3. International VDI Conference 2019

Smart Construction Equipment

December 3–4, 2019, Munich, Germany

• The Future of Building Construction
• New AI Developments in Construction
• Automation in different Industries
• Understanding the Digital Construction Market
• Latest Information on Cyber Security & Legal Challenges from Data Management

+ World Cafés
+ Panel Discussion: The Future of AI in Construction

Meet international Experts from:

An event organized by VDI Wissensforum GmbH
www.vdi-international.com/01K0916019
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.

About us

**VDI**

**Expected Participants according to Functions**

- Digital Product Manager: 13%
- Head of Telematics/Connectivity: 15%
- Head of Electrical and Electronic Systems: 22%
- Head of Research and Development...
- Head of Innovation: 24%

**Expected Participants according to Industries**

- Telecommunication and Software Providers
- Tier 1 and Tier 2 Supplier
- Construction Companies
- Equipment Producers/Off Highway OEMs

**Reasons to attend**

- **Meet** international Key Players of the Construction Industry
- **Discuss** the Impact of Automation and Digitization on your Industry
- **Learn** about Chances and Challenges of the Future Smart Sites with AI, Connectivity and Telematics
- **Network** with Experts from Equipment Producers, Suppliers and Construction Companies
- **Benefit** from our Interactive Networking Sessions
- **Prepare** for the Future of Construction

**1st day**

Day of Week, Date, Year
08:45 Registration & Welcome Coffee

10:15 Chair’s Welcome & Opening Address
Dr. Oliver Geibig, Division Head & Trend Scout, fischerwerke GmbH, Germany

10:30 Say Hi & Get to know your Peers!
Have your business cards on hand and see who else is joining the event!

I. The Future of Building Construction

10:45 The Jobsite of the Future - Autonomy in Construction
• A vision for the fully autonomous construction jobsite
• New applications for automation, equipment tracking capability & data analytics
• Emerging technologies as the next step to industry-wide adoption
• Preparing for the jobsite of the future
Jason Ramshaw, Construction Digital & Technology, Caterpillar Inc., UK

11:15 Games Technology in Asset Design, Construction and Management
• Low-cost methods for modelling existing assets
• The value of semantic models for data integration
• Digital Twins and the V-process
Dipl.-Ing. Kim Jung, CTO, LocLab Consulting GmbH, Germany

11:45 Refurbishment of the Runway Salzburg Airport - Digitization of Construction Processes
• Special logistical challenges due to the total closure of flight operations
• Digitization of processes: Optimization in asphalt paving, fleet management, 3D paving control and compaction control
• Special features of an airport construction site
Dr. Christoph Winkler, Project Manager - Innovation in construction operation, PORR Bau GmbH, Austria

12:15 Lunch

II. Artificial Intelligence at Construction Sites

13:45 Optimizing Large-Scale Earthwork Operations through an AI Supported IoT Solution
• Real-time state tracking, independent of specific sensor solutions
• AI based resource optimization
• Remote monitoring and smart on-site assistance
• Experiences from real world deployment
Marco Hirsch, Researcher, German Research Center for Artificial Intelligence (DFKI), Germany & Francisco Javier Royo Abancéns, Head of R&D Projects, Ferrovial Agroman, Spain

14:15 AI, Machine Learning and the Long Road to autonomous Equipment in Construction
• Complicated job sites hindering artificial intelligence

14:45 Tunnel Facility Management – Experiences of using Artificial Intelligence
• How can AI help to reduce cost and risk during tunnel maintenance?
• Tunnel inspection process and the chance for a digital tunnel twin
• RetroBIM as an important part for effective Tunnel Facility Management
Oliver Schneider, Business Unit Manager Tunnel, Amberg Technologies AG, Switzerland & Veronika Petschen, Junior Project Leader, Amberg Group AG, Switzerland

15:15 Panel Discussion: The Future of AI in Construction
Chairman: Prof. Dr. Thomas Bock, Chair for Building Realization and Robotics, TU Munich and German Institute for AI
Panelists:
Oliver Schneider, Business Unit Manager Tunnel, Amberg Technologies AG
Veronika Petschen, Junior Project Leader, Amberg Group AG
Marco Hirsch, Researcher, DFKI
Francisco Javier Royo Abancéns, Head of R&D Projects, Ferrovial Agroman
Elza Marisa Paiva de Figueiredo, Autonomous System Manager for Europe, Danfoss Power Solutions ApS

16:00 Networking & coffee break

III. Cyber Security and Legal Challenges

16:30 The Importance of Product Cyber Security
• What is CS about - The perimeter of attention
• Be ready for it: The Incident Response Plan
• Can we prevent incidents? Design for Cyber Security
Piero Blunda, Product Safety and Cybersecurity, CNH Industrial, Italy

17:00 Industry 4.0 meets Law – Legal Challenges from Data Management to Smart Dispute Resolution
• Legal Aspects of Lifecycle Data Management
• From Data Usage via Data Governance to Data Stewardship
• Influence of European Data Protection Laws on Smart Processes
Eduard Dischke, Specialist for Construction Law, KNH Rechtsanwälte, Germany

17:30 Summary of the first 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.
IV. Automation in different Industries

