

PROGRAM OVERVIEW



9th International Commercial Vehicle Technology Symposium Kaiserslautern

June 10-11, 2026
Fraunhofer Zentrum Kaiserslautern



commercial vehicle alliance
kaiserslautern

PROGRAM OVERVIEW

Wednesday, June 10, 2026

9:00	Opening and welcome Keynote	room 1
10:00	Exhibitor presentation	lobby
10:30	Exhibition and Coffee break	lobby
11:15	Simulation Methods (1) <i>Presentations see page 4</i>	room 1
	Innovative Development Methods <i>Presentations see page 4</i>	room 2
12:30	Exhibition and Lunch break	lobby
14:00	Simulation Methods (2) <i>Presentations see page 4</i>	room 1
	Connected and Integrated Systems and Services <i>Presentations see page 4</i>	room 2
15:15	Poster presentation	lobby
15:40	Exhibition, Poster Presentation and Coffee break	lobby
16:45	Assisted and Automated Driving and Working (1) <i>Presentations see page 4</i>	room 1
	Safety, Reliability and Durability (1) <i>Presentations see page 5</i>	room 2
19:00	Conference dinner	city

PROGRAM OVERVIEW

Thursday, June 11, 2026

9:00	Welcome & Review	room 1
9:15	Assisted and Automated Driving and Working (2) <i>Presentations see page 5</i>	room 1
10:30	Exhibition, Poster Presentation and Coffee break	lobby
11:30	Safety, Reliability and Durability (2) <i>Presentations see page 5</i>	room 1
	New Propulsion Technologies <i>Presentations see page 5</i>	room 2
12:45	Exhibition and Lunch break	lobby
14:15	Simulation Methods (3) <i>Presentations see page 5</i>	room 1
15:30	Final plenary session	room 1

PRESENTATIONS

Wednesday, June 10, 2026

SIMULATION METHODS (1)		room 1
11.15	Beyond the Road: Scenario-Based Testing and Validation of Off-road Autonomy in Heavy-Duty and Agricultural Machinery	Rothmann; Frank; Schwank; Burger (Fraunhofer ITWM)
-	Coupled Humans-in-the-Loop Co-Simulation for Validation of Safety-Critical Assistance Systems on the Construction Site	Emmerich ¹ ; Reinhard ² ; Schneider ¹ ; Nicolai ³ ; Hekele ² ; Burger ¹ (¹ Fraunhofer ITWM; ² RPTU Kaiserslautern-Landau; ³ University of the Bundeswehr)
12.30	Absicherung automatisierter Fahrfunktionen im Nutzfahrzeugbereich: Potenziale und Herausforderungen simulationsbasierter Ansätze	Bilgic Istoc (IPG Automotive)

INNOVATIVE DEVELOPMENT METHODS		room 2
11.15	Semantische Erfassung von dynamischen Situationen im Straßenverkehr	Musiat; Reichardt; Wasenmüller (Technische Hochschule Mannheim)
-	Generative AI methods for simulation of electrified and automated commercial vehicles	Schyr; Stern; Sentas ³ (¹ AVL Deutschland; ² AVL List; ³ AVL Turkey)
12.30	SENNA: Ensuring Safe Attachment Handling in Autonomous Commercial Vehicles	Deolji; Li; Khan; Egelhof; Wolf; Berns; Thup (¹ RPTU Kaiserslautern-Landau; ² Commercial Vehicle Cluster)

SIMULATION METHODS (2)		room 1
14.00	Enhancing Operator Safety and Attention in Commercial Vehicles through Smart Assistance	Hillen; Lorenz; Reich; Adler; Wolf; Schneider (Fraunhofer IEESE, Germany)
-	Mixed Reality Head-Up Displays im Fokus: Eine Eye-Tracking-Analyse virtueller Fahrspuraugmentierungen	Conrad; Wallach (Hochschule Kaiserslautern)
15.15	SALSA: Potentiale eines adaptiven Anzeige- und Bedienkonzepts im LKW	Lippert; Eckl; Mertens; Woelfel (MAN Truck & Bus)

CONNECTED AND INTEGRATED SYSTEMS AND SERVICES		room 2
14.00	Intelligentes Lademanagement von elektrifizierten Verteilerverkehrsflotten: Eine Synergie von Wirtschaftlichkeit und Nachhaltigkeit	Dunger; Warmann (ITK Engineering)
-	Quantifying Real-World Delays in Heavy-Duty Truck Operations: An Agent-Based Approach to Assess the Potential of Charging Point Reservation Systems in German Road Freight	Paper; Klein; Bröde; Winkler; Lienkamp (Technical University of Munich)
15.15	Interface analysis between long-distance road freight transport and the modular U-Shift vehicle system in relation to the handling of goods in automated terminals	Hahn; Mysore Pavan (Deutsches Zentrum für Luft- und Raumfahrt)

