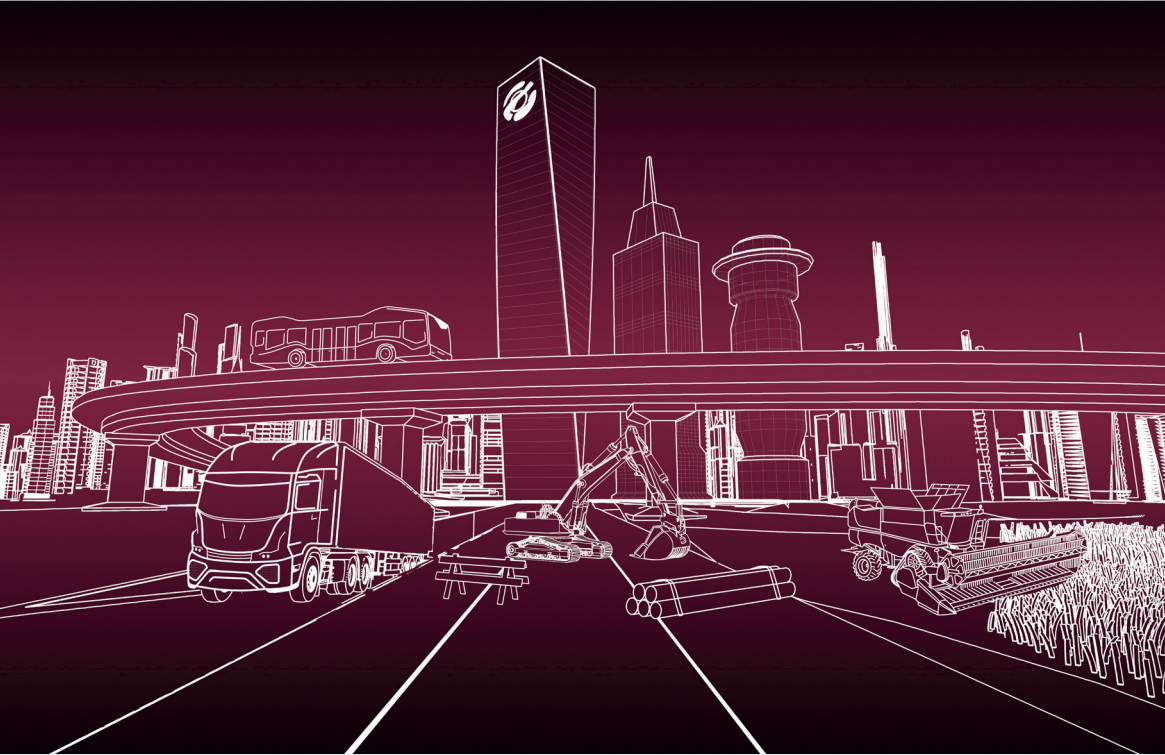


PROGRAM OVERVIEW



8th International Commercial Vehicle Technology Symposium Kaiserslautern

March 13-14, 2024
University Kaiserslautern-Landau



commercial vehicle alliance
kaiserslautern

version: March 08, 2024

PROGRAM OVERVIEW

Wednesday, march 13, 2024

9:00	Opening and welcome		room 115
	Keynote „Fossil free drive alternatives in arable farming“ <i>(Prof. Dr. Peter Pickel, John Deere)</i>		
10:00	Exhibition and Coffee break		lobby
10:45	Simulation Methods (1) <i>Presentations see page 4</i>	room 110	Alternative Propulsion Technologies (1) <i>Presentations see page 4</i>
12:00	Exhibitor presentation		lobby
12:45	Lunch break		lobby
13:45	Safety, Reliability and Durability <i>Presentations see page 4</i>	room 110	Connected and Integrated Systems and Services <i>Presentations see page 4</i>
15:30	Vehicle presentation		lobby
16:15	Exhibition and Coffee break		lobby
16:45	Innovative Development and Production Methods (1) <i>Presentations see page 5</i>		room 115
19:00	Conference dinner <i>Das Brauhaus an der Gartenschau, Forellenstraße 6, 67659 Kaiserslautern</i>		city

PROGRAM OVERVIEW

Thursday, march 14, 2024

8:30	Welcome & Review	room 115
8:45	Assisted and Automated Driving and Working <i>Presentations see page 5</i>	room 115
10:00	Exhibition, Poster presentation and Coffee break	lobby
11:00	Simulation Methods (2) <i>Presentations see page 5</i>	room 110
	Innovative Development and Production Methods (2) <i>Presentations see page 5</i>	room 115
12:15	Exhibition and Lunch break	lobby
13:45	Alternative Propulsion Technologies (2) <i>Presentations see page 5</i>	room 115
15:00	Final plenary session	room 115

