

VDI

Europe's leading technology
conference on Autonomous Trucks

6th International VDI Conference **Autonomous Trucks**

May 16 and 17, 2022, Dusseldorf, Germany

- New Business Solutions & Digital Services for Commercial Vehicles
- Use Cases for Hub-to-Hub, confined Areas and Last Mile Delivery
- Safety and Security Development
- Data Handling, Connectivity and on-board Software
- Legal Frameworks, Sensor Control, and Sensor Fusion

+ Panel discussions „Autonomous Transport - Market Perspectives for today and tomorrow“

+ Free entrance to the parallel running VDI conferences „Connected Off-Highway Machines“ and „Smart Farming“

Meet international Experts from:



BAIN & COMPANY



DAIMLER TRUCK



An event organized by VDI Wissensforum GmbH
www.vdi-international.com/01K0915022



09:00 Registration & Welcome Coffee

10:00 Chair's Welcome and Opening Address

Dr. Gerhard Nowak, Partner / Vice President, Bain & Company, Germany

10:15 Autonomous Trucks: An OEM Perspective

- What is the business potential of autonomous trucking?
- How autonomous trucks will transform the industry
- Market environment and Daimler Truck's Dual Track Strategy

Dr. Peter Vaughan Schmidt, Head of Autonomous Technology Group, Daimler Truck AG, Germany

Opening
Keynote

I. Future Perspectives on Autonomous Trucking

OEM
Insights

10:45 Autonomous Trucking: Road to Mass Deployment

- Overview of the global trucking landscape, including Europe, and current state of development of autonomous truck technology
- Dive into different paths to driverless trucks, Plus's unique commercialization approach, and latest updates on its global deployment
- Discuss Plus's expansion and the company's exciting development efforts in Europe

Shawn Kerrigan, COO and Co-Founder, Plus, United States

11:15 Digital Transformation & New Business Models

- Digitalization of the truck and transport industry
- Existing business models and new technologies
- Acceleration of the market through new players

Niklaus H. Waser, Senior Vice President and Chief Digital Officer, MAN Truck & Bus SE, Germany

II. Automated Trucks for Transportation and Logistics

11:45 Safe and autonomous Commercial Vehicle Applications on private Grounds

- Requirements and challenges of designing a safe and productive solutions that uses autonomous trucks in gated areas, outdoors.
- Missions and ODDs for commercial applications in gated areas
- Automating driving and not-driving tasks with truck and trailer combinations
- Safety requirements and certifications for driving on private grounds

Dr. Giorgio Corbellini, Head of Commercial Vehicle Automation, Embotech AG, Switzerland

12:15  Networking Lunch

13:45 The Truck Transfer Program (TTP) with US-based carrier Knight Swift

- Overview of Embark's unique business model: Which has the fleet own and operate Embark-equipped trucks alongside their existing human driven fleet
- Breakdown of the various ways that a fleet's operations must adapt to run autonomous trucks

- How the Truck Transfer Program will be the first of its kind effort to place trucks in the hands of a fleet, Knight-Swift, in order to begin working through these various operational changes

Sam Abidi, CCO, Embark Trucks, United States

14:15 Bringing Platooning to Market across Diverse Use Cases

- Platooning has diverse applications beyond commercial long-haul trucking
- U.S. Military has been developing off-road platooning/convoy technology over the last two decades
- Platooning benefits extend beyond emission reduction and can be lifesaving in dangerous terrain
- Platooning offers significant benefits for resource extraction industries, mitigating safety issues/labor shortages

Joseph Putney, Director of Commercial Systems, Robotic Research LLC, United States

14:45 The All Weather Autonomous Real Logistics Operations and Demonstrations (AWARD) Program

- Development of autonomous heavy-duty vehicles in harsh weather conditions for real-logistics operations
- Improving safety and efficiency of freight transport and make vehicle operations more comfortable
- Cost-benefit analysis to demonstrate the added value and economic viability of automated systems in real logistics operations.

Dr.-Ing. Arwed Schmidt, Director of Strategic Affairs, EasyMile, France

15:15  Networking & Coffee Break

15:45 Taking Transportation to the next Level

- Self-driving trucks to transport freight on highways between customer hubs
- See-Think-Act system perceives, understands and takes action autonomously
- Safety and security in a holistic systems engineering approach

Andrew Culhane, Chief Strategy Officer, Torc.AI, United States

16:15 Panel Discussion: Autonomous Transport - Market Perspectives for today and tomorrow

Hosted by Dr. Gerhard Nowak, Bain & Company, Germany

Panelists:

- Sam Abidi, CCO, Embark Trucks, United States
- Shawn Kerrigan, COO and Co-Founder, Plus, United States
- Dr. Peter Vaughan Schmidt, Head of Autonomous Technology Group, Daimler Truck AG, Germany

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.

