

Autonomous Off-Highway Machinery Technology Hybrid Summit



+18 high profile Speakers & +100 attendees

- 8 hours of networking breaks + drinks reception
- Thought provoking panel discussions
- Dedicated sponsor booth / display area
- Breathtaking venue

Leonardo Royal Hotel
Berlin Alexanderplatz

Leonardo
Hotels

February 23-24, 2023

Main Event

Berlin, Germany + Online

January 24, 2023

Pre-Event Teaser

Online

SPONSORS







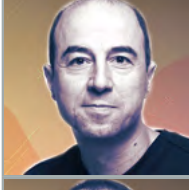



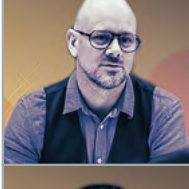





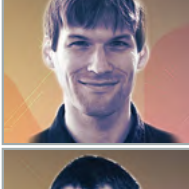



Algoryx



BRONZE

BRONZE

	Rauno Heikkilä Professor, Director of Research Team	
	Aref Mohammad Technical Lead, Robotics & AI	
	Mattia Gabetti Manager, Connected & Non-Connected Services Development	
	Ali Soofastaei AI Program Leader	
	Thierry Bernard Owner	
	Eva Carranza Global Director ESG & Sustainability	
	Prof. Dr.-Ing. Jürgen Weber Director of the Institute of Mechatronic Engineering Technische Universität Dresden, Institute of Mechatronic Engineering	
	Tatiana Minav Associate Professor	
	William Sitch Chief Business Officer	
	Damien Forest Director of Development & Strategy	
	José Luis Peralta CTO & Partner	

	Cédric Seguineau Head of HSQE	
	Harald Thum Managing Director	
	Heikki Keranen Head of Technology	
	Reza Ghabcheloo Associate Professor	
	Denis Pogosov Principal R&D Engineer	
	Erik Jonuks CEO	
	Marco Hutter CEO	
	Riccardo Viaggi Secretary General	
	Bryant Walker Smith Associate Professor	
	Michael Holzner Global Automation Engineer	

MEDIA PARTNERS

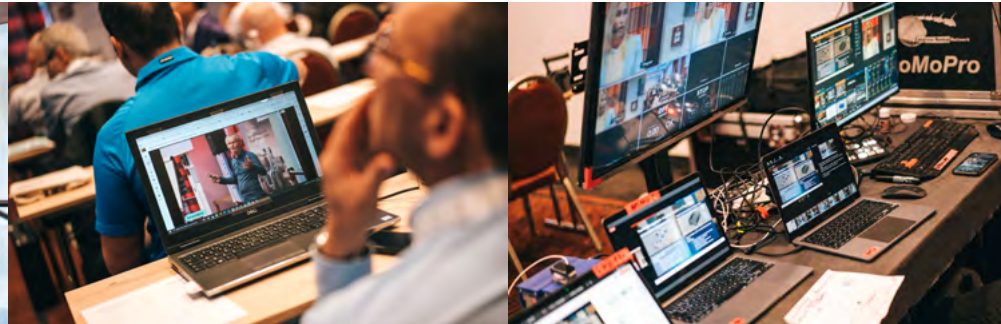


ABOUT INNOVATRIX



At Innovatrix we strive to create conferences that inspire and connect the top decision-makers from the largest industries in the world. From manufacturing and technology to finance and pharmaceuticals, we embrace innovation and focus on providing a breeding ground of sharing, networking, and discussion for our attendees. Our highly skilled team has a collective experience stretching back two decades in B2B events production, marketing, sponsorship and execution.

Businesses stagnate if they don't incorporate the latest innovative techniques, be that with actual technologies or simply just new ways of thinking. Innovatrix was established to provide a platform for top professionals in any given field to share their knowledge and learn from others with regard to these modern techniques.



Innovatrix Hybrid Events

Our main partner for organizing hybrid events – Hopin.