ASSISTED AND AUTOMATED DRIVING AND WORKING (1)		room 1
16.45	Plattformkonzept für sichere Videoübertragung über 5G bei teleoperierten Fahrzeugen	Flade ¹ ; Zatta ² (¹ NewTec; ² Rheinmetall Technology Center)
-	Versatile Autonomous Robotic Tractor for Small-Scale Agriculture and Specialty Crops	Pawlak; Gassen; Kunz; Egelhof; Wolf; Berns (RPTU Kaiserslautern-Landau)
18.00	Echtzeitfähige Detektion von Straßenfugen mittels Objekterkennung	Kelleners; Schröder; Erdmann (Technische Hochschule Köln)

Wednesday, June 10, 2026 & Thursday, June 11, 2026

SAFETY, RELIABILITY AND DURABILITY (1)		room 2
16.45	An Ontology-Based Framework for the Evaluation of Safety Analyses in Autonomous Commercial Vehicles	Helten ¹ ; Hillen ² ; Wolf ¹ ; Reich ² (¹ RPTU Kaiserslautern-Landau; ² Fraunhofer IESE)
-	Controllability ratings of steering related hazards in heavy commercial vehicles according to ISO 26262:2018	Glaser ^{1,2} ; Barrans ² ; Fadlallah ² ; Müller ² (¹ IVECO; ² University of Huddersfield; ³ Fachhochschule Dortmund)
18.00	Software Updates as Enabler for Cyber Security in the CV Domain	Roy; Achenbach; Ulmer (IAV)

ASSISTED AND AUTOMATED DRIVING AND WORKING (2)		room 1
09.15	Modular and Context-Aware Autonomy for Multi-Role Off-Road Platforms: A Survey with the Unimog as a Case Study	Egelhof ¹ ; Deoli ¹ ; Li ¹ ; Isecke ¹ ; Wolf ¹ ; Berns ¹ (¹ RPTU Kaiserslautern-Landau; ² Daimler Truck)
-	Autonomous Tool Change for Excavators in Unstructured Terrain	Zimmermann ^{1,2} ; Albrecht ^{1,2} ; Peterit ^{1,2} (¹ Fraunhofer IOSB; ² Robotics Institute Germany)
10.30	Towards Autonomous Suction Excavation: Overview, Application and Approaches	Li ¹ ; Deoli ¹ ; Khan ¹ ; Egelhof ¹ ; Riedel ¹ ; Wolf ¹ ; Berns ¹ (¹ RPTU Kaiserslautern-Landau; ² MTS Mobile Tiefbausysteme)

SAFETY, RELIABILITY AND DURABILITY (1)		room 1
11.30	Condition Monitoring approach for diagnostics of a journal bearing in a hydraulic excavator	Baur; Teutsch (RPTU Kaiserslautern-Landau)
-	Truck Front Leaf Spring Durability Testing with Smart Virtual Sensing	Kou ¹ ; Kubo ² ; Hack ¹ ; De Gregoriis ¹ (^{1,2} Siemens Industry Software; ³ Volvo Trucks)
12.45	Mitigating Sensor Data Degradation in Off-Road Autonomy: A Data Fusion Approach with Fault Detection and Isolation	Verma; Helten; Wolf (RPTU Kaiserslautern-Landau)

NEW PROPULSION TECHNOLOGIES		room 2
11.30	Simulation-Based Optimization Framework for Mixed Fleet Commercial Vehicle Operations	Koch; Eckstein (RWTH Aachen University)
-	Physics-Informed Machine Learning for Real-Time Emission Prediction in Hybrid Powertrains	Sundaram; Ulmen; Heubaum; Gorges; Gehra; Günthner (RPTU Kaiserslautern-Landau)
12.45	Lubricants for new driving technologies	Schmidt (Fuchs Lubricants)

SIMULATION METHODS (3)		room 1
14.15	Extracting Continuous Curvature Road Geometry from Perception Point Clouds	Wang ^{1,2} ; Rehme ¹ ; Necker ¹ ; Schwiager ² (¹ Mercedes-Benz; ² University of Stuttgart)
-	From Manual Design to Automated System Optimization: Harness and Hose Engineering in Agricultural Machinery	Dengel ¹ ; Hoepfner ² (¹ fleXstructures; ² John Deere)
15.30	Genetic Algorithm-Based Optimization of Vehicle Dynamics for Off-Road Robotics Simulation	Geupel; Berns (RPTU Kaiserslautern-Landau)

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Umbrella organization of:



Center for Commercial Vehicle Technology
(ZNT)
RPTU Kaiserslautern-Landau



Commercial Vehicle Cluster -
Nutzfahrzeuge GmbH (CVC)



High Performance Center Simulation and
Software-Based Innovation -
»Digital Commercial Vehicle Technology«
Fraunhofer ITWM/Fraunhofer IESE