



The World's Largest Congress for Automotive Electronics, Software and Applications!



23rd International Congress and Exhibition

October 15-16, 2025, Bonn, Germany

Accelerate Innovation

Top Speakers:

Kai Barbehöhn, BMW
Nakul Duggal, Qualcomm
Dr. Fathi El-Dwaik, BMW
Thomas Fleischmann, Accenture
Dr. Michael Hauth, Mercedes-Benz
Dr. Christof Horn, Accenture
Dr. Céline Laurent-Winter, BMW
Katrin Matthes, Ampere
Justin Moon, QNX
Poorab Sarmah, AUDI
Dr. Minea Schwenk, Robert Bosch
Dr. Marc Weber, Vector Informatik
Jiani Zhang, Capgemini

Main Topics:

- Open Source – Automotive Trend Session I
- Chiplets – Automotive Trend Session II
- Accelerate Innovation
- Software for the SDV: Strategy, Security, Cloud, Virtualization, Data
- Automotive AI: Agentic AI, from Sensors to Validation
- Disruptive Methods & Tools
- Architecture & Communication
- Automated Driving: Validation, Safety
- Electronics Technology for Mobility
- Organizational Transformation
- Cockpit & Customer Experience

Congress Highlights:

- Automotive Trend Sessions on Open Source & Chiplets
- Autonomous Driving Challenge
- Extensive Exhibition
- Interactive Communication Points
- Lightning Talks
- Meet with the Speakers
- Night of Electronics
- Panel Discussions: Open Source & Chiplets
- Parallel Conference E/E for Commercial Vehicles
- Start-up Area and Special Start-up Program

with friendly support of:



Including up-to-date
contributions from:



1st Congress Day Wednesday, October 15, 2025

08:00 Registration



Keynotes – New York (Ground Floor)

Moderation: **Dr. Rolf Zöller**, DigiTrans Consulting, Tübingen, former Porsche AG and Porsche Digital

09:00 Opening of the Congress, Current Market Situation & Hour of Topical Interest

Dr. Rolf Zöller, CEO and Founder DigiTrans Consulting, Tübingen, former Porsche AG and Porsche Digital, Chairman of the Program Committee, and **Dipl.-Ing. (FH) Stefan Riegl**, Vice President Domain Head Systems Engineering, TRATON SE, Munich, Chairman of the Program Committee E/E for Commercial Vehicles

09:15 Panel Discussion: Accelerate Innovation

Participants: **Dr. Céline Laurent-Winter**, Vice President Connected Vehicle Platforms, Connected Company Development, Technical Operations, BMW Group, Munich
Katrin Matthes, Lead Software Technologist, R&D, Ampere, Biot, France
Dr. Minea Schwenk, Vice President Connected Services, R&D, Robert Bosch GmbH, Stuttgart
Dipl.-Ing. (FH) Thomas Fleischmann, Firmware & Embedded Engineering Director, Accenture Industry X, Munich

09:45 Coffee Break, Exhibition and Start-up Area visit

10:30 Parallel Sessions

Session 1: New York (Ground Floor)



Software for the SDV – Strategy

Moderation: Kai-Uwe Balszuweit, BMW, Munich

Session 2: Nairobi (Ground Floor)



Architecture & Communication

Moderation: Dipl.-Ing. Stefan Teuchert, TRATON, Munich

Session 3: Wien (Ground Floor)



Automotive AI – From Sensors to Validation

Moderation: Dr. Jutta Schneider, Mercedes-Benz, Sindelfingen

Session 4: Bangkok (Basement)



Automated Driving – Validation

Moderation: Dipl.-Ing. Christof Kellerwessel, adck-consult, Cologne

Session 5: Addis Abeba (Basement)



Testing & Validation: New Ways of Testing

Moderation: Dipl.-Ing. (FH) Stefan Riegl, TRATON SE, Munich

Parallel Conference:
Electric/Electronics for
Commercial Vehicles 2025

12:00 Lunch, Exhibition and Start-up Area visit

13:30 KEYNOTE: Diverging International Market and Customer Requirements – **New York (Ground Floor)**

Poorab Sarmah, B. Eng. and IT, Vice President, Head of Development Infotainment and Interior Interaction, Development Occupant Interaction System/Infotainment System, AUDI AG, Ingolstadt

Keynote

14:00 Parallel Sessions



Automotive Trend Session (ATS): Open Source

Moderation: Michael Plagge, Eclipse Foundation Europe, Darmstadt



Agentic AI

Moderation: Dr. Dirk Walliser, Walliser Advisory, former ZF Group, Aichwald



Security for the SDV

Moderation: Prof. Dr. Jörn Eichler, Volkswagen, Wolfsburg



Electronics for Mobility

Moderation: Thomas Wambara, Apex.AI, Munich



Electrified CV

Moderation: Dr. Falk Hecker, Knorr-Bremse Systeme für Nutzfahrzeuge, Schwieberdingen

16:00 Coffee Break, Exhibition and Start-up Area visit

16:45 Parallel Sessions



Architecture – Enabling SDV

Moderation: Dr. Rolf Zöller, DigiTrans Consulting, Tübingen



Software for the SDV – Cloud & Virtualization

Moderation: Joachim Langenwalter, TMT CoPilots, Munich



Electronics Technology

Moderation: Joachim Ziethen, HELLA, Lippstadt



Automated Driving – Safety

Moderation: Jürgen Bortolazzi, Porsche, Weissach



Next Steps in Software

Moderation: Dr. Stefan Sailer, ZF Friedrichshafen

18:15 Lightning Talks – Part I: 10 Innovative Three-minute Rapid-fire Pitches on Automotive Topics – **New York (Ground Floor)**

18:45 End of the first Congress Day



19:00 Night of Electronics at the MS RheinMagie – All participants are cordially invited. Discuss the results of the day with fellow experts and use your chance to network.

2nd Congress Day Thursday, October 16, 2025

08:30 KEYNOTE: From Announcements to Delivery – The BMW NEUE KLASSE from the Perspective of the Electric/Electronics Architecture – **New York (Ground Floor)**
Dipl.-Ing. Kai Lars Barbehön, Vice President Central Control Units, Physical Wiring System, Power Supply, BMW Group, and
Dr. Fathi El-Dwaik, Vice President BMW Group E/E System, BMW AG, Munich

Keynote

09:00 Parallel Sessions

Session 1: New York (Ground Floor)


Session 2: Nairobi (Ground Floor)


Session 3: Wien (Ground Floor)

Session 4: Bangkok (Basement)


Session 5: Addis Abeba (Basement)

 **Automotive Trend Session (ATS): Chiplets**
 Moderation: Dipl.-Ing. Stefan Singer, Renesas Electronics, Munich

 **Software & Data**
 Moderation: Dr. Patrick Bartsch, AWS, Wolfsburg

 **Cockpit & Customer Experience**
 Moderation: Dr. Riclef Schmidt-Clausen, AUDI, Ingolstadt

 **Disruptive Methods & Tools**
 Moderation: Dipl.-Ing. Andreas Hinderlich, HELLA, Bremen

 **Autonomous Commercial Vehicles/Trucks**
 Moderation: Ralf Weller, MAN Truck& Bus, Munich

11:00 KEYNOTE: Accelerating the Future of Automotive Innovation – **New York (Ground Floor)**
Nakul Duggal, Group GM, Automotive, Industrial & Embedded IoT, and Cloud Computing, Qualcomm Technologies, Inc., San Diego, USA