In-Person and Online participation:

- Network one-on-one over live video.
- “Connect” and exchange virtual business cards for following up later.
- Join breakout sessions and participate in groups.
- Watch keynote presentations on stage, send chat messages, fill out polls, and explore interactive expo areas.

Join us for the best hybrid event experience!

What our participants say

“Good composition of speakers, content was also good with fantastic interaction”

Anders Hedqvist
Head of Strategic Projects
Epiroc

“It was really a successful, interactive, impressive and well attended conference. Arrangements and handling of the event was really impactful”

Mahesh Saini
Head Quality Assurance
Sun Pharmaceutical Industries

“It was great to see so many different presentations from all areas of this off-highway electrification. We will be here next year”

Jeroen Soepnel (GOLD SPONSOR)
Head of Marketing CSB
Webasto Group

“Over these 2 decades I have been to lots of congresses, summits – you name it. This one I would rank at the top. I thought I’ll attend only the lectures that apply to my work the most – but I ended up attending them all”

Ivan Velimirovic
Senior Associate
Hemofarm AD



Check the videos of our previous events and follow us on Social Media



Autonomous Off-Highway Machinery Technology Hybrid Summit

INNOVATRIX
ENGAGE • INSPIRE • INNOVATE

Virtual Pre-Event Teaser: 24 January 2023

Main Event: 23 – 24 February, 2023

Autonomous machines and robots are definitely a new growth point for the agricultural, mining and construction industries, which have crept up to us quietly from the point of view of the layman. Increasing productivity and working hours, reducing the cost of operating activities, safety at facilities are some of the many advantages of this technology.

Autonomous Off-Highway Machinery Technology Hybrid Summit – this conference was developed with a primary focus on knowledge exchange, catering exclusively to industry leaders and decision-makers. The conference participants will be represented not only by manufacturers of machines and providers of technical solutions, but additionally end users from the agricultural, mining and construction sites, who will present their results from the introduction of this new technology.

The expert speakers will present the current technological advancements in the Automation, Robotics and Autonomous off-road machines, changes in legislation, market reviews, new tests and business cases. The industry must be flexible because the regulations are still not fully defined. So, with this conference we hope to present a platform where our delegates will discover the most sustainable solutions of the future.

Do not forget to mark 23–24 February 2023 in your calendar!

With the current global environment in mind, we have taken every step to ensure the safety of our clients and therefore we welcome you to the beautiful city of Berlin for our Autonomous Off-Highway Machinery Technology Hybrid Summit.

CONFERENCE LEARNING POINTS

- Legislation is needed to drive innovation
- Automation and robotics for NRMM
- Deep implementation of AI and ML
- Points of intersection of autonomous machines and electrification
- Deployment of autonomous machines on real objects and sites
- Development of cyber-physical systems
- ADAS infrastructure technology perspectives
- Case study: fully autonomous tractor
- Robotic Off-Highway Equipment
- Automation in mobile hydraulic control
- Connectivity – challenges and requirements for the next step
- Using digital twins and simulation in various domain
- Case study: fully autonomous excavator
- Functional Safety Impact
- Positioning and navigation, GNSS challenges
- Collaborative perception
- Customizable UX/UI

Agriculture | Construction | Mining | Forestry

WHY SPONSOR?

Our unique conference sponsorship packages offer you the chance to showcase your products, services, or solutions directly to a targeted audience of industry executives who need them.

Sponsors can promote their business to industry decision-makers with a speaking opportunity and draw attention to their products and logo with exhibition stands and corporate materials. Significant exposure such as marketing campaigns, corporate event materials, and social media promotion pre- and post-event help strengthen our sponsor's brand, and we provide exhaustive post-conference lead materials for your continued business development.

We guarantee the potential for a higher Return on Investment (ROI) can be achieved with our comprehensive sponsorship packages that afford your company an extensive range of benefits and exclusive opportunities. We offer a number of sponsorship options designed to meet your strategic goals.

