

# 5th International VDI Conference Automation and Robotics in Agriculture

#### June 4 and 5, 2025, Dusseldorf

- Automation in European Agriculture Where Are We from a Farmer's Point of View?
- Managing the Regulatory Landscape: Safe and Efficient Operation of Agricultural Machinery
- From Field to Data: Do We Have the Data Base for Agricultural Automation?
- Sensor Perception in an Autonomy/Automation Context
- Growth of the Agri-Robot Market
- + Interactive Round Table Session

#### Meet international Experts from:



An event organized by VDI Wissensforum GmbH www.vdi-international.com/ 12K0901025

#### 9:00 Registration & Welcome Coffee

10:00 Chair's Welcome and Opening Address

**Ole Green,** Founder, Agrointelli, Denmark

**10:15 Speed Networking** | Make the most of this networking opportunity by participating in these quick and effective 1-to-1 interactions.

#### I. Automation in Europe

#### 10:30 Automation in European Agriculture – Where Are We from a Farmer's Point of View?



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- Solution landscape easy or complex?
- Which pain points are we trying to solve and are they the right ones?
- Which hurdles do we need to overcome from a farmer's point of view?

Andreas Kaczmarczyk, VP Marketing, Kubota Holdings Europe BV, Netherlands

#### 11:00 Fully Autonomous Machines and Tractors for a Profitable Ecology

- Autonomy for Farming: How autonomy leverages new use cases and new way
  of farming
- Autonomy as Support for Sustainability: How autonomy enables tools to be used more sustainably
- Autonomy as Support for Profitability: How autonomy of agricultural machinery brings profitability at different timescales

Christophe Aubé, CEO, AgreenCulture & President, Robagri, France

11:30 🔛 Networking & Coffee Break

12:15 From Field to Data: Do We Have the Data Base for Agricultural Automation in Europe?

- Advances in agricultural technology are outpacing the practical application of plant production expertise
- The Big Data Disappointment: Current methods fail to produce extensive, high-quality, and standardized datasets across farms
- Farmers are not data scientists they need insights that provide causality, not just correlation

#### Jacob von der Decken, CCO, Tunen Limited, United Kingdom

#### 12:45 Reduce Time to Market for Automated Ag Ecosystems by Equipping Conventional Implements with Retrofit Monitoring Kits

- Smart Implements: Conventional implements turn into smart implements to ensure process reliability with automated systems
- Error Detection: Various types of sensors with customized thresholds detect errors and malfunctions to remotely notify or warn supervisors
- Easy Integration: Standard protocols make retrofitting simple and compatible
- Real-World Testing: Test results and feedback on performance in combination with highly automated and autonomous vehicles

Michael Wiebeler, Field Application Engineer, ANEDO GmbH, Germany and Philipp Kamps, Product Management, AgXeed BV, Netherlands

13:15 🚺 Lunch

#### II. Safety & Regulations – Managing the Regulatory Landscape

## 14:45 Safe and Efficient Operation of Agricultural Machinery for Seamless Field-to-Road Transition

- Automation Benefits in Agriculture: Boosts efficiency, productivity, and safety
- Standards Integration: ISO 18497 (off-road) and SAE J3016 (on-road)
- Agri-ODD: Standardizes complex agricultural operations and addresses environmental variability

**Prof. Dr. Julius Schöning,** Faculty of Engineering and Computer Science, Osnabrück University of Applied Sciences, Germany

#### 15:15 Navigating the Evolving Regulatory Landscape for Autonomous Agricultural Vehicles

- The regulatory framework relevant to safety, functional safety, and cybersecurity for autonomous agricultural vehicles
- Insights, solutions, and compliance efforts for several use cases
- Impact on both technical solutions and business models

Tommy Ertbølle Madsen, CEO and Co-Founder, AgriRobot, Denmark

15:45 🔛 Networking & Coffee Break

#### 16:30 Autonomous Agricultural Robots in a Public Road Setup - A Safe Road Crossing Robot

- Navigation and route planning with multi fields including public road
- A Danish test setup performed with the Danish Civil Aviation and Railway
   Authority
- · Gains and benefits for farmers and growers

Gareth Edwards, Digital Infrastructure Product Manager, Agrointelli, Denmark

17:00 End of 1st Conference Day

#### 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.

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#### 9:30 III. Interactive Round Table Session

During the interactive Round Table Session, we invite you to engage directly with other experts. These consist of interactively moderated conversations on various topics. Discuss and identify challenges within the industry as well as problems, needs, and solutions.