Keynote


11:30 Coffee Break, Exhibition and Start-up Area visit


Parallel Conference:
Electric/Electronics for
Commercial Vehicles 2025


12:15 Lightning Talks – Part II: 10 Further Innovative Three-minute Rapid-fire Pitches on Automotive Topics


12:45 Parallel Sessions

 **Accelerate Innovation**
 Moderation: Dipl.-Ing. Martin Schleicher, former Continental AG, Erlangen

 **Automotive Software & AI**
 Moderation: Dipl.-Inf. Elmar Frickenstein, Elstein Consulting, Munich

 **Organizational Transformation**
 Moderation: Jan Becker, Apex.AI, Palo Alto, USA

 **Disruptive Methods & Tools**
 Moderation: Michael Hörig, Robert Bosch, Stuttgart

 **Automated Driving Insides**
 Moderation: Georg Fässler, Continental Automotive, Villingen-Schwenningen

14:15 Lunch, Exhibition and Start-up Area visit



Keynotes and Conclusion – New York (Ground Floor)

Moderation: **Dr. Rolf Zöller**, DigiTrans Consulting, Tübingen, former Porsche AG and Porsche Digital

15:30 Reimagining Automotive Engineering: Navigating the AI Revolution with Strategic Transformation
Jiani Zhang, B. S., MBA, EVP, Chief Software Officer, Software Product Engineering, Capgemini, Paris, France

16:00 Conclusion & Closing of the Congress

16:10 End of the Congress

Follow #eliv
on LinkedIn



Wednesday, October 15, 2025

08:00 Registration



Keynotes – New York (Ground Floor)

Moderation: **Dr. Rolf Zöller**, DigiTrans Consulting, Tübingen, former Porsche AG and Porsche Digital

09:00 Opening of the Congress, Current Market Situation & Hour of Topical Interest



Dr. Rolf Zöller,

CEO and Founder, DigiTrans Consulting, Tübingen, former Porsche AG and Porsche Digital, Chairman of the Program Committee, and



Dipl.-Ing. (FH) Stefan Riegl,

Vice President Domain Head Systems Engineering, TRATON SE, Munich, Chairman of the Program Committee E/E for Commercial Vehicles

09:15 Panel Discussion: Acceleration of Innovation

Participants:



Dr. Céline Laurent-Winter,

Vice President Connected Vehicle Platforms, Connected Company Development, Technical Operations, BMW Group, Munich



Katrin Matthes,

Lead Software Technologist, R&D, Ampere, Biot, France



Dr. Minea Schwenk,

Vice President Connected Services, R&D, Robert Bosch GmbH, Stuttgart



Dipl.-Ing. (FH) Thomas Fleischmann,

Firmware & Embedded Engineering Director, Accenture Industry X, Munich

09:45 Coffee Break, Exhibition and Start-up Area visit

ELIV – The App

Simply download the Event-App and register!

The App will be available for download in the Apple App Store and the Google Play Store for all participants as of October.

App areas:

- Digital congress program: create your own agenda at once
- General event information
- Evaluation and question function
- Exhibition information
- Service information
- Networking:
- Digital Business Card: create your Digital Business Card
Share your data quickly and easily with other participants and save new contacts directly
- Use the "Offer" and "Search" function to find and contact other participants
- Meeting Arrangement: request appointments with other participants

Sponsored by:



New York (Ground Floor)



Software for the SDV – Strategy

Moderation: Kai-Uwe Balszuweit, BMW, Munich

10:30 **Cloud-based Validation of new E/E Architectures at Stellantis**

- Rising demand for in-vehicle software with increasing number of functions
 - Ensuring software quality and reduce time to market
 - Stellantis' development and test approach with cloud-based development, Virtual Validation and Software-in-the-Loop (SiL) testing
- Dipl.-Ing. Marco Saenger**, Vice President Product Integration, Verification & Validation, STELLANTIS, Rüsselsheim am Main, and **Dipl.-Ing. Tino Schulze**, Vice President Autonomous Driving and Software Solutions, dSPACE, Paderborn, Co-Authors: Fabian Bronner, B. Sc., Dipl.-Math. Michael Beine, both of dSPACE GmbH, Paderborn, Sangeeta Theru, STELLANTIS, Auburn Hills, USA

11:00 **The Importance of Middleware for the Development of SDV Systems**

- What's behind the term "middleware"?
 - Hardware abstraction
 - Model based design and development efficiency
 - Technological options for different levels of granularity
- Nicolas Du Lac**, CEO, Co-Authors: Florian Michel, Gwenaél Dunand, all of INTEMPORA, Issy-les-Moulineaux, France


Nairobi (Ground Floor)



Architecture & Communication

Moderation: Dipl.-Ing. Stefan Teuchert, TRATON, Munich

Beyond SDV: Imperatives for OEMs and the Supply Chain

- The quest for SDV – where we stand
 - The age of the architects
 - Building systems of systems
 - The impact of AI
-  **Dr., Dipl.-Phys., Dipl.-Math. Christof Horn**, Global Lead SW Defined Vehicle, Accenture, Kronberg

Keynote

Cost-Efficient and Optimized Hardware Architectures Enabling Software-Defined Vehicles (SDVs)

- Centralized and Zonal Architecture
 - Advanced Communication Backbone
 - Optimized Data Handling
 - Modular and Virtualized Solution
- Rich Cannon**, Client Systems Engineering Manager EMEA, Co-Authors: Harald Kohler, Deniz Braun, all of Microchip, Winnersh, United Kingdom and Karlsruhe

Wien (Ground Floor)



Automotive AI – From Sensor to Validation

Moderation: Dr. Jutta Schneider, Mercedes-Benz, Sindelfingen

NAOMI4Radar: Advancing Autonomous Driving with High-Efficiency Neuromorphic Radar

- Demonstrator of real time radar data processing pipeline comparing state of the art with neuromorphic algorithms
 - Seamless integration of custom neuromorphic algorithms on neuromorphic hardware
 - Evaluation of suitability of neuromorphic computing for radar processing
- Dr. Gerrit Ecke**, Research Specialist Group Research, Future Technologies, Mercedes-Benz AG, Böblingen, and **Franziska Ott, M. Sc.**, Principal ADAS, Technological Competence Center, TWT GmbH Science & Innovation, Stuttgart

Building a Foundation Model Database for Generic Perception Tasks in Autonomous Driving: Lessons Learned and why Close Collaboration Matters

- Set up of a process for efficient data acquisition and data labeling
 - Combining data from different camera types into a unified large training and validation dataset
 - Performing data quality assurance and improving data and model quality continuously
 - Impact of data quality on the amount of data required
- Dr. Felix Nobis**, Co-Founder and Perception Lead, R&D, driveblocks GmbH, Munich, Co-Author: Marius Reuther, b-plus automotive GmbH, Regensburg

Bangkok (Basement)



Automated Driving – Validation

Moderation: Dipl.-Ing. Christof Kellerwessel, adck-consult, Cologne

How Simulation Technology Helps to Accelerate the Development of Autonomous Ridepooling

- MOIA and VW are advancing autonomous mobility by developing the ID.Buzz AD Robot-Taxi
 - Key challenge: rapid and safe software releases for the autonomous ridepooling fleet
 - Simulation is enabling safe & fast testing and thus accelerating development speed
 - Use of AI in modeling virtual traffic participants in simulation
- Dr.-Ing. Christian Rösener**, Head of "Integration & Verification", R&D MaaS/TaaS, Volkswagen AG, Wolfsburg