08:45 Welcome Coffee

09:30 Chair's Welcome

Stephan Keese, Senior Partner, Roland Berger, United States

III. Development of Autonomous Applications

09:35 From Assistance Systems to Automated Hub-2-Hub Transportation: A Modular and Scalable Approach for Efficient Development

- A scalable control unit allowing the gradual increase of the automation level
- A modular software architecture and software development methods/process to ensure robustness and compliance to standards
- Effective virtual calibration and verification in suitable environments to enable short development cycles
- Considering safety and security from beginning to ensure safe, connected driving

Dipl.-Inf. (FH) Klaus Fuchs, Senior Product Manager ADAS/AD Software & Controls, AVL Software and Functions GmbH, Germany, and DI (FH) Gernot Hasenbichler, Senior Product Manager ADAS/AD Truck & Bus, AVL List GmbH, Austria

10:00 An AD Management System to fulfil legal and Technology Compliance Requirements for SAE L3 & L4 Applications

- Requirements for SAE L3 and L4 functions: permanent field surveillance and a continuous SW updateability.
- The new UN ECE regulation for Automated Lane Keeping System (R157)
- An holistic AD Management System framework

Lucas Blublitz, Senior Consultant Autonomous driving, and Johannes Boithling, Project Manager, both: P3 Group, Germany

10:30 Control Tower Software: Opportunities and Limitations for Autonomous Trucks

- Managing single and multiple robot vehicles on yards.
- helyOS - an innovative software development framework accelerates yard automation
- Presentation of demo use cases from different R&D projects
- What's next? Paving the road to open source

Felix Keppler, Research Associate, Vehicle Control and Sensor Systems, Fraunhofer IVI, Germany

11:00  Networking & Coffee Break

IV. AI and Sensor Perception for Autonomous Applications

11:30 AI in Off-Road Applications: NN versus rule-based?

- Off-Road application with rule based AI algorithms for more flexible tuning, modifications and extensions
- Manual training of neural networks on occasionally occurring events

Kris De Meester, VP Sales & Business Development, XenomatiX, Belgium

12:00 Trucks at Night and in Any Weather

- Safety and business continuity enabled with technology
- L2-L4 truck use cases
- Addresses all vehicle perception requirements in limited visibility

Ofer David, PhD, Co-Founder & CEO, Bright Way Vision, Israel

12:30  Networking Lunch

V. Self-Learning and Cybersecurity for Autonomous Vehicles

14:00 Accelerating Autonomous Driving using Self-Supervised Learning

- Progress in perception systems for autonomous driving slowed down over the last years
- Supervised learning in autonomous driving has come to its limits
- Can new approaches such as self-supervised learning overcome this limitation and accelerate further development?

MSc ETH, Igor Susmelj, Co-Founder, Lightly AG, Switzerland

14:30 Cybersecurity for Commercial Vehicles and its Impact on Project Management

- Cybersecurity impacts all projects from software to the overall vehicle development
- Covering new requirements and expectations to ensure compliance
- New competences as well as new way of working is required to cope with the new standards and regulations

Manuel Sandler, Associate Partner, Cyres Consulting, Germany

VI. Building the Next Generation Autonomous Vehicles

15:00 Building for the Future of Freight Transportation

- If you started with a clean sheet of paper, what kind of truck would you build today?
- To maximize for cost, the focus needs to be on overall efficiency: EV, aero, and build for autonomy, not for humans

Richard Bishop, Advisor, Solo Advanced Vehicles Technologies, USA

15:30 Conference Chair's Closing Remarks

15:45 End of Conference



Upcoming Events

International Congress ELIV Marketplace 2022

E/E in commercial vehicles

November 15–16, 2022 in Baden-Baden, Germany

6th International VDI Conference

Smart Farming

Date and venue:

May 16-17, 2022

Van der Valk Airporthotel Dusseldorf, Germany

Following topics will be discussed:

- The state of AgTech in Europe and how it compares to the US
- Farming Technologies: Optimizing the Use of Robotics, AI and more
- A Question of Data: How Standards pave the Way for Smart Farming Worldwide
- Safety Requirements for Autonomous Agricultural Machinery
- What's going on in the AgTech StartUp Community?

<https://www.vdiconference.com/12K0100022>

Parallel
running
conferences



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7th International VDI Conference

Connected Off-Highway Machines

Date and venue:

May 16-17, 2022

Van der Valk Airporthotel Dusseldorf, Germany

Following topics will be discussed:

- The Future of Autonomous Mobile Machines
- Connected Vehicle Technology
- Machine Maintenance and Remote Monitoring
- Importance of Data Management
- Safety & Security of Connected Off-Highway Machines
- Digital Solutions for Fleet Management & Fleet Operations

www.vdiconference.com/01K0902022



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Conference venue
Van der Valk Airporthotel Düsseldorf
Am Hülserhof 57
40472 Düsseldorf, Germany
Phone: +49 211/20063-0
Email: dusseldorf@valk.com



**You will find more hotels
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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 Van der Valk Airporthotel Düsseldorf. 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 May 16, 2022.

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

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Please submit your topic to:
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Registration

Autonomous Trucks



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Yes, I will participate as follows:

Participation Fee + VAT

VDI Conference 16.-17.05.2022
(01K0915022) € 1890

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