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#### Here are the first announced topics:

**#1: Building a Sustainable Business Model for Automated Solutions in Agriculture | Daria Batukhtina,** Sr. Manager Strategic Business Development, Innovation Center Europe, Kubota Holdings Europe BV, Netherlands

**#2: Partnering is Needed – How Can We Establish Equal Cooperation Between** Large and Small Businesses? | Ole Green, Founder, Agrointelli, Denmark

**#3: From Prototype to Production: The Biggest Challenges Facing Developers of Agricultural Robotics | James Szabo**, Agriculture Autonomy Portfolio Manager, Hexagon, United Kingdom

10:30 🔛 Networking & Coffee Break

#### IV. Sensors Perception in an Autonomy/Automation Context

#### 11:00 Practical Insight: 4D Imaging Radar in Agriculture

- Evolution "4D Imaging Radar", ready for agriculture?
- · Reality check of use-cases: expectations vs. real-world experiences
- Say goodbye to GNSS drift or signal loss radar-based SLAM

**Dipl.-Ing. Camille Marbach**, Product Management Perception Off-Highway, Bosch Engineering GmbH, Germany

## 11:30 Scaling Autonomy: A Unified Sensor Fusion Approach from Roads to Agriculture

- Geometrical Interpretable Filtering: Fuses sensor data over time for an interpretable model, improving object detection, tracking, and safety
- Scalability Across Domains: Reduces costs and effort by enabling flexible, cross-domain deployment
- Validation and Certification: Transparent design simplifies compliance with regulations and safety regulations
- Real-World Demonstrations: Showcasing applications from trucking to agriculture for robust object detection

Tim Stahl, Co-Founder, driveblocks GmbH, Germany

12:00 Lunch

#### V. Livestock Automation – Solutions & Use Cases

## 13:30 AI Meets Reality: How Automation Tackles the Challenges of Livestock Farming

- Unstructured reality why livestock environments present unique automation challenges
- Improving worker conditions and farm productivity an autonomous robot for cleaning of layer houses
- Dealing with uncertainty computer vision in farm environments

Dr. Christian Lamping, Product Development, Big Dutchman International GmbH, Germany

14:00 Advanced Technologies and Animal Welfare Go Hand in Hand – Use Cases from the Poultry Sector: Hyperspectral Imaging, Accelerated Electrons and a Multi-Axis Robot

- The problem of day-old male chick culling hyperspectral imaging for in ovo sex determination
- Chemical free and improved hatching rates accelerated electrons for hatching egg sanitization
- Save resources and improve vaccination quality a multi-axis robot for poultry vaccination

Jörg Hurlin, CEO and Founder, Agri Advanced Technologies GmbH, Germany

14:30 🔛 Networking & Coffee Break

#### VI. Robotics on the Fields

#### 15:00 Automation vs. Autonomy – Tackle the Limits (of Farmers)

- · Practical insights of developing automated Ag-tec for robots
- Sustainable automation what drives us
- The value of data and AI

Gregor Witzmann MSc., MBA, CEO, Farm-ING Smart Farm Equipment GesmbH, Austria

#### 15:30 Growth of the Agri-Robot Market

- Highlights & trends over the past 5 years
- · Added value by field examples: Less robotics, more automation?
- Tech development vs. business process vs. human change vs. environment Corné Rispens, MSc. BEng., Entrepreneur – Adoption of Agriculture Robots, DUCKSIZE, Netherlands

#### 16:00 Closing Remarks

#### 16:15 End of conference

#### **10th International VDI Conference**

### **Connected Off-Highway Machines**

Securing the Path to Autonomy

#### Date and venue:

June 4-5, 2025 Radisson Blu Conference Hotel Dusseldorf, Germany

Renowned speakers will present their results on the following topics:

- Digital Innovation & Connectivity in Off-Highway
- Off-Highway Autonomous Systems
- Artificial Intelligence & Cyber Security
- Data Management & Regulations
- Innovative Sensor & Radar Technologies

www.vdi-international.com/01K0902025





#### **Reasons to attend**

Meet international agriculture industry experts Hear about automation in European agriculture Gain Insights into managing the regulatory landscape Discuss the highlights & trends in the Agri-Robot market Benefit from practical experiences with Ag-Robots on the fields Network with innovative companies & organizations

#### About us



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 technologyrelated 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.



#### Upcoming Events

International Conference on Agricultural Engineering LAND.TECHNIK AgEng 2025 November 7-8, 2025 in Hannover, Germany

Call for Papers: Submit your paper before March 31, 2025

#### 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:

#### Vanessa Ulbrich

Project Consultant Exhibitions & Sponsoring Phone: +49 211 6214-918 Email: ulbrich@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, E/E for mobile Machines, 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 Email: georgiou-smith@vdi.de

#### **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. Dutch VAT directives apply. Please state your VAT-ID with your registration.

#### Conference venue

Radisson Blu Conference Hotel Dusseldorf Karl-Arnold-Platz 5 40474 Dusseldorf, Germany Phone: +49 211 45 53-0 Email: info.dusseldorf@radissonblu.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 conference hotel. Please refer to "VDI Conference". For more hotels: www.vdi-wissensforum.de/hr

#### VDI Wissensforum service package:

The conference package includes the conference documents (online), beverages during breaks, lunch, and the get-together on June 4, 2025.

**Conference attendance conditions and terms** can be found on our website: www.vdi-wissensforum.de/en/terms-and-conditions/

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## Registration

#### **5th International VDI Conference**

## Automation and Robotics in Agriculture

### VDI Wissensforum GmbH | VDI-Platz 1 | 40468 Düsseldorf | Germany www

## VDĪ

Register online! www.vdi-international.com/12K0901025

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Yes, I will participate as follows:

Participation Fee + VAT VDI Conference 04.-05.06.2025 (12K0901025) € 1990

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

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