PRESENTATIONS

Wednesday, march 13, 2024

SIMULATION METHODS (1)		room 110
10.45	AI-based Surrogate Modeling for Highly Efficient Soil-Tool Simulation	Emmerich; Harutyunyan; Steidel; Burger (Fraunhofer ITWM)
-	Efficient HiL-Test Generation for Electric Heavy-Duty Drivetrains using Model-Based Systems Engineering	Mennicken (RWTH Aachen)
12.00	Cascading of feasible tyre characteristics of tyre design specifications using a tyre resizing tool	Lidberg ¹ ; Li ² (¹ Fraunhofer Chalmers Centre; ² Volvo Cars Corporation)

ALTERNATIVE PROPULSION TECHNOLOGIES (1)		room 115
10.45	Potenziale und Herausforderungen wasserstoffbetriebener Baumaschinen	Trommler; Hänel; Will (TU Dresden)
-	Energieeffiziente und verschleißoptimierte Betriebsstrategien für Sonder- und Nutzfahrzeuge mit Brennstoffzellenantrieb	Ufert; Singaravelan; Steinert (Fraunhofer IVI)
12.00	Mercedes-Benz eCitaro fuel cell: mehr Reichweite ohne Nachladen dank Brennstoffzelle	Javed (Daimler Buses)

SAFETY, RELIABILITY AND DURABILITY		room 110
13.45	Dynamic Risk Assessment for Automated Driving System using Artificial Neural Network	Patel ¹ ; Gorasiya ¹ ; Liggesmeyer ^{1,2} (¹ RPTU Kaiserslautern-Landau; ² Fraunhofer IESE)
-	Extended Language Server Support for Robotics Frameworks	Klaaßen; Meckel; Berns (RPTU Kaiserslautern-Landau)
15.30	Active perception and monitoring of data quality to increase the sensing performance of autonomous off-road robots	Wolf ¹ ; Berns ² (¹ Fraunhofer IESE; ² RPTU Kaiserslautern-Landau)
	Tree-SLAM: Localization and Mapping in Dense Forest Environments for Autonomous Vehicles	Heupel ¹ ; Wolf ² ; Berns ¹ (¹ RPTU Kaiserslautern-Landau; ² Fraunhofer IESE)

CONNECTED AND INTEGRATED SYSTEMS AND SERVICES		room 115
13.45	Prediction of energy consumption in road transport by simulation of the vehicle's field of application and its performance	Biedinger; Christiansen; Dahlheimer; Halfmann; Speckert; Wagner (Fraunhofer ITWM)
-	AI-based vehicle activity recognition using telemetry data	Burger ¹ ; Fiedler ¹ ; Jansen ² ; Kickert ² ; Kleeberg ² ; Philippi ² (¹ Fraunhofer ITWM; ² Volvo CE)
15.30	The (important) Role of Digital Twins and AI Methods within Predictive Maintenance Strategies	Baur; Teutsch (RPTU Kaiserslautern-Landau)
	Open APIs in the era of the software-defined commercial vehicle	Tanimou; Achtzehn; Stumpf; Henkel; Muenzenmay (Robert Bosch)

Wednesday, march 13, 2024 & Thursday, march 14, 2023

INNOVATIVE DEVELOPMENT AND PRODUCTION METHODS (1)

room 115

16.45	Multidisciplinary design optimization of electric truck motors with additively manufactured hairpin winding	Umland ¹ ; Winkler ¹ ; Kutter ² ; Jung ³ (¹ Fraunhofer IFAM; ² BPW Bergische Achsen; ³ Additive Drives)
-	Konstruktionsmethodische Synthese der additiven Fertigung und des Tailored-Fiber-Placements zur Lasteinleitung in FKV-Bauteile	Rupp ¹ ; Al-Zuhairi ¹ ; Teutsch ² ; Nagaraj ² ; Pfaff ² ; Motsch ² ; Digel ³ (¹ RPTU Kaiserslautern-Landau; ² Leibniz-Institut für Verbundwerkstoffe; ³ Digel Sticktech)
18.00	Simulation and testing of Hybrid Load-bearing Structures for Lightweight Construction in Vehicles	Nagaraj ¹ ; Pfaff ¹ ; Motsch-Eichmann ¹ ; Hausmann ¹ ; Rupp ² ; Al-Zuhairi ² ; Teutsch ² ; Digel ³ (¹ Leibniz-Institut für Verbundwerkstoffe; ² RPTU Kaiserslautern-Landau; ³ Digel Sticktech)