Level 4 on the Highway: Enabling Autonomous Driving Between Hubs

- Insights into the successful deployment of autonomous trucks on highways
 - AFGBV approval and the implications for operational readiness
 - Modular software architecture, covering sensor fusion, decision-making, and vehicle control with a focus on safety and reliability
- Leonie Wulf**, Senior Manager, R&D, Perception & Motion Planner, MAN Truck & Bus SE, Munich

Addis Abeba (Basement)



Testing & Validation: New Ways of Testing

Moderation: Dipl.-Ing. (FH) Stefan Riegl, MAN Truck & Bus, Munich

"Shift Left!" – Next Gen E/E Test Infrastructure via Micro HiL Ecosystem

- Shift left: Test early, test often, also on real hardware
 - Remote First: Test, flash, debug, do it all remotely
 - Central Hosting: Establish absolute reproducibility for all partners
 - Unified infrastructure: Reuse infrastructure to test at multiple integration levels
- Jakov Sprljan, M.Sc.**, Senior Sales Manager, Marketing & Sales, Co-Author: Hendrik Hoppman, both of Schleißheimer Soft- und Hardwareentwicklung GmbH, Nieder-Wöllstadt

From Requirements to Tests: How Sovereign Generative AI Accelerates Product Development

- Enterprise AI software that supports the product development cycle
 - AI and engineers work hand in hand in business critical tasks
 - Customers of the solution save up to 40 % time for their RFQ and Tender processing
- Jan Stratmann**, Solution Principal Industrials, Aleph Alpha GmbH, Heidelberg

11:30 Fast Update for Platform Independent Connectivity Functions

- Quick function development by utilizing an OCI-compliant container framework
- Providing generic interfaces by abstraction of specific platform implementations
- Fine-grained access control

Dr.-Ing. Torsten Büschenfeld, Lead Product Owner, R&D, Co-Authors: Dr.-Ing. Sven Klomp, Dr.-Ing. Stephan Max, all of CARIAD SE, Wolfsburg

Enhancing Vehicle Architectures: Evaluating PCIe for Efficient Data Transfer in Software-Defined Vehicles

- Centralization in SDV architecture for easier software management
- High data transfer required, especially for ADAS and Connectivity
- Evaluation of PCIe as an alternative to ethernet with lower latency and less CPU overhead

Jan Weber, Lead Architect, R&D, and **Lukas Stahlbock, M. Sc.**, Architect, R&D, both of IAV GmbH, Gifhorn, Co-Author: Atle Rønjum Vesterkjær, M. Sc., Dolphin Interconnect Solutions AS, Oslo, Norway

AI Driven Efficiency Increase in Time Based Data Analysis

- Amount of data will increase within the next years
- Time based data are relevant in many business areas
- Utilizing unsupervised deep learning
- First use case in vehicle network trace anomaly detection

Max Bernholz, Team Manager Data Analytics, and **Laura-Ann Hübsch**, Team Manager Enterprise Content Management, both R&D, Co-Author: Vamsi Krishna Chalampalem, all of Volkswagen Group IT Solutions GmbH, Wolfsburg

Holistic Testing for Open World Driving Systems

- Verification and validation of AD functions
- Automotive simulation models and sensor simulation
- Software & Hardware-in-the-loop testing
- Field operational tests and resimulation

Dr. Philipp Junietz, Expert End-To-End Test Automation, Autonomous Mobility, Co-Authors: Dr. Jan Peter Karch, both of Continental Autonomous Mobility Germany GmbH, Frankfurt/Main, Robert Timmermann, dSPACE GmbH, Paderborn

A New Approach to Software-Defined XiL-Environments (SDXiL) for the Challenges in Test & Validation of Software-Defined Vehicles (SDV)

- Adaptive XiL architecture enabling seamless integration of HiL, SiL, and MiL methodologies
- Dynamically scalable HiL systems for efficient validation of software-defined vehicle architectures
- Automated testing workflows for validating continuous developments in software-defined vehicles (SDVs)
- Combination of real hardware setups and virtual validation in mixed testing environments

Abdülkerim Dagli, M. Eng., MAS, Head of Global Sales & Marketing, Co-Authors: Dipl.-Ing. Gregor Axt, Dipl.-Ing. (FH) Bruno Eichler, all of MicroNova AG, Vierkirchen

12:00 Lunch, Exhibition and Start-up Area visit

13:30 Diverging International Market and Customer Requirements – New York (Ground Floor)

- Paradigm change, from a unified worldwide infotainment platform to:
 - Different international legal requirements
 - Different consumer electronic ecosystems
 - Different customer journeys

Poorab Sarmah, B. Eng. and IT, Vice President, Head of Development Infotainment and Interior Interaction, Development Occupant Interaction System/Infotainment System, AUDI AG, Ingolstadt

Keynote



Automotive Trend Session (ATS): Open Source
Moderation: Michael Plagge, Eclipse Foundation Europe, Darmstadt



Agentic AI
Moderation: Dr. Dirk Walliser, Walliser Advisory, former ZF Group, Aichwald



Security for the SDV
Moderation: Prof. Dr. Jörn Eichler, Volkswagen, Wolfsburg



Electronics for Mobility
Moderation: Thomas Wambera, Apex.AI, Munich



Electrified CV
Moderation: Dr. Falk Hecker, Knorr-Bremse Systeme für Nutzfahrzeuge, Schwieberdingen

14:00 An Open Source Automotive Middleware Stack for Secure and Real-Time Embedded Systems

- Open Source middleware stack for secure and real-time automotive systems
- Modular architecture enabling multi-processor ECU interoperability
- Compliance with ISO 26262 and ISO/SAE 21434 for safety and cyber security
- Industry-wide collaboration through Eclipse Foundation's S-CORE initiative

Dr. Nico Hartmann, Chief Technology Officer, Qorix GmbH, Munich

The Benefits of Agentic AI for Automotive R&D

- Supporting critical decision making in the product development process
- Areas of application, where can Generative AI support the R&D process
- Example deep dives Application of Generative AI in requirement management
- Benefits and Challenges of AI in the R&D processes

Dipl.-Ing. Georg Doll, CTO Automotive and Mobility, Microsoft Customer and Partner Solutions, Microsoft, Munich

Securing the Future: Post-Quantum Cryptography in the Automotive Industry

- The need for quantum safe encryption
- Quantum threats for vehicles
- Ensuring long-term security & regulatory compliance

Dr. Hendrik Meer, Engagement Manager, Technology & Innovation, Co-Authors: Mahesh Girija Shive Shankarmurthy, Peter Fintl, all of Capgemini Engineering, Munich

Highly Dynamic Battery Management Test System with Real-time Electrochemical Impedance Simulation (EIS)

- EIS: extended qualification of battery cells
- Up to now only used in laboratory environments
- Chip vendors: developing solutions for in vehicle operation
- Highly dynamic simulation of EIS behaviour

Dipl.-Inf. Franz Dengler, Testing Solutions, Co-Author: Abdülkerim Dagli, M. Eng., both of MicroNova AG, Vierkirchen

High-Performance Simulation of EV and Inverter Software on x86 Architectures Using Structure-Preserving Algorithms

- EV software integration & traction inverter component tests
- 35x speed-up: structure-preserving algorithms vs. standard models
- Theoretical foundations & advancements
- Real-world validation & industry benchmarks: Practical application

Dr. Felix Pfister, Lead Global Sales Strategy Manager, IPG Automotive GmbH, Karlsruhe, and **Dr. Tobias Lautenschlager**, CEO, Simulation, Persystems GmbH, Regensburg

14:30 **Accelerating SDV Development: Leveraging AI, Open Source, and Agile Standardization**