If you are interested in seeing our detailed sponsorship packages, please contact our Sponsorship team:

sponsorship@innovatrix.eu

[Read more about Sponsorship](#)



+420 214 214 844 info@innovatrix.eu www.innovatrix.eu

PRE-EVENT TEASER

Autonomous Off-Highway Machinery Technology Hybrid Summit

FREE PRE-EVENT ONLINE [HOPIN]

**24 January 2023
14:00 – 16:50 CET**

In preparation for our Autonomous Off-Highway Machinery Technology Hybrid Summit taking place on 23-24 February 2023, we are delighted to introduce this completely FREE Pre-Event “teaser” webinar – limited to 500 places for our clients! With the world rapidly adopting autonomous machines, the most innovative and impressive technologies are on display in the off-highway sector, and that’s why we are providing an inside-industry look at the subject with top companies with exclusive materials. This Pre-Event webinar enables you to check out the buzz around our Main Event, the ‘Autonomous Off-Highway Machinery Technology Hybrid Summit’, and have a sneak peek at the premier topics from our speakers such as the deploying autonomous mobile machines, infrastructure challenges, innovations in positioning and navigation, and ADAS technology perspectives.

The Pre-Event Teaser is only limited to 500 places. Don’t miss out, book your place now!

 Ali Soofastaei AI Program Leader Vale	 Implementation of Advanced Analytics and AI in Mining; Opportunities and Challenges <ul style="list-style-type: none">Advanced Analytics levels in miningAI application: A powerful optimization tool for miningMining digital transformation - opportunitiesMining digital transformation - challenges	14:00 – 14:30 CET <hr/> 8:00 – 8:30 EST
 Rauno Heikkilä Professor, Director of Research Team University of Oulu	 Autonomous Low-Emission Swarm of Infra Construction Machinery <ul style="list-style-type: none">Infra construction work sites, needs for swarmFrom autonomous control of single machines to control of machine swarmSwarm of University of Oulu, research aims and stepsLessons learned from Japanese experimentsConclusions	14:35 – 15:05 CET <hr/> 8:35 – 9:05 EST
OPEN FOR PLATINUM OR GOLD SPONSOR Note: This is an example. Sponsors can choose their own presentation		15:45 – 16:15 CET <hr/> 9:45 – 10:15 EST
 Aref Mohammad Technical Lead, Robotics & AI Cargotec	 Off-highway and autonomous, cheap or complex? <ul style="list-style-type: none">Reshaping product development/managementSafety, opportunity, and challengeDoing inventions by the book	15:10 – 15:40 CET <hr/> 9:10 – 9:40 EST
 Bryant Walker Smith Associate Professor University of South Carolina	 The potential transnational character of automated and remote off-road systems. How should law evolve? <ul style="list-style-type: none">The trustworthy company	16:20 – 16:50 CET <hr/> 10:20 – 10:50 EST

REGISTER FOR FREE NOW



DESIGN & DEVELOPMENT OF ZERO-EMISSION OFF-HIGHWAY MACHINERY

Main Event | 19-20 May 2022 | Berlin, Germany + Online

Pre-Event | 28 April 2022 | Virtual

Some of the attendee companies:



08:00 **Registration and Networking**

08:45 **Moderator's Opening Remarks**

09:00 - 09:30 CET **How the upcoming Machinery Product Regulation will affect the autonomous off-road machineries for agriculture in Europe**

- What is expected in the new regulation concerning autonomy
- How it may affect the current machineries
- The needs for updating the standards



Cédric Segueau
Head of HSQE
Naio Technologies



09:35 - 10:05 CET **Progression from autonomous vehicles to the autonomous system**

- Challenges in human-centered vehicle autonomy
- Making the problem bigger: break down the complexity
- The autonomous system to rule them all



Denis Pogosov
Principal R&D Engineer
Vanderlande Industries B.V.



10:10 - 10:40 CET **Panel Discussion: What could be strategies to share autonomy?**

Sharing autonomy to tackle the challenges and shortening the time for autonomous solutions to reach the market.

