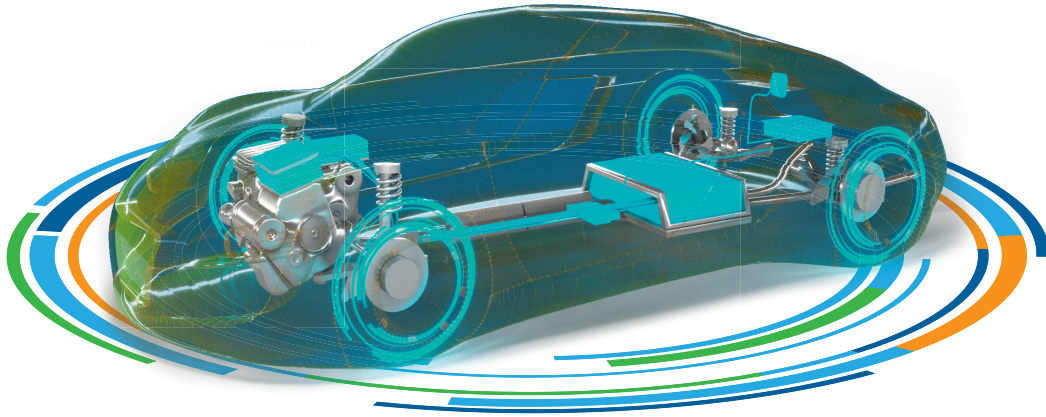




10th Int. Symposium on Development Methodology
November 7 – 8 | Wiesbaden | Germany



PROGRAM COMMITTEE



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Technical University
Darmstadt



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Peter Renninger
Daimler Truck AG



Prof. Bernhard Schick
Kempten University of
Applied Sciences

GENERAL INFORMATION

DATE & VENUE

November 7 – 8, 2023, Kurhaus Wiesbaden,
Germany

TICKETS

Registration fee	1,100,- Euro
Early bird (until July 21, 2023)	975,- Euro
University members	550,- Euro
Students	220,- Euro

CONFERENCE LANGUAGES

German and English (simultaneous translation)

HOTEL RESERVATION

We have negotiated some attractive prices
with a number of hotels in Wiesbaden. You

find the hotel list at www.avl.com/symposium-development-methodology. Please book your accommodation directly at the hotel and settle your hotel bill at departure.

REGISTRATION AND FURTHER INFORMATION

www.avl.com/symposium-development-methodology

CONTACT

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Conference Program – November 7, 2023

Time			
Key Note; Prof. C. Beidl – Technical University Darmstadt			
08:45	Welcome and Opening of the Symposium Prof. H. List – AVL List GmbH		
09:10	Zoo of Methods and Digital Transformation: V-Model, Agile, SAFe, DevOps, MLOps – Challenge and Opportunity for Transforming Development Organizations Prof. A. Rausch – Clausthal University of Technology		
09:35	Do We Need Engineers Anymore? The Role of Engineering in Times of Generative Artificial Intelligence R. Müller – Microsoft Deutschland GmbH		
10:00	Coffee Break		
	Session 1A: Battery/BEV; Chairperson: Dr. M. Frobenius – AVL Deutschland GmbH		Session 1B: ADAS/AD; Chairperson: Prof. B. Schick – Kempten University of Applied Sciences
10:30	Battery Cell Design on Target - But How to Do It? Dr. J. Richter, Dr. M. Schönleber – Batemo GmbH	10:30	Methodology for Evaluating the Accuracy of Simulated Camera Data C. Rohmann, Prof. H. Bachem, Prof. B. Lichte – Ostfalia University of Applied Sciences
11:00	In-Use Battery Lifetime Monitoring and Prediction with Data Intelligence A. Tuschkan, M. Zivadinovic, A. Palmisano, G. Schagerl, Dr. N. Keuth – AVL List GmbH; A. Belnarsch, Dr. W. Ratzke – AVL Software and Functions GmbH	11:00	Development and Testing of Autonomous Ship Ferries with 5G Connectivity Dr. C. Schyr – AVL Deutschland GmbH; J. Petzold, Prof. R. von Hanxleden – Department of Computer Science, Kiel University, N. Dohse, B. Schwarze – ADDIX GmbH
11:30	Combining AI and Cloud-Based Computation in Thermal Runaway Modelling B. Guillaume, Dr. J. Wolf, H. Fournier – Compagnie de Saint Gobain S.A.	11:30	Simulation-Based Safety Assurance for Learning- Enabled Components and Systems Dr. H. Esen, H. Liao – DENSO AUTOMOTIVE Deutschland GmbH