- AI-supported integration of standards and Open Source into proprietary SDV stacks
- Real-world insights from the NDS Expert AI Assistant implementation
- Challenges in data integration, user adoption, and continuous alignment
- Roadmap for combining AI and agile standardization to accelerate innovation

Dipl.-Inf. Fabian Klebert, Technical Lead, Development, Navigation Data Standard e. V., Gröbenzell

Agentic AI for Test and Fleet Data Analysis

- Challenges in engineering data analysis: Fragmented data sources, poor semantic descriptions, disjoint tooling
- Technologies for robust engineering data analysis with agentic AI: Data infrastructure, AI workflows, UX patterns
- Outlook towards the future of agentic engineering AI: Interoperability with MCP, change in IT infrastructure, use case examples

Dr. Stefan Suwelack, Managing Director, Renumics GmbH, Karlsruhe

The Urgency of Crypto Agility – Challenges and Strategies

- Building future-proof vehicles using crypto agility
- Target systems for crypto agility
- Crypto-agile communication protocols

Dr.-Ing. Tobias Oder, Expert Consultant Hardware Security, Cyber Security, Alter Solutions Deutschland GmbH, Düsseldorf

Accelerating EV Charging Ecosystem Development by Integrating All Stakeholders on a Unified Platform

- Integrated charging platform for all stakeholders in EV Ecosystem
- Ready to use Charging communication stacks complying with global standards & protocols
- End-to-End charging ecosystem development and validation
- Multi-stakeholder integrations by supporting CPOs, EVSE providers, roaming platforms, and payment systems through a unified digital framework
- Plug and play, ready-to-use platform enabling accelerated integration and validation

Dr. Taner Göcmez, Vice President – Global Business Leader, Electric Powertrain & Conventional Powertrain, KPIT Technologies, Munich, Co-Authors: Ketan Doshi, KPIT, Pune, India, Devendrakumar Banker, KPIT, Novi, USA

Experiences from Public Road Testing of Electrified Commercial Vehicle Trailers

- Electrification/hybridization of heavy-duty trailers
- Decarbonization of the freight industry
- Challenges in the legal framework

Dr. rer. nat. Nils Pfullmann, Head of System Development, System Solutions Trailer, R&D, Co-Author: Michael Schomburg, M. Eng., both of ZF Friedrichshafen AG, Hanover

15:00 **First Release Eclipse S-Core 0.5 – An HPC OSS Full Stack Comprises Modules Across All Layers of the Automotive SW Plattform**
Joint Presentation

Followed by **Announcement S-Core 0.5 made by involved Keyplayers**

Announcement

Agentic AI in Automotive: A Technical Approach to Enhancing the Customer Lifecycle and Development Ecosystem

- Framework for integrating Agentic AI across automotive software lifecycle
- Generative AI applied to sales, interfaces, and autonomy systems
- Continuous learning and sensor fusion for real-time vehicle adaptation
- Strategic partnership reveals cutting-edge AI in automotive deployment

Harry Powell, Global SVP Data & AI, Endava PLC, London, UK

From Threats to Tests: Architecture-Driven Cyber Security Validation for Connected Vehicles

- Linking TARA to testing through architecture-driven mapping to ensure security validation aligns with functional risks
- Iterative feedback loops integrating test results (e.g., from Pen Testing) back into threat models to refine risk assessments
- Lifecycle-wide security validation using co-simulation and model-based testing from early design to post-deployment updates

Claudio Balestrino, Lead Engineer Cyber Security, Power Train Engineering, and **Dipl.-Ing. Jürgen Gert Wurzinger, MA**, Product Manager Automotive Cyber Security, Advanced Software Solutions, Co-Author: Stefan Marksteiner, all of AVL List GmbH, Graz, Austria

Modular High Power DC/DC Platform for FC-Applications

- “Phase-Shedding”, High-Efficiency in various voltage ranges at partial to full load
- Impedance spectroscopy during high-power operation
- Multi-mode control, switching between voltage and current control on-the-fly
- High re-usability due to optional-bidirectional power-transfer capability

Remo Frei, FPGA Engineer, R&D, BRUSA HyPower AG, Buchs, Switzerland

Integrated Charging Infrastructure and Energy Management as a Catalyst for Sustainable Logistics Centers

- Integration of charging infrastructure into local grids
- Impact of charging management on costs
- Interaction with renewable energies
- New revenue streams

Dr.-Ing. Thorsten Dunger, Team Manager, Energy Management, Co-Author: Dipl.-Inf. Christina Warmann, both of ITK Engineering GmbH, Berlin

15:30 Panel Discussion:
Acceleration: How Open Source will Transform the Automotive Industry

Moderation: Michael Plagge, Eclipse Foundation Europe

Panelist:
 Participants to be confirmed.



Outlook to the Next Level of AI-Powered Speech-Based Cockpit UI

- From voice assistant to mobility assistant
- Vision: Trends, User expectations & Solution design principles
- Architecture: Ecosystems, Building blocks, Integration & Orchestration
- Outlook: AI-powered Cockpit UI Evolution, Challenges & Opportunities

Dipl.-Ing. Kurt Gieske, Vice President Engineering Architecture Technology, R&D, Co-Author: Benjamin Pfuhl, both of Robert Bosch GmbH, Hildesheim and Renningen

Simulating and Evaluating Incident Response for Automotive Systems

- Incident response processes are common in IT, but rarely in product security
- Extending attack simulations to automotive systems improves the incident response process
- Simulated attacks by a Red Team achieve a high degree of realism

Sergej Weber, Lead Consultant, Software Intensive Systems by UL Solutions, Kugler Maag Cie GmbH, Kornwestheim, and **Felix Bräunling**, Principal Software Engineer, Engineering, Software Intensive Systems by UL Solutions, UL Method Park GmbH, Erlangen

AI-Powered Battery Management for Enhanced Safety, Performance, and Longevity

- Deep learning-based state-of-charge estimation for the LFP chemistry
- Closed loop safe fast charging concept
- Lifetime estimation and prediction for lithium-ion batteries by AI
- AI prognostics for batteries: detection for lithium plating

Dr. Umut Genc, CEO, Management, Eatron Technologies Ltd., Warwick, United Kingdom, Co-Authors: Dr. Ugur Yavas, Can Kurtulus, both of Eatron Technologies Ltd., Istanbul, Turkey

Holistic Operation Optimization for Mixed Commercial Vehicle Fleets

- Electrification of commercial vehicle fleets
- Holistic optimization of mixed fleet operation
- Full vehicle model simulations to determine energy demands and charging times
- Customized ant colony optimization for simultaneous routing and charging strategy optimization

Theo Koch, M. Sc., Research Associate, Energy Management & Drivetrains, Co-Author: Univ.-Prof. Dr.-Ing. Lutz Eckstein, both of Institute for Automotive Engineering (ika), RWTH Aachen University

16:00 Coffee break, Exhibition and Start-up Area visit

Architecture – Enabling SDV

Moderation: Dr. Rolf Zöllner, DigiTrans Consulting, Tübingen

Software for the SDV – Cloud & Virtualization

Moderation: Joachim Langenwatter, TMT CoPilots, Munich

Electronics Technology

Moderation: Joachim Ziethen, HELLA, Lippstadt

Automated Driving – Safety

Moderation: Jürgen Bortolazzi, Porsche, Weissach

Next Steps in Software

Moderation: Dr. Stefan Sailer, ZF Friedrichshafen, Friedrichshafen

16:45 Addressing Complexity at its Core: A Pre-integrated SDV Platform to Streamline and Accelerate Development