Denis Pogosov | Vanderlande Industries B.V. (Moderator of the Panel)
TBA

10:40 **Networking Coffee Break**

11:10 - 11:40 CET **Autonomous Excavation**

- Open Infra BIM introduction
- BIM based control of excavation
- Smart Excavator – available methods for control the machine
- Experimental results with evaluations



Rauno Heikkilä
Professor, Director of Research Team
University of Oulu



11:45 - 12:15 CET **How automation and robotics are developing and what are the main challenges of the non-road machinery industry**

OPEN FOR SPONSOR

Note: This is an example. Sponsors can choose their own presentation

12:20 **Networking & Lunch Break**

13:30 - 14:00 CET **Localization and Mapping for Autonomous Off-Road Robots**

- Motion-based sensor calibration (no checkerboards!)
- Lidar, camera, and radar-based SLAM in GPS-denied areas
- Localization in dynamically changing environments
- Case studies and success stories



William Sitch
Chief Business Officer
Main Street Autonomy



14:05 - 14:35 CET **Communicating Construction Machines as Prerequisite for Digital Construction Processes**

- The construction site of the future is connected and automated to further improve productivity and efficiency
- Construction companies do have mixed fleets and mixed technologies
- The nowadays installed systems cannot deal with these problems at all
- Within the joint research project Bauen 4.0 solutions for mobile machine automation and connectivity were developed and demonstrated
- To close the gap between these demonstrators and commercial products, the Construction Future Lab was founded

Jürgen Weber



Director of the Institute of Mechatronic Engineering
Technische Universität Dresden, Institute of Mechatronic Engineering



14:40 - 15:10 CET **Real cases of GNSS challenged environment**



José Luis Peralta
CTO & Partner
GIM Robotics



15:10 **Networking Coffee Break**

15:45 - 16:15 CET **Towards autonomous road-maintenance operations: the InfraROB project**

- EU-funded project to run until 2025 to create autonomous paver
- Great collaboration effort with road operators, research organisations and industry
- Autonomous maintenance operations means less disruptions on road and less accidents



Riccardo Viaggi
Secretary General
CECE - Committee for European Construction



16:20 - 16:50 CET **Autonomous Excavators for Landscape and Dry-stone**

- Automation and teleoperation of tracked and spider excavators
- Autonomous landscaping and material handling demonstrated in large-scale constructions
- Teleoperation using augmented reality for efficient operation in remote and hazardous zones.



Marco Hutter
CEO
Gravis Robotics



16:55 - 17:25 CET **Machine and Material: A combined approach towards sustainable construction**

- On the way to 6.5 billion people by 2050 how we construct will be continuously important
- Digitalization enables connectivity and productivity gains in constructions
- Connecting People and Objects to the construction ecosystem ensures progress towards sustainable outcomes
- Assist concepts
- KTEG GmbH's Cooperation with Leica
- Remote solutions



Harald Thum
Managing Director
KTEG



Eva Carranza
Global Director ESG & Sustainability
Hexagon Geosystems



17:30 - 18:00 CET **Panel Discussion: Positioning and navigation for off-road vehicles**

William Sitch | Main Street Autonomy
Holger Pietzsch | Hexagon

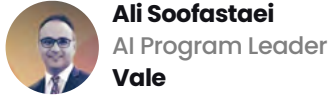
18:05 **End of Day One & Closing word from the Chair**

18:10 **Open Drinks Reception**
RESERVED FOR SPONSOR

08:45 **Moderator's Opening Remarks**

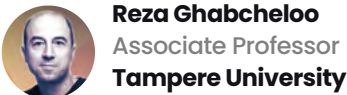
09:00 - 09:30 CET **Maturity Assessment Framework: An innovative approach to tackle the digital transformation challenges in mining**