12:00	ThermoLab 2.0 – A Development Approach for Highly Efficient Thermal Management Systems for BEV and FCEV M. Conin, Prof. C. Beidl – Technical University Darmstadt; L. Fiore, Prof. G. Hohenberg – IVD Deutschland GmbH	12:00	Automated Detection of Critical Driving Scenarios Through AI-Assisted Algorithms Dr. M. Fehling-Kaschek, F. Lüttner, Dr. C. Brockt, Dr. I. Häring – Fraunhofer Institute for High-Speed Dynamics, Ernst-Mach-Institut; Dr. C. Schyr – AVL Deutschland GmbH
12:30 Lunch			
Session 2A: Digital Twin / (Co-)Simulation; Chairperson: Dr. O. Herrmann – DENSO AUTOMOTIVE Germany GmbH		Session 2B: Fuel Cell; Chairperson: P. Renninger – Daimler Truck AG	
14:00	Vehicle Level Testing on the Inverter Testbed J. Yasue – DENSO Corporation; Dr. F. Holzinger, A. Kolar – AVL List GmbH; H. Akimatsu – AVL Japan K.K.	14:00	Application-Oriented Development of Components for Fuel Cell Drive Systems Dr. J. Haußmann, J. Knaier, B. Seth, S. Knecht, K. Bause, S. Ott – IPEK Institute for Product Engineering
14:30	Comparison of Driver Models for Powertrain Test Benches Using a Digital Twin J. Schilling, Dr. J.-M. Wilmsen – Dr. Ing. h.c. F. Porsche AG; P. Nitschke – Harvard University; Prof. H.-C. Reuss – Institute of Automotive Engineering, University of Stuttgart	14:30	Virtual Fuel Cell – HiL & SiL as Your Digital Twin for PEMFC Li Zijong, Z. Cao, S. Wang – FAW Group; M. Kainer, Dr. A. Reiter, G. Llopart Vazquez, H. Ahmed, O. Domez – AVL List GmbH
15:00	End-To-End Automated Simulation in Powertrain Performance Development T. Ikemiya – Toyota Motor Corporation; Dr. J. Zehetner – AVL List GmbH; H. Akimatsu – AVL Japan K.K.	15:00	Development Methodologies of Zero Impact Energy Conversion Based on Hydrogen Combustion J. Ziegler, M. Bucherer, J. Reimer, S. Knapp, M. Grüninger, H. Schmid, T. Schweizer, J. Pfeil, Dr. H. Kubach, Dr. U. Wagner, Prof. T. Koch – Karlsruher Institut für Technologie KIT

Conference Program – November 7, 2023

Time	
15:30	Coffee Break
	Session 3A: Methodology Management+Organisation; Chairperson: Dr. T. Combé – Dr. Ing. h.c. F. Porsche AG
16:00	Digital Engineering: Mastering Complexity and Transformation in Software-Defined Vehicles Dr. M. Baumann – Bosch Engineering GmbH
16:20	System Orientation – Aspects and Challenges for Development Service Providers Dr. D. Szolnoki – Bertrandt Technologie GmbH
16:40	Holistic Development Methodology for Sustainable Mobility Dr. M. Gohl, M. Friedmann, M. Schmalz, M. Kronstedt, J. Walter – APL Automobil-Prüftechnik Landau GmbH
17:00	Panel Discussion
17:30	End Day 1