- Safe and secure foundational vehicle software platform
- Deep integration for maximum performance
- Reduced time-to-market by simplified configuration and certification
- Open collaboration model meets company-backed ecosystem



Justin Moon, Vice President Core Product Engineering, QNX, Ottawa, Canada, and



Dr. Marc Weber, Vice President Product Management, Productline Embedded Software and Systems, Vector Informatik GmbH, Stuttgart

Keynote

Fast-Track to Quality: Cloud Solutions for Embedded Software Development

- Replicate virtual vehicle Electric/Electronic architectures in the cloud
- Accelerate through Cloud-based developer workspaces
- Transforming automotive software development through agentic AI and deep-linking capabilities

Eleonora Scherl, B. A., Senior Product Manager Tech, AWS Industry Solutions, Amazon Web Services EMEA SARL, Munich, and **Olivier Sutter, M. Sc.**, Senior Specialist Solutions Architect, AWS Auto Industry Business Unit, Amazon Web Services, Paris, France

Development Flow for Trustworthy Automotive Semiconductors

- Automotive Semiconductor Development
- Safety & Security of Semiconductors
- Semiconductor Supply Chain
- Semiconductor EDA Process

Dr. Stefan Simon, Semiconductor Expert, Development Compute Platform & Semiconductors, AUDI AG, Ingolstadt, Co-Authors: Enkele Rama, University of the Bundeswehr Munich, Neubiberg, Mouadh Ayache, Synopsys GmbH, Munich

Lab-Based Digital Homologation for Autonomous Driving Functions

- Hardware-in-the-Loop Test Benches vital for homologation
- Synchronization of environment sensor and automotive bus data with lowest possible latency
- Physics-based Sensor Simulation for high-fidelity sensor models
- Highly accurate sensor raw data simulation

Caius Seiger, M. Sc., Product Manager, Automated Driving & Software Solutions, Co-Author: Dr. Gregor Sievers, both of dSPACE GmbH, Paderborn

Code, Cloud and Trucks: An Architect's View on Shifting the Global Truck Industry Left and North with Software-Defined Vehicles (SDV)

- Global challenges and opportunities due to digitalization, electrification and automation
 - Everything as Code, Cloud and Vehicle modularization is helping solve challenges
 - Software-defined vehicles with shift left and north are becoming reality
 - Systems Engineering, HPCS, Zones, Onboard and Offboard Software and HW Platforms
 - Becoming a fluid architecture with centralization & decentralization between EE, Software, Cloud
- Dipl.-Inf. Thomas Michelbach**, Solution Architect (VP) for EE, Software & Services Backbone, R&D, TRATON R&D, Munich

17:15 **Scale, Bridge, Replace: Designing E/E Architectures in Cross-OEM and Cross-segment Scenarios**

- New approaches to scaling centralized E/E architectures cost-efficiently
- Multi-stage designs to build technology bridges across segments and manufacturer solutions
- Emerging industry standards for E/E architectures, e. g., for 48V and remote control of smart actuators

Dr. Thorsten Huck, Vice President E/E Architectures, R&D, Co-Author: Dr. Andreas Achtzehn, both of Robert Bosch GmbH, Abstatt

Navigating the Shift to Continuous Development: Bridging Architecture, Implementation, and Compliance

- Transitioning from Microcontrollers to Microprocessors
- Enhancing Software Factories through System Simulations
- Advancing Virtualization with Virtual ECUs (vECUs)
- Integrating Systems Engineering with Agile Development

Dr. Hans Martin Ritt, Director Application Engineering, MathWorks, Munich

Highly Integrated Camera System for Enhanced In-Cabin Monitoring

- Development In-Cabin monitoring camera system for regulatory, safety and customer requirements fulfillment
- Trade-off between integration of camera technology and vehicle interior styling
- Multi-Level software development for integration of best-in-class business functions

Pedro Almeida, M. Eng., Head of Department, Vehicle Safety Department – Development Occupant Restraint Safety Systems, Steering Wheel, In Cabin Monitoring, Volkswagen AG, Wolfsburg

Continuous Safety Engineering for Automated Driving

- Managing uncertainties during development and deployment
- Unified process for in-field monitoring in the context of ISO 21448 (SOTIF) and ISO 8800
- Using AI in safety-critical systems by splitting the ODD to attain statistical evidences

Philipp Schleiss, Department Head, Mobility, Fraunhofer IKS, Munich

Agentic Engineering Intelligence for Commercial Vehicles: Actionable Product Knowledge as Foundation for Agent Solutions Valuable (Gen) AI Applications can only exist in Manufacturing Industries when built on a strong and consistent Data Foundation

- At SPREAD our mission is to bring the power of AI to engineering teams and make data of complex products accessible, intuitive, and actionable across R&D, Production, and Aftermarket
- We give insights into our Agentic Engineering Intelligence platform architecture as well as our solutions and their business impact along the product lifecycle

Daniel Wilms, Principle Architect, R&D, Co-Authors: Patrice Geiger, Jonas Wiedenhofer, all of Spread AI, Berlin

17:45 **Opportunities and Challenges in Server-Zone Architectures – A Holistic View on Enabling SDVs**

- Overview of Server-Zone implementation strategies and SDVs
- Impact on vehicle diversity, including commercial and off-road vehicles
- Tool-based modeling and assessment of SDV-enabled E/E architecture scenarios

Dipl.-Ing. (FH) Thomas Zipper, Head of Center E/E Architecture, Co-Authors: Karl-Heinz Putz, Thomas Ginsberg, all of AVL Software and Functions GmbH, Regensburg

Accelerating Automotive Software Development with Automotive AI Assist and Virtual Hardware

- Automotive AI Assist: Transforming the Left Side of the V-Cycle
- Virtual Hardware: Enhancing the Right Side of the V-Cycle
- Ecosystem Availability and Collaboration
- Case Study: Smart Cockpit HPC Virtualization and CLEPA Innovation Prize 2024

Amir Namazi, Solution Manager Virtualization Cloud & AI, Architecture and Network Solutions, High-Performance Computer, Continental Automotive Technologies GmbH, Regensburg

Rewilding the Automotive Low Voltage Powernet with Intelligent Lead Acid Batteries

- Novel solution for enhanced Pb-A battery diagnostics, enabling ASIL B
- Significant reductions in LV Architecture components, complexity and price
- Architecture & integration flexibility through modular design
- Safety claims and assurance

Maged Khalil, Senior Technical Fellow, CTO-Office, R&D, Co-Authors: Olaf Sielemann, David Celinske, all of Clarios, Hanover

Event-Chain Analysis for Automated and ADAS Systems: Ensuring Safety and Meeting Regulatory Timing Requirements

- Formal elicitation of regulatory timing requirements
- Event-chain methodology for modeling and analyzing timing behavior
- Demonstrating compliance with international regulations through traceability

Sebastian Dingler, M. Sc., Development Engineer, Active Safety & Automation, Daimler Truck AG, Stuttgart, Co-Authors: Philip Rehkop, Ralf Mützenberger, both of INCHRON AG, Erlangen

Scalable and Real-Time Middleware for Commercial Software-Defined Vehicles (SDVs)

- Seamless integration of sensor fusion
- Low-latency processing
- Interoperability with automotive standards

Peter Nguere, M. Sc., Product Manager, Automated Driving and Software Solutions, dSPACE GmbH, Paderborn

18:45 **Lightning Talks – Part I: 10 Innovative Three-minute Rapid-fire Pitches on Automotive Topics – New York (Ground Floor)**

18:45 **End of the 1st Congress Day**

19:00 **Night of Electronics at the MS RheinMagie**

The VDI invites all participants, speakers, sponsors and exhibitors to join the "Night of Electronics" aboard Europe's largest event liner, the MS RheinMagie. This evening reception is the perfect opportunity to network and continue the discussions of the first congress day in a relaxed atmosphere. Meet your peers and business partners and enjoy a varied entertainment program.