ASSISTED AND AUTOMATED DRIVING AND WORKING

room 115

08.45	Fahrerassistenz und Teleoperation, technische Lösungen als Antwort auf Marktanforderungen	Hofmann (Liebherr Hydraulikbagger)
-	Full Virtual Workflow to support Automation & Autonomy Applications for Commercial Vehicles including AI	Eichhorn ¹ ; Höh ¹ ; Gumaste ² ; Vaidya ² (¹ John Deere ETIC; ² John Deere India)
10.00	Kollisionsverhinderungssystem für schemelgelenkte Tandemwalzen	Telschow (BOMAG)

SIMULATION METHODS (2)

room 110

11.00	Effiziente Entwicklungsprozesse für optimale Nutzfahrzeug-Antriebslösungen durch durchgängigen Einsatz skalierbarer Simulationsmodelle	Scherpelz; Baumann; Horn; Glöckler (ZF Friedrichshafen)
-	Cloud-Based Identification of Dynamic Trailer States	Burger ¹ ; Holfeld ¹ ; Steidel ^{1,2} ; Bartolozzi ³ ; Möller ³ ; Kobler ³ ; Weßel ⁴ ; Brand ⁴ (¹ Fraunhofer ITWM; ² Hochschule Kaiserslautern; ³ Fraunhofer LBF; ⁴ BPW Bergische Achsen)
12.15	Workflows für die virtuelle Absicherung von autonomen Nutzfahrzeugen in der Cloud	Bilgic Istoc (IPG Automotive)

INNOVATIVE DEVELOPMENT AND PRODUCTION METHODS (2)

room 115

11.00	Truck Seat – Strategy for a Green Product	Paruchuri; Stuiber (Grammer)
-	Lasttragende Leichtbau-Wasserstofftanks zur optimalen Bauraumausnutzung im Nutzfahrzeug	Motsch-Eichmann; Pfaff; Hausmann (Leibniz-Institut für Verbundwerkstoffe)
12.15	Functional Safety in the Development Process of Mobile Cranes	Schneider (Tadano Demag)

ALTERNATIVE PROPULSION TECHNOLOGIES (2)

room 115

13.45	Die nächste Generation der Elektromobilität bei Daimler Truck	Lehmann (Daimler Truck)
-	Vergleich gemischsansaugender und luftansaugender Biopropan-Diesel Dual-Fuel Brennverfahren	Müller; Günthner (RPTU Kaiserslautern-Landau)
15.00	Practical and Customer-oriented electrification of agricultural tractors	Rajani; Reiter (John Deere)

PROGRAM COMMITTEE

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BPW Bergische Achsen, Wiehl

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Chalmers University of Technology, Gothenburg (S)

