Chair's Welcome and Opening Address

Prof. Ole Green, CEO, AGROINTELLI, Denmark

10:30 **Speed Networking** | Make the most of this networking opportunity by participating in these quick and effective 1-to-1 interactions. Get to know the other attendees and exchange your business cards.

Automation meets Agriculture

Opening OEM Keynote

10:45 **Automation and Connectivity: The New Way of Farming**

- What is automation and how it impacts farming
- What is available in terms of technologies nowadays
- The future of farming: When automation and connectivity meet

Daniel Stuart, Product Marketing Director Europe, Case IH, CNH Industrial Österreich GmbH, Austria

11:15 **Transforming Automation in Agriculture through Robotics and AI**

- Applying clever automation strategies and deep learning for smart data collection
- Enabling more advanced treatment and harvesting of high value crops through the use of robotics and AI
- Successful advances and remaining challenges to wide-scale adoption

Chris Roberts, Associate Director, Head of Industrial Robotics, Cambridge Consultants, United Kingdom

11:45 **Farming Automation: State of the Art Technology today and what the Future holds**

- Current state of autonomy in Ag
- Multi vehicle command and control for production
- The ongoing developments in localization and environmental awareness

Jeff Ferrin, CTO, Autonomous Solutions Inc., USA

12:15 Lunch

Robotics on the Fields – Part I

13:45 **Sustainable Intensification of Arable Farming enabled by Automated Implements**

- The use of robots in arable farming anno 2019
- Robotic as an enabler for precision farming
- New possibilities in arable farming with robots

Prof. Ole Green, CEO, AGROINTELLI, Denmark

14:15 **Small Scale Arable Production Systems – Advantages and Challenges**

- From big - bigger to smaller with help of technology
- Ecology as driver instead of technology
- Autonomous vehicles in controlled traffic system
- Experiences with detection of volunteer potato control

Ir. J.A.L.M. Jan Kamp, Team Leader Product and Crop Innovations, Wageningen Research, The Netherlands

14:45 **Artificial Intelligence in the Detection of Microfauna and Microflora**

- Separating the soil from the components in an automated robotic environment
- How many and what kind of organisms are influencing development – Think nematodes
- Automated fertility and chemical measurement ideas
- Artificial Intelligence and Deep Learning for treatment methods

Steve Gerrish, CEO, Qmira, USA

15:15 Networking & coffee break

World Cafés

15:45 **Interactive World Café Session**

During the interactive World Café Session, we invite you to directly engage with other experts. It is an interactively moderated discussion on different topics. Discuss and identify challenges within your sector as well as problems, needs and solutions. The focus is on the participants – Decide what exactly you would like to discuss and introduce your own experiences and cases.

16:45 **From Farm to Fork: Automation and the Robot in Agriculture today**

- What innovation looks like today
- How to scale automation and robotics
- Do not forget about the software robot
- Supply Chain Innovation 11 years on – What to start planning for in 2030

Marc O'Regan, CTO & Technologist, Dell EMC/EMEA, Ireland

Keynote

17:15 End of conference day one



Get-together

At the end of the first conference day we kindly invite you to use the relaxed and informal atmosphere for in-depth conversations with other participants and speakers.

Robotics on the Fields – Part II**09:00 Field Agriculture Robots, only for Special Crops ... yet**

- Feedback from 7 years of experience in mechanical weeding robot
- The place of the field robots in intelligent agriculture systems
- From FIRA to starting an international group or association about agriculture robots?

Gaëtan Séverac, Co-founder, Naïo Technologies, France

09:30 (R)evolution in the Greenhouse – The Future is Now!