Program:

19:00 – Boarding of the "MS RheinMagie"
20:00 – Dinner

20:15 – 22:00 Cruise across the Rhine
22:00 – Arrival at the jetty and possibility to disembark

22:00 – Opening of the dance floor
24:00 – End of the Night of Electronics and disembarkation from the ship



Thursday, October 16, 2025

08:30 From Announcements to Delivery – The BMW NEUE KLASSE from the Perspective of the Electric/Electronics Architecture – **New York (Ground Floor)**

Keynote



- Technological Highlights and Features of the BMW Neue Klasse: Vehicle, Powertrain, Infotainment, ADAS, Body
- Architecture: From Domain oriented to a zonal electrical system approach including high performance “Superbrains”
- Chances and challenges of the new energy boardnet with eFUSE Technology
- Software Update and Security
- Approaches for Integration and Testing

Dipl.-Ing. Kai Lars Barbehön, Vice President Central Control Units, Physical Wiring System, Power Supply, BMW Group, and **Dr. Fathi El-Dwaik**, Vice President BMW Group E/E System, BMW AG, Munich

New York (Ground Floor)

Nairobi (Ground Floor)

Wien (Ground Floor)

Bangkok (Basement)

Addis Abeba (Basement)



Automotive Trend Session (ATS): Chipllets

Moderation: Dipl.-Ing. Stefan Singer, Renesas Electronics, Munich



Software & Data

Moderation: Dr. Patrick Bartsch, AWS, Wolfsburg



Cockpit & Customer Experience

Moderation: Dr. Riclef Schmidt-Clausen, AUDI, Ingolstadt



Disruptive Methods & Tools

Moderation: Dipl.-Ing. Andreas Hinderlich, HELLA, Bremen



Autonomous Commercial Vehicles/Truck

Moderation: Ralf Weller, MAN Truck & Bus, Munich

09:00 **Pioneering Automotive Chipllet**

- Evolution of compute requirements driven by AI, UX & SDV
- Chipllet adoption – a paradigm shift for semiconductor driving SDV
- Chipllet key challenges & considerations

Cyril Cordoba, Senior Director, SoC System Architecture Department, Renesas Electronics Corporation, Vélizy, France

Accelerating Automotive Innovation: AI-Integration and Developer Frameworks for Next-Generation SDVs

- Backbone of SDVs: HPC platforms
- AI: Improving vehicle perception, navigation, in-cabin interactions
- End-to-end workflow
- Data simulation: vital role in AI model training, testing and validation

Thomas Dannemann, Senior Director, Product Marketing, Qualcomm Germany GmbH, Munich

New Ice Detection Sensor for Innovative BMW Head-up Display Technology

- Ice Detection Sensor (IDS) is a new sensor for HUD (Head-up Display)
- IDS is an optical sensor system
- IDS can distinguish between fog, ice and clear windscreen

Dr.-Ing. Marcus Maiwald, Head of Electronics Development, Design & Development Sensors, HELLA Fahrzeugkomponenten GmbH, Bremen

Quantum Internet Use Case Analysis for the Automotive Industry

- Short-Term Synergies (<10 years)
- Long-Term Opportunities (≥10 years): Blind Quantum Computing, Anonymous Transmission, Quantum-Enhanced Sensor Fusion, Secure Vehicle Ad Hoc Networks (VANETs)

Alissa Wilms, Quantum Computing Scientist, Porsche Digital, Ludwigsburg

Simulate, Validate, Deploy: Scaling Safe Autonomy in Commercial Fleets

Will Lin, Head of Automotive and Trucking, Applied Intuition, Mountain View, USA

09:30 **Driving the Future: How Chipllets and Standardized Compute Architectures are Powering the Next Generation of Software-Defined Vehicles**

- Boost Performance: Revolution of semiconductor integration, delivering unparalleled performance and cost savings
- Enhance Vehicles: Transformation of Automotive electronics, ensuring superior efficiency and functionality
- Drive Innovation: Innovative future with cutting-edge compute technology

Suraj Gajendra, Vice President Products & Software Solutions, Arm Ltd., Cambridge, UK

Build a Globally Connected High-performance AI Infrastructure for AD Development

- How to improve performance for large scale AI workloads
- Connect and optimize all your data
- Learn how organizations today are retooling their IT operations to embrace artificial intelligence (AI), machine learning (ML), and advanced analytics

Dipl.-Ing. (FH) Frank Kraemer, Systems Architect, IBM Technology Group, IBM Germany, Frankfurt/Main

Beyond Displays – Rethinking the Automotive UX Paradigm

- From AI copilots to ambient intelligence-shaping the next era of in-car experiences
- The evolution of HMI
- Voice and multimodal UX
- AI-personalization and anticipatory systems

Audrey Matarage, Independent UX Consultant, Audrey Matarage Consulting, Stuttgart

Agility as a Driver of Electromobility: Agile Metrics, Startup Mentality, and Fast-Charging Technologies – What We Can Learn for the Future

- Agile Metrics in EV Development
- Lessons from Agile EV Startups (Tesla, Rivian)
- Fast-Charging Agile Teams

Sabine Graupner, Agile Coach Scrum Master Trainer, and **Valentin Nowotny**, MBA, Agile Coach and Trainer, both Agile Transformation, P3 automotive GmbH, Stuttgart

Bringing Innovation and Speed to the Market Through Complementary Partnerships and New Business Models

- Innovation at greater speed has become the new norm
- Continental and Aurora – a complementary partnership
- Commercially scalable fully autonomous trucking systems
- The industry-first hardware-as-a-service business model

Dipl.-Ing. Bernd Hartmann, Head of Innovation Line Driverless, System & Software Business, Innovation Line Driverless, Co-Authors: Dr. Andree Hohm, Dr. Saman Khodaverdian, all of Continental Autonomous Mobility Germany GmbH, Frankfurt/Main

10:00 **Multi-Die Designs on Wheels: What's Required**

- Key market trends
- Motivation for multi-die designs in automotive applications
- Die-to-die connectivity with UCle
- Innovation in the automotive supply chain

Hezi Saar, Executive Director, Mobile Automotive Consumer Prod Management, Product Management, Synopsys, Sunnyvale, USA

Accelerate your SDV Innovation: A Comprehensive End-to-End Approach Enabling Connected Services

- Complexity of managing the development & integration across various tech-domains & typical components (on- & offboard) of an SDV
- Different levels of connected services (customer features, business services, platform/infrastructure) and differentiation potential for OEMs
- Closing the big loop: Treating complex SDV projects like modern code development frameworks to accelerate time-to-market & enabling modular platforms

Andreas Heinecke, Senior Vice President Business Unit Cloud, Vector Informatik GmbH, Stuttgart

Redefining Consumer Experience: Cross-market Collaborations to Unlock New Innovation Dynamics

- Young generation consumers are reshaping competition perceptions
- The incredible innovation dynamics push the competition in China market to the extreme
- Case study of using AR technologies to transform the in-car experience
- Cross-market collaborations to bring exciting experience to more consumers

Dr. Angela Wang, Senior Vice President of Neusoft Corporation, Chairman & President of Neusoft Europe, Neusoft Corporation, Shenyang, China

Multi-Domain Engineering for the Software-Defined Vehicle

- Model Driven process for Systems, Software & EE Engineering
- Utilize a common System and Logical Architecture
- Derive Software and EE Architecture leveraging a common System and Logical Architecture
- Maintain Traceability through requirements and models

Brett Hillhouse, Global Automotive Leader, IBM Software, Co-Author: Dipl.-Ing. Walter van der Heiden, both of IBM, Armonk, NY, USA

Effective Integration of Autonomous Driving Domain in Strategy Definition for Software-Defined Trucks?