- Advanced Analytics in Mining Industry; Challenges
- Advanced Analytics in Mining Industry; Opportunities
- Mining 4.0; Critical Steps
- Analytics Maturity Challenge & Recommended Solution
- Maturity Assessment; A Case Study



09:35 - 10:05 CET **Advanced Learning for Machine Automation**

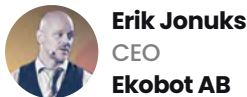
- Data driven methods for model learning and control of industrial cranes
- Learning to do bucket filling using a wheel loader from human demonstrations
- Learning on real machines



10:05 **Networking Coffee Break**

10:40 - 11:10 CET **Autonomous robots increase productivity and reduce the use of pesticides in the agricultural sector**

- Demand for higher productivity, reduced use of chemicals is driving the agbot market rapidly forward for agbots
- Robotics AI and vision systems enable digital transformation in the agricultural sector
- Analysis of performance and data collection in real time



11:15 - 11:45 CET **Enabling secured connectivity for Autonomous Off-Highway machinery**

- Smart implementation of 5G and WiFi technologies
- Utilizing antenna technologies efficiently
- Making connectivity seamless for operators
- Emerging technology options for future connectivity requirements



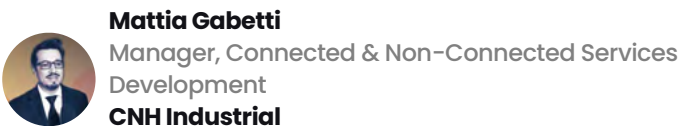
11:50 - 12:20 CET **Embedding industrial vehicles in state-of-the-art communication networks**

OPEN FOR SPONSOR
Note: This is an example. Sponsors can choose their own presentation

12:20 **Networking & Lunch Break**

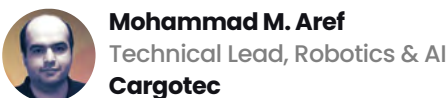
13:30 - 14:00 CET **UX/UI Design process on Services Development Connected and Non-Connected**

- Persona's mapping
- UX Design process
- Agile Product Management
- Quality Assurance programs and strategies on fast moving Agile development projects



14:05 - 14:35 CET **The journey from mobile machines to autonomous robots**

- AI application, from invention to integration
- Safety of prototype vs. product
- Improvement or redesign?



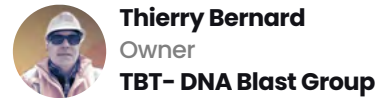
14:40 - 15:10 CET **Machine learning & physics-based radar simulation in autonomous machines**

OPEN FOR SPONSOR
Note: This is an example. Sponsors can choose their own presentation

15:10 **Networking Coffee Break**

15:40 - 16:10 CET **Blasting is following the trends and the need of continuous updated data of the terrain (ground surface and geology)**

- Digital transformation in the mining industry
- Blast Digital Twins
- Optimizing blast and ensuring worker safety
- Reducing carbon footprint



16:15 - 16:45 CET **Autonomous robots for security & safety of industrial sites**



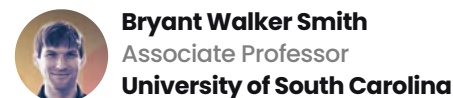
16:50 - 17:20 CET **BAUMA reflections: Any progress on link between Electrification and Automation?**

- Bauma 2022 Reflection between electrification and automation trends in NRMM field
- Assessment for autonomous non-road applications from perspective of completed projects



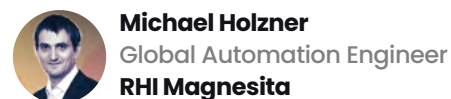
17:25 - 17:55 CET **What makes off-road unique legally?**

- Legal frameworks and potential issues with the US as principal example



18:00 - 18:30 CET **Navigation System for Robots**

- Safety models, Simulation, and Naturalistic Driving Data
- Advancing the Safety of Automated Driving Systems



18:00 - 19:05 CET **Panel Discussion: Safety challenges concerning Autonomous technology in various conditions**