- Crop production challenges
- Robots to support grower
- Engineering an economical relevant robot
- The strawberry picking case

Dipl.-Ing. (FH) Didier Verhaeghe, Octinion Agriculture, Belgium

10:00 NIR Sensors for the Determination of Ingredients in passing Liquid Manure – An Example for Infield Application

- From lab to field: NIRS technology and areas of application in agriculture
- Development of testing procedures for mobile NIRS precision, mounted on forage harvesters and slurry tanks
- DLG certification: User acceptance - Recognition by governmental authorities
- Future outlook: Measurement - Data management & documentation - Sensor data based machine control

Dr. agr. Ulrich Rubenschuh, Project Manager, Test Services for agricultural technologies, DLG TestService GmbH, Germany

10:30  Networking & coffee break

11:00 Start-up Session

Get in touch with interesting start-ups! You are keen to initiate a new industry collaboration? You are looking for innovative technologies and solutions? Then join our interactive start-up session. Listen to carefully selected start-ups presenting their ideas in a few short minutes. Select the start-up you want to meet and discuss your questions with them directly. Network and brainstorm about new ideas! Represented start-ups will include:

Localized Spraying with Automated Weeds Identification: A Use Case for Deep-Learning | Simon Denonnain, Carbon Bee Agtech, France

Wireless Charging – A key enabler for 100% Autonomous Operation of Agricultural Robots | Matthieu Ebert, M.Sc., Key Account Manager, Blue Inductive GmbH, Germany

3D Learning applied in Agriculture | Jonathan Berte, Founder & CEO, Robovision, Belgium

12:00  Lunch

Animal Automation and Livestock Management – Solutions & Use Cases**13:00 Milking Cows with Robots – Challenges and Opportunities**

- Vision systems for teat-finding applications on cows
- Robot control close to animals
- Sensors and electronics in the challenging barn environment
- ...and how to make the cow feel just fine

Björn Wiklander, M.Sc., Technical Manager Robot & Vision, DeLaval International AB, Sweden

13:30 Automating Livestock Management

Speaker to be announced

14:00  Networking & coffee break

Safety Considerations for Employing Robotics**14:30 Safety of Collaborating Robots in Agriculture**

- Overview of safety standards and state of the art
- Use of collaborating robots in farming
- Ensuring safe and productive operation

Speaker to be announced

15:00 Panel Discussion

Robotics Shaping the Future of Agriculture

15:30 Closing Remarks

15:45 End of conference

**Upcoming Events****3rd International VDI Conference****Smart Farming**

May 14–15, 2019 in Dusseldorf, Germany

77th International Conference on Agricultural Engineering**LAND. TECHNIK AgEng 2019****The Forum for Agricultural Engineering Innovations**

November 08–09, 2019 in Hannover, Germany

The Call for Papers will commence on January 2019

www.vdi-international.com/ageng

ISOBUS Automation using TIM

Workshop Chair:

Dr. Matthias Rothmund, Manager Products & Sales and Julian Fichtner, Software Architect TIM, both: The ISOBUS Experts, OSB AG, Germany

Date and Venue:

June 28, 2019, Berlin, Germany

Time:

10:00 - 16:00

The workshop provides an introduction to the implementation of ISOBUS Automation with TIM (Tractor Implementation Management). Participants get an overview of TIM architecture, functionalities and use cases, as well as of safety and security aspects. Based on the know-how from TIM definition and prototyping in AEF (Agricultural Industry Electronics Foundation) necessary hardware, software and infrastructure components for the development of TIM functionalities, their integration into Ag implements and market rollout are explained. After the workshop, participants will be able to prepare roadmaps for TIM development and production of TIM-ready machines.

Welcome & Introduction

- Why ISOBUS Automation is needed
- ISOBUS Automation aspects covered by TIM specification

TIM Architecture

- Hardware / Software components
- Authentication process & Exchange of certificates

TIM Specification

- Functionalities & Key infrastructure
- Authentication and security

System Boundaries and Responsibilities

- Security: Which aspects are (not) covered by the Specification?
- Implications for manufacturers based on the risk assessment
- Functional safety: Implications for manufacturers

Basic Prerequisites: What is needed to get started?