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John Deere, Kaiserslautern

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Deutz, Köln

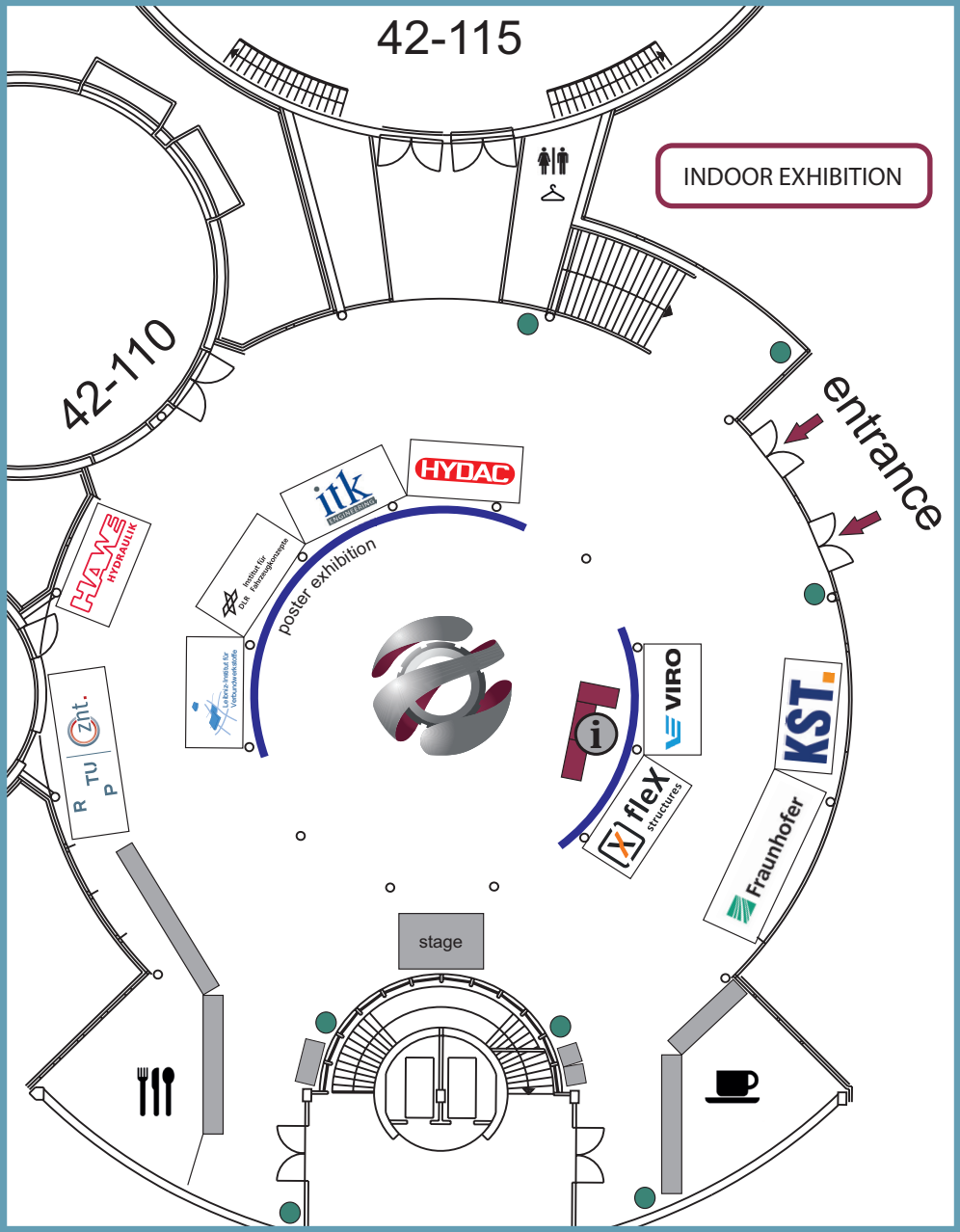
Dr.-Ing. C. Weber
Daimler, Wörth

Dr.-Ing. J. Wieser
Tadano, Zweibrücken

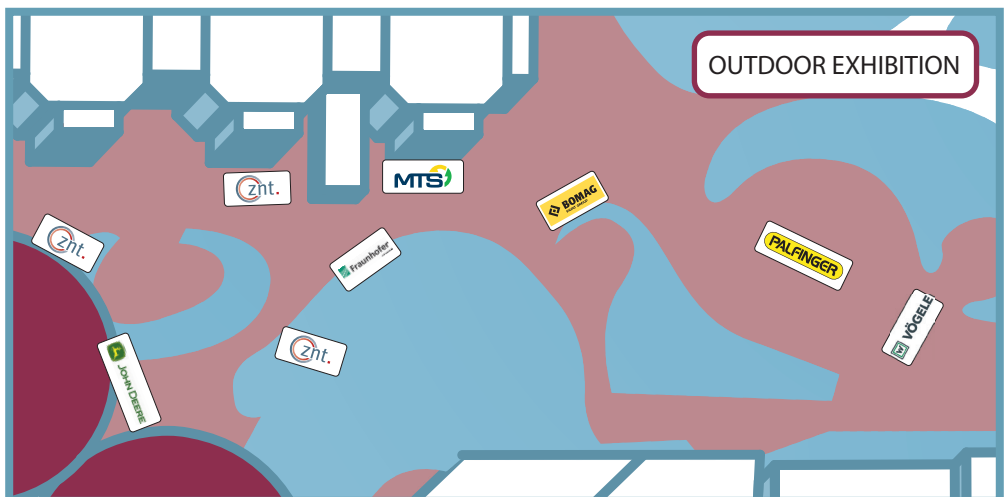
M. Wildhagen
Schmitz Cargobull, Altenberge

Prof. Dr. F. Will
TU Dresden

EXHIBITION



- BOMAG GmbH
bomag.com
- fleXstructures GmbH
flexstructures.com
- HAWE Hydraulik SE
hawe.com
- Hydac New Technology GmbH
hydac.com
- Institut für Fahrzeugkonzepte des DLR
dlr.de/fk
- ITK Engineering GmbH
itk-engineering.de
- John Deere GmbH & Co. KG
deere.de
- Joseph Vögele AG
wirtgen-group.com/de-de/unternehmen/voegele
- KST-Motorenversuch GmbH & Co. KG
kst-motorenversuch.de
- Leibniz-Institut für Verbundwerkstoffe GmbH
ivw.uni-kl.de
- Leistungszentrum Simulations- und Softwarebasierte Innovation –
»Digitale Nutzfahrzeugtechnologie« /
Fraunhofer ITWM & IESE
leistungszentrum-simulation-software.de
- MTS Mobile Tiefbau Saugsysteme GmbH
saugbagger.com
- Palfinger AG
palfinger.com
- VIRO Echt B.V.
viro-group.com
- Zentrum für Nutzfahrzeugtechnologie der RPTU
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