Conference Program – November 8, 2023

Time	
	Session 4A: Digital Twin; Chairperson: D. Gundel – Volkswagen AG
09:00	Objective Assessment of a Complex Shift Strategy as Base for Virtual Calibration B. Klein, J.-P. Hoffmeister, T. Breitingner – Dr. Ing. h.c. F. Porsche AG; B. Wultsch, A. Oruz, M. Peinsipp, A. Pichler – AVL List GmbH
09:30	A Multi Vehicle-Level Attribute Decision-Making Solution for Virtual Concept Definition P. Jeong, D. Kang – Hyundai Motor Company; S. Kellner, J. Schlager, Dr. A. Ramsauer, M. Oswald, F. Duchi – AVL List GmbH
10:00	Digital Twins for Passenger Car Development Dr. B. Hoppe, Dr. H. Klar, A. Abidine – Volkswagen AG; Prof. A. Kampker – RWTH Aachen University; M. Teitzer, M. Oswald – AVL List GmbH
10:30	Coffee Break
	Session 5A: Calibration; Chairperson: E. Martini – Valeo S. A.
11:00	Drivability Methodology for HEV on Powertrain Testbeds S. Puster, M. Arntz, R. Litzlbauer, Dr. C. Mayr – AVL List GmbH; C. Schuebl – BMW Motoren GmbH
	Session 4B: ADAS/AD; Chairperson: Prof. T. Düser – Karlsruhe Institute of Technology
09:00	Validation of Driverless Vehicles in Real and Virtual Test Fields A. Hartwecker – AVL Deutschland GmbH; P. Joisten, Dr. B. Abendroth – Technical University Darmstadt
09:30	Hardware-in-the-Loop Architecture for ADAS/AD Validation and Verification Y. Xu – National Innovation Center of Intelligent and Connected Vehicles; A. Sehgal, D. Nickel – AVL Deutschland GmbH
10:00	The TI-CAR Initiative: Reproducible, Evidence-Based Validation of System Limits Dr. S. Meyne, Dr. S. Kothe, Dr. U. Schumann, Dr. R. Wynands, Dr. T. Schrader – Physikalisch-Technische Bundesanstalt (PTB)
	Session 5B: Big Data / Fleet Data; Chairperson: Dr. W. Puntigam – AVL List GmbH
11:00	Analysis of Prototype Vehicle Fleet Data Based on Artificial Intelligence Dr. M. Grill, T. Hagenbucher, Dr. Q. Yang, Prof. A. Kulzer – Research Institute for Automotive Engineering and Powertrain Systems Stuttgart

Conference Program – November 8, 2023

Time			
11:30	Global Efficiency and Torque Accuracy Optimization of External Excited Synchronous Machine A. Labadie – Renault S.A.; M. Sulzer, F. Duchi , A. Ficsor – AVL List GmbH	11:30	Data Analytics and Prognostics - How to Improve the Customer Experience D. Parry, T. Hines – Jaguar Land Rover Ltd.; G. Schagerl, M. Zivadinovic – AVL List GmbH
12:00	Front-Loading Vehicle Attribute Testing from – Road to XIL Environment S. Dhingra – Jaguar Land Rover Ltd.	12:00	A Comprehensive Simulation Solution to Balance Vehicle-Level Attributes C. Triebel, M. Pichler – AVL List GmbH; E. Karabiyik, A. Oruz, S. Özkaynak – AVL Research & Engineering Turkey
12:30	Lunch		
	Session 6A: Calibration; Chairperson: C. Christ – AVL List GmbH		Session 6B: Cybersecurity/SDV; Chairperson: Dr. W. Puntigam – AVL List GmbH
14:00	Parameter Optimization with Software-in-the-Loop D. Scheuerle, J.-C. Goos, Dr. P. Klein – Mercedes-Benz AG	14:00	Cooperative Cyber Security Threat Detection and Reaction Y. Ladjici – Valeo S.A.
14:30	Automated Calibration of an Automotive Thermal Control System Using Reinforcement Learning P. Garg, L. Mulder, Prof. F. Willems – Eindhoven University of Technology; R. Puts, B. van Moergastel – DENSO AUTOMOTIVE Germany GmbH	14:30	Impact of Architecture Changes on Dev & Test of Software Defined Vehicles T. Wambera, L. Emmerich, T. Stark, A. Patel – Apex.AI Inc.
15:00	Evolving the Calibration Workflow as a Tier 1 Supplier for Electrified Vehicles R. Nandyala, R. Biesmans, J. De Spa, G. Luyckx, R. Nandyala – Punch Powertrain nv	15:00	Continuous and Interlinked System Development and Validation for the Use Case ADAS/AD C. Neimöck, C. Tröster, S. Leidig – T-Systems International GmbH; S. Dörr – Conweaver GmbH; Dr. J. Zehetner, D. Krems – AVL List GmbH

Time	
15:30	Break
	Key Note; R. Jeutter – AVL Deutschland GmbH
15:40	Illustration of Advanced Simulation Data Management Using LEGO® Crash and CFD Simulations M. Thiele – SCALE GmbH
16:05	Systems Engineering in Practice: Validation of the Energy System Dr. R. Sargenti, Dr. T. Combé, F. Grill, Dr. A. Kronich – Dr. Ing. h.c. F. Porsche AG
16:30	Closing Remarks R. Jeutter – AVL Deutschland GmbH; Prof. C. Beidl – Technical University Darmstadt
16:40	End of Symposium

Sponsoring

There is the possibility for students to apply for sponsored places by Daimler Truck, Denso, Valeo Siemens, VW und AVL, which are free of charge. Information on this topic is available online at www.avl.com/symposium-development-methodology.

DAIMLER TRUCK



DENSO
Crafting the Core



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