- Milestones of a TIM integration roadmap
- Designing a system architecture
- Availability of hardware and software components
- Development process & Infrastructure

Summary, Discussion and Conclusion



International VDI Conference

Sensors for Off-Highway Machines

Date and venue:

June 26-27, 2019

MERCURE Hotel MOA, Berlin, Germany

Renowned speakers will discuss the following topics:

- Technology transfer from passenger cars to the OHW Sector
- Requirements for Sensor Systems
- Advanced Sensing Solutions & Building Sensor Platforms
- Management of Functional Safety Standards, Regulations and Standardization
- The Role of Data, AI & Neural Networks and Cyber Security
- Future of Work in Autonomous OHW Machines

www.vdi-international.com/01K0935019

Parallel running
conferences -
Free of extra
charge

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International VDI Conference

HMI in Off-Highway Machines

Date and venue:

June 26-27, 2019

MERCURE Hotel MOA, Berlin, Germany

Renowned speakers will discuss the following topics:

- User Centered Design / UX in Off-Highway Machine Cockpits
- HMI Software: Standardization and Device Connectivity
- Advanced Driver Assistance and improved Vehicle Safety
- Haptic, Gesture and Speech Control Development and Technology
- Modular HMI Components / Instrument Clusters
- Head-Up Displays / Augmented & Virtual Reality

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Exhibition / Sponsoring

If you want to meet with and reach out to the first-rate experts attending this VDI conference and to powerfully present your products and services to the well-informed community of conference participants, please contact:

Christoph Brockerhoff

Project Consultant Exhibitions & Sponsoring

Phone: +49 211 6214-228

Fax: +49 211 6214-97228

Email: brockerhoff@vdi.de



Become a speaker

Become a speaker at our international VDI Automotive Conferences. Make yourself known in the industry and discuss best practice examples with other international experts. We are looking for speakers on: Smart Farming, Sensor & HMI Technologies for the Off-Highway Industry.

Please submit your topic to:

Dr. Maria Georgiou-Smith

Product Manager International Business

Agricultural Engineering

Phone: +49 211 6214-467

Fax: +49 211 6214-97467

Email: georgiou-smith@vdi.de

Registration

Terms and Conditions

Registrations: Registrations for conference attendance must be made in writing. Confirmation of your registration and the associated invoice will be mailed to you. Please do not pay your conference attendance fee until you have received our invoice and its invoice number to be stated for transfer. German VAT directives apply. Please state your VAT-ID with your registration.

Conference venue

MERCURE Hotel MOA Berlin

Stephanstr. 41

10559 Berlin, Germany

Phone: +49 30 3940430

Email: ha0f7@accor.com



You will find more hotels

close to the venue at

www.vdi-wissensforum.de/hrs

Hotel room reservation: A limited number of rooms has been reserved for the benefit of the conference participants at the MERCURE Hotel MOA Berlin. Please refer to "VDI Conference". For more hotels: www.vdi-wissensforum.de/hrs

VDI Wissensforum service package: The conference package includes the conference documents (online), beverages during breaks, lunch and the get-together on June 26, 2019.

Conference attendance conditions and terms: By way of your registration you accept the conference attendance conditions and terms of VDI Wissensforum GmbH as binding. Any cancellation of your registration must be made in writing. We will charge you only an administrative fee of € 50.00 plus German VAT if you cancel your registration earlier than 14 days ahead of the conference date.

Any cancellation that reaches us after this deadline will entail the conference attendance fee as stated in our invoice to be charged in full. The date of the post office stamp of your written cancellation will be the decisive criterion. In that case, we will gladly mail you the conference documents on request. Subject to agreement, you may name a substitute participant. Individual parts and sections of conferences and seminars cannot be booked. You will be informed without delay if an event has to be cancelled for unforeseeable reasons. In that instance, you will be entitled only to a refund of your conference attendance fee if already paid. We reserve the right to exchange speakers and/or change the program sequence in exceptional cases. In any case, the liability of VDI Wissensforum GmbH is restricted exclusively to the conference attendance fee.

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International VDI Conference

Automation and Robotics in Agriculture



Register online!

www.vdi-international.com/12K0901019



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[www](http://www.vdi.de)

Participants
are eligible to
attend the parallel
conferences free of
extra charge

Yes, I will participate as follows:

Participation Fee + VAT

VDI Conference 26.-27.06.2019
(12K0901019) € 1840

Workshop 28.06.2019
(01ST935001) € 950

Package Price (Please tick the boxes)

(Conference + 1 Workshop) € 2500

I am interested in sponsoring and/or exhibition

Participation Fee VDI-Members* Save 50 € for each Conference Day.

* For the price category 2, please state your VDI membership number

VDI membership no.

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