- Architectures for the transition to software-defined trucks
- Key enablers for a transition
- Integration of autonomous driving domain into a software-defined platform

Dr.-Ing. Alexander Kugler, Lead Solution Manager, Infotainment and connected mobility, Co-Authors: Max-Arno Meyer, Dirk Macke, all of FEV.io GmbH, Aachen

10:30 **Panel Discussion on "Chiplets"**
Moderation: Dipl.-Ing. Stefan Singer, Renesas Electronics

Panelists:
Cyril Cordoba, Renesas Electronics Corporation

More participants to be confirmed.



AI and GenAI for Efficient Validation

- AI boosts validation with Automation and New Insights
- Automated Requirement Management
- AI anomaly detection during testing
- Talk to your data

Dipl.-Ing. Gerhard Schagerl, Product Line Manager, Data Intelligence and AI, AVL List GmbH, Graz, Austria

The Intersection of Location Intelligence & AI: Shaping the Future of Digital Cockpits

- How AI transforms location data into actionable insights for drivers and vehicles
- The pivotal role of live maps in enabling predictive and automated driving scenarios
- Strategies to seamlessly integrate location intelligence into vehicle architectures and ecosystems
- The integration of navigation, guidance, and ADAS through digital cockpit systems, enhancing
- Driver convenience and safety while building unique differentiated user experiences

Remco Timmer, Senior Vice President Product Management, Head of Automotive Solutions, Product Management, HERE Technologies, Amsterdam, Netherlands

Efficient Integration of Cross Platform Functions onto Service-oriented Architectures

- Efficient integration of platform agnostic functions
- Standardized application interfaces
- Enabler for Software as a Product in service-oriented architectures
- Concept for a semi-automated integration process

Thomas Schulik, Development Engineer, R&D, ZF Engineering Solutions, ZF Friedrichshafen AG, Friedrichshafen

Between Highly Task Specific Assistance Systems and Vertically Integrated Autonomous Robots: How to Build a Commercially Viable Path Towards Industrial Vehicle Autonomy?

- Competing approaches to industrial vehicle autonomy: Specific driver assistance systems versus fully autonomous robots
- Impact of product and business model on autonomy system architecture
- Comparison of end-to-end architectures and modular systems with respect to industrial vehicles
- Real world insights into deployments coming from these different architectures

Dr.-Ing. Alexander Wischnewski, CEO/CTO, driveblocks, Munich

11:00 **Accelerating the Future of Automotive Innovation – New York (Ground Floor)**

- Visionary approach to transformation through advanced semiconductors, software solutions architectures, and emerging technologies for software-defined vehicles (SDVs)
- Boosting CPU and AI performance for real-time data processing in safety-critical ADAS systems, cutting-edge infotainment and connected vehicle solutions
- Platform and collaboration strategy, emphasizing the importance of partnerships with leading OEMs and tech companies for seamless integration and continuous innovation
- Empowering the industry to accelerate innovation, deliver superior, personalized riding experiences that meet the evolving needs of consumers

Nakul Duggal, Group GM, Automotive, Industrial & Embedded IoT, and Cloud Computing, Qualcomm Technologies, Inc., San Diego, USA



Keynote

11:30 Coffee Break, Exhibition and Start-up Area visit

12:15 Lightning Talks – Part II: 10 Further Innovative Three-minute Rapid-fire Pitches on Automotive Topics



Accelerate Innovation

Moderation: Dipl.-Ing. Martin Schleicher, former Continental AG, Erlangen



Automotive Software & AI

Moderation: Dipl.-Inf. Elmar Frickenstein, Elstein Consulting, Munich



Organizational Transformation

Moderation: Jan Becker, Apex.AI, Palo Alto, CA, USA



Disruptive Methods & Tools

Moderation: Michael Horig, Robert Bosch, Stuttgart



Automated Driving Insides

Moderation: Georg Fässler, Continental Automotive, Villingen-Schwenningen

12:45 **Accelerating Innovation: Achieving Ten Times Faster Embedded Software Development at Mercedes-Benz** Keynote

- Speed³: Why rapid development is crucial for software success
- Automotive Challenges: Unique hurdles in embedded software
- Automation Excellence: Highly automated integration processes within the OEM
- Seamless Partner Integration: Effectively collaborate with development partners around the globe
- Modernizing AUTOSAR Classic: Adapt traditional frameworks to contemporary concurrent processes
- Virtualized Testing at Scale: The pivotal role of virtualization in pipeline-attached testing



Dr. Michael Hauth, Senior Manager Software Development Zone Controller, R&D, Mercedes-Benz AG, Sindelfingen

AI Based Requirements Engineering

- Increasingly complex and time-consuming requirements engineering process
 - Cutting edge AI algorithms transform tedious manual labor into fast, high-quality process
 - Refining automotive development workflow
 - Significant and measurable time savings and quality improvements
- Dr. Stefan Zwicklbauer**, Product Manager, R&D, Co-Authors: Dr. Jörg Dietrich, Michael Sicker, all of Continental Automotive Technologies GmbH, Regensburg, Frankfurt/Main and Babenhausen

The Evolution of Software-Defined Vehicles: Technological Advancements, Organizational Transformation, and Ecosystem Dynamics

- The transition to Software-Defined Vehicles (SDVs)
 - Insights and lesson learned from multiple OEMs
 - SDV Technological and organizational advancements
 - The evolving dynamics within the automotive ecosystem
- Dr.-Ing. Wasim Said**, Lead Expert, Development and Technology, Co-Author: Dr. Rodrigo Buirrun, both of Porsche Consulting GmbH, Stuttgart and Munich

Continuous Integration and Testing an OEM Perspective

- Overview of continuous integration and testing towards whole vehicle
 - Our approach to achieving integration and testing flow
 - Technical solutions and challenges we encountered
 - Our lessons-learned and how we scaled it
- Dr.-Ing. Mirko Nentwig**, Head of XIL Methods Development/CI/CT/CD-Pipeline, AUDI AG, Ingolstadt

Plus's SOTIF Strategy for Building Safe Autonomous Trucks

- The importance of SOTIF in autonomous trucking
 - How Plus integrates SOTIF principles into its system development
 - Key challenges and lessons learned from real-world safety testing
- Antonello De Galizia**, Staff System Safety Engineer, Engineering, Plus, Munich

13:15 **Digital Twin to Bridge Innovation into Reality**

- Digital Twin
- GenAI
- Open Source
- Software Defined X

Christer Neimöck, Senior Manager BD and Program ADAS/AD, Connected Mobility, T-Systems International GmbH, Frankfurt/Main

AUTOSAR.AI: A Novel HybridAI-Driven Framework for Accelerating AUTOSAR Development Through Contextualization

- Embedded SDLC with Generative AI
 - Classic AUTOSAR Agentic Workflow
 - Real World Application
- Silvio Filipe, PhD**, Senior Solution Architect, Embedded & Safety-Critical Systems, Co-Authors: Jefferson Nascimento, José Oliveira, all of Capgemini, Lisboa, Fundão and Porto, Portugal

Empowering OEMs with Agile and Cost-Effective Model for ECU Development through Hardware-Software Decoupling