09:00 True Sustainability lies in the optimized Use of available Resources - Examples from Mining and Construction Segments
- Lean mindset is the base
- The trap of over capacity
- Extra steel means extra fuel
- Alternative fuels and electrification
- Automation and autonomous vehicles
Jon Fang, Project Manager, Scania Mining & Anders Lampinen, Director New Technologies/Trucks, Scania, Sweden

09:30 Open infra BIM based Automation for Road Construction
- Automation as a part of Open Infra BIM ecosystem
- BIM based autonomous control method for machines
- How to measure real-time work area changes
- Safety requirements for autonomous control
- Experiments of autonomous operation
Professor Rauno Heikkilä, Digitalized Construction & Mining Operations and Head of Structures & Construction Technology, University Oulu, Finland

V. Profitability through Smart Equipment

10:00 Machine Automation and Autonomy - Following the ROI
- Construction equipment automation and autonomy
- Levels of autonomy and return on investment
- Multi-machine control and latest developments in machine automation
Dr. Ulrich Vollath, CTO Autonomous Technologies, Trimble Inc., Germany

10:30 Networking & Coffee break

11:00 Machine Integrated Measurement & Connectivity – A holistic Approach to drive Customer Productivity
- Telematics and connected milling
- Tracking a performance from A to Z: Innovative measurement, smart documentation & invoicing
- Facing the challenges of reliable and accurate measurements vs. rough site conditions and various customer applications
Dr. Stefan Wagner, R&D Team Leader Technology Development, Wirtgen Group, Germany

11:30 Intelligent Tires – How to Improve Operations & Reduce Costs
- Digital & Remote Tire Monitoring Solutions for Construction Sites
- Best practice use cases & cost saving potentials from the industry
- Advanced Telemetry Analytics & Route Optimization for continuous improvement of vehicle operations
- Interaction with other FMS/OEMs & future trends
Michael Christian Lorenz, Business Development Digital Solutions, Continental Reifen GmbH, Germany

VI. Understanding the Digital Construction Market

13:00 World Cafés
Restrictions and opportunities when using BIM in underground engineering - Ulrike Nohlen, Division Manager, MTS Maschinenentechnik Schrode AG
Adding value through Digitization, Automation and Big Data - Dipl.-Ing. Roland Wagner, Head of Product Marketing, CODESYS Group and other experts!

14:30 Understanding Industry and User Needs: Tapping into the Digital Construction Market
- The complexity of trades and the digital construction ecosystem
- Our vision and contribution to the digital construction
- The role of a solution provider based on specific capabilities
Dr. Marc Jost-Benz, Business Owner of the Digital Business Team, Bosch Power Tools GmbH, Germany

15:00 Conference chair’s closing remarks
15:15 End of conference
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 Schwarz
Project Consultant
Exhibitions & Sponsoring
Phone: +49 211 6214-917
Fax: +49 211 6214-97917
Email: schwarz@vdi.de

Become a speaker

Become a speaker at our international VDI Construction & Off-Highway Conferences. Make yourself known in the industry and discuss best practice examples with other international experts.

Please submit your topic to:
Carolin Leuchten
Product Manager International Business
Phone: +49 211 6214 - 118
Email: Leuchten@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. German VAT directives apply. Please state your VAT-ID with your registration.

Conference venue
Mercure Hotel München Süd Messe
Karl-Marx-Ring 87
81735 München, Germany
Phone: +49 89 63270
Email: H1374@accor.com

Hotel room reservation: A limited number of rooms has been reserved for the benefit of the conference participants at the Mercure Hotel München Süd Messe until November 1st, 2019. Please refer to “VDI”. 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 December 3rd, 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.

Data protection: VDI Wissensforum GmbH captures and processes the address data of conference participants for their own corporate advertising purposes, enabling renowned companies and institutes to reach out to participants by way of information and offers within their own marketing activities. We have outsourced in part the technical implementation of data processing to external service providers. If you do not want to receive any information and offers in the future, you may contradict the use of your personal data by us or any third parties for advertising purposes. In that case, kindly notify us of your contradiction by using the email wissensforum@vdi.de or any other of the contact options mentioned.

Registration
Conference by VDI Wissensforum GmbH | www.vdi-international.com/01K0916019 | Phone +49 211 6214-201 | Fax +49 211 6214-154
### 3. International VDI Conference 2019

**Smart Construction Equipment**

**Register online!**
www.vdi-international.com/01KO916019

VDI Wissensforum GmbH
P.O. Box 10 11 39
40002 Düsseldorf, Germany
Phone: +49 211 6214-201
Fax: +49 211 6214-154
Email: wissensforum@vdi.de
www.vdi-international.com/01KO916019

---

**Participation Fee + VAT**

Yes, I will participate as follows:

- [ ] VDI Conference 03.-04.12.2019 (01KO916019) €1690

- [ ] 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

<table>
<thead>
<tr>
<th>VDI membership no.</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>First Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Last Name (Family Name)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Company/Institute</th>
<th>VAT-ID</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Street</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ZIP Code, City, Country</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

Please state your invoice address if this differs from the address given

---

**Participants with an invoice address outside of Austria, Germany and Switzerland are kindly requested to pay by credit card:**

- [ ] Visa
- [ ] Mastercard
- [ ] American Express

<table>
<thead>
<tr>
<th>Card holder</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Card no.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Valid until (MM/YYYY)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Security Code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>× Your Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>