TBA

Moderated by the moderator with the contribution of speakers from Day 1

19:10 **End of Day Two & Closing word from the Chair**

UPCOMING OFF-HIGHWAY EVENTS

INNOVATRIX
ENGAGE • INSPIRE • INNOVATE



January 24, 2023 | Online

Pre-Event Teaser: Autonomous Off-Highway Machinery Technology Hybrid Summit

In preparation for our Autonomous Off-Highway Machinery Technology Hybrid Summit taking place on 23-24 February 2023, we are delighted to introduce this completely FREE Pre-Event "teaser" webinar - limited to 500 places for our clients! With the world rapidly adopting autonomous machines, the most innovative and impressive technologies are on display in the off-highway sector, and that's why we are providing an inside-industry look at the subject with top companies with exclusive materials.

This Pre-Event webinar enables you to check out the buzz around our Main Event, the 'Autonomous Off-Highway Machinery Technology Hybrid Summit', and have a sneak peek at the premier topics from our speakers such as the deploying autonomous mobile machines, infrastructure challenges, innovations in positioning and navigation, and ADAS technology perspectives.



February 23-24, 2023 | Berlin, Germany + Online

Autonomous Off-Highway Machinery Technology Hybrid Summit

Autonomous machines and robots are definitely a new growth point for the agricultural, mining and construction industries, which have crept up to us quietly from the point of view of the layman. Increasing productivity and working hours, reducing the cost of operating activities, safety at facilities are some of the many advantages of this technology.

Autonomous Off-Highway Machinery Technology Hybrid Summit - this conference was developed with a primary focus on knowledge exchange, catering exclusively to industry leaders and decision-makers. The conference participants will be represented not only by manufacturers of machines and providers of technical solutions, but additionally end users from the agricultural, mining and construction sites, who will present their results from the introduction of this new technology.

The expert speakers will present the current technological advancements in the Automation, Robotics and Autonomous off-road machines, changes in legislation, market reviews, new tests and business cases. The industry must be flexible because the regulations are still not fully defined. So, with this conference we hope to present a platform where our delegates will discover the most sustainable solutions of the future.



April 13, 2023 | Online

Pre-Event Teaser: 2nd Design & Development of Zero-Emission Off-Highway Machinery

With so much focus on carbon neutrality and such determination from OEMs to achieve zero-emission goals across the off-highway industry, we are thrilled to introduce the Pre-Event "teaser" webinar on 13 April 2023 - free for our clients!

This Pre-Event teaser will enable you to have a sneak peek at some of the premier topics from

the revered speakers at our Main Event: '2nd Design and Development of Zero-Emission Off-Highway Machinery Hybrid Summit. Everyone is welcome as we have 500 seats. Don't miss this Pre-Event Teaser and Network with the industry leaders.



May 11-12, 2023 | Berlin, Germany + Online

2nd Design & Development of Zero-Emission Off-Highway Machinery

Electric off-highway machines are already a fact in the markets of construction, mining, agricultural, forestry and even defense industries. The current challenge is in the direction of zero emissions of these machines without reducing their power and efficiency.

After the success of the first event of the 2022 edition and continuing the tradition, the '2nd Design and Development of Zero-Emission Off-Highway Machinery Hybrid Conference'

was established to give enterprises a platform to cement their presence in the industry, by exchanging experience, opinions and networking with market leaders, and discussing current trends and upcoming challenges, in order to reduce their collective carbon footprints.

The focus will be on the on the latest developments and trends in the development of electric Off-Highway Machinery, last cases of implementation of electric machines, regulations, innovations in batteries and charging infrastructure, Thermal management solutions, Hydraulic systems, Electric Drive-trains and ePowertrain, Hydrogen technology and Alternative Fuel Solutions, engines and many more exciting and innovative topics.

**Interested in joining both events?
Contact us for an attractive bundle discount**

+420 214 214 844 info@innovatrix.eu www.innovatrix.eu