- Scalable Hardware- Software Decoupling for ECU Development
 - Innovative Validation Enablers- Virtual + Physical Hybridization
 - AI Based Test Review for quality & cost optimization
 - Production level impact from Real OEM project
- Rahul Agarwal**, Associate Vice President, Electric Powertrain & Conventional Powertrain, Co-Author: Amod Lagoo, both of KPIT Technologies, Munich

Avoiding New ECU Development: Unlocking Hidden Potential in Legacy Systems

- Identify performance reserves via continuous runtime monitoring
 - Enhance lifecycle management through precise system analysis
 - Enable safe updates and feature expansion without hardware changes
 - Optimize ECU platforms using real-world data to reduce cost and risk
- Dipl.-Inf. Dominik Jürgens**, Managing Director/CEO, tensor embedded GmbH, Pollenfeld Preith, Co-Author: Dr.-Ing. Alexander Weiss, Accemic Technologies GmbH, Kiefersfelden

A Methodology for Evaluation and Optimization of Fail-Operational Systems in AD Applications

- Assessment of safety, performance, reliability and cost-effectiveness under real-world conditions
 - System redundancy, decision-making resilience, and human-machine collaboration
 - KPIs and acceptance criteria for identified critical functions
- Dipl.-Ing. Alexander Moschig**, Technical Expert ADAS/AD Systems and Functions, ADAS/AD Vehicle V&V, Systems & Connectivity, Co-Author: Dr. Adam Schnellbach, both of AVL List GmbH, Graz, Austria

13:45 **Transforming the RISC-V Landscape: The Path to Ecosystem Alignment**

- RISC-V's flexibility enables customized solutions across diverse applications, from low-power devices to high-performance systems, enabling innovation
- This same flexibility also makes ecosystem alignment difficult, especially in safety-critical sectors like automotive
- RISC-V profiles and platforms address this by standardizing key configurations and capabilities, supporting consistency, scalability, and real-time performance
- Adopting these standards and platforms, the RISC-V community can balance the need for flexibility with the demands for ecosystem coherence, ensuring software interoperability

Angel Berrio Moreno, M. Eng., Head of Product Management, Quintauris, Granada, Spain

Securing MPSoC Memory Interference on SDV Architectures

- Software-Defined Vehicle (SDV) require powerful platforms (MPSoC)
- MPSoC complexity endangers security and safety of critical applications
- Memory monitoring and regulation help manage the complexity
- Integration into automated tools improves security and safety

Dr. Andrea Bastoni, CTO and Co-Founder, Engineering, Co-Authors: Dr. Alexander Züpke, Dr. Marco Solieri, all of Minerva Systems SRL, Modena, Italy

Building Resilient Platforms for a Dynamic Future – Navigating Uncertainty in Technology Development and Operations

- Building resilient platforms to thrive in a fast-changing environment
- Strategies for leading future trends and adapting to change
- Integrating technology, culture, and organizational practices for flexibility
- Leveraging data, software, hardware, and AI for a robust platform solution
- Best practices and pitfalls to avoid for sustained success
- Leading and defining flexible platforms amidst moving targets

Joachim Langenwalter, Founder and CEO, TMT CoPilots, Munich

From Supplier-Driven to In-House Software Development – Onsite and Cloud-Native CI/CD for the Mobility-as-a-Service solution of the Volkswagen ID.Buzz AD

- Self-managed CI/CD for integration and validation of safety-critical automotive software
- Hybrid setup: on-premise and cloud resources for x86/ARM, RTOS and hypervisors
- Automated pipelines with SBOM, security scans and artifact traceability
- Faster release cycles through deterministic builds and distributed orchestration

Thomas Wambara, Vice President, Business Europe, Apex.AI, Munich, and **Philipp Lackmann**, Head of Function Development & Architecture MaaS, Volkswagen ADMT, Hanover, Co-Authors: Martin Petrov, David Lenhart, both from Apex.AI, Munich and Palo Alto, USA

Distributed System Management for L4 vehicles – Necessity and Smart Architecture

- Redundancy needed for ensuring safety and availability for Automated Driving
- Many components are available multiple times
- Challenge to select the right path/components
- Challenge to come to a consistent solution throughout the whole vehicle

Dr.-Ing. Korbinian Schechner, Product Owner Base Vehicle for Automated Driving, EE Automated Driving, Co-Authors: Svenja Hillebrand, both of MAN Truck & Bus SE, Munich, Dr. Reinhard Pröll, CLEAR MOTIVE GmbH, Augsburg

14:15 Lunch, Exhibition and Start-up Area visit



Keynotes and Conclusion – New York (Ground Floor)

Moderation: **Dr. Rolf Zöller**, DigiTrans Consulting, Tübingen, former Porsche AG and Porsche Digital

15:30 **Reimagining Automotive Engineering: Navigating the AI Revolution with Strategic Transformation**

- AI as a Catalyst for Engineering Transformation: Exploring how artificial intelligence can drive radical changes in automotive engineering processes, beyond incremental improvements
- Agentic AI and Systemic Redesign: Introducing agentic AI approaches that enable automation and reimagining of traditional engineering workflows
- Strategic Organizational Impact: Positioning AI not just as a tool, but as a platform for comprehensive transformation across engineering organizations
- Breaking Process Boundaries for Innovation: Demonstrating how intelligent systems can dissolve rigid process constraints to enhance efficiency, adaptability, and innovation



Jiani Zhang, B. S., MBA, EVP, Chief Software Officer, Software Product Engineering, Capgemini, Paris, France

16:00 Conclusion & Closing of the Congress

16:10 End of the Congress

Lightning Talks - Three-Minute Pitches on the Main Stage

After a great start in October 2024, ELIV 2025 will also offer a stage for Lightning Talks. Lightning Talks are three-minute quick presentations to the entire ELIV audience on the main stage.

Starting in summer 2025, we are once again looking for dynamic individuals who are ready to take the stage and deliver a captivating three-minute talk to our audience of industry experts, entrepreneurs and enthusiasts. Whether you are a seasoned professional, an aspiring innovator or a young professional, we want to hear from you!

As a Lightning Talks speaker, you will have the unique opportunity to showcase your expertise, share your insights and inspire others with your passion for innovation. Whether you are introducing a revolutionary technology, presenting ground-breaking research or sharing your vision for the future, this is your chance to shine on the main stage at ELIV 2025.

Presenters will be charged **50 % of the congress ticket price.**

NextGen Program

The NextGen program is designed to support future decision-makers and give them the opportunity to build the network for tomorrow today.

The program not only offers participation in the regular congress, but also includes a tailor-made supporting program which is specially created to meet the needs and interests of young professionals. In addition to attending the presentations, there will be numerous opportunities to exchange ideas and network with top experts and other motivated young professionals.

Young talents who are no older than 35 and already working in the field of automotive electronics and software can take part. Registration for the NextGen program is only possible via the senior manager with a corresponding recommendation.

Further information on the NextGen program can be found on our website at www.eliv-congress.com.

First Deadline: June 13, 2025 (expired)

Second Deadline: August 29, 2025

Notification shortly after deadline

Submit your **pitch idea by August 29.**

Send your idea to annick.braun@vdi.de.

Your proposal should include the title, a brief description of your pitch and speaker details including age. Please limit yourself to a maximum of 500 characters.

A screenshot of an email composition window. The window has a blue header with three colored circles (red, yellow, green) and a close button (X). The email content is as follows:
To: @Senior Managers
Subject: NextGen ELIV 2025

Do you have a young talent in your department, a promising young manager or even your designated successor?

Then support the generation: Send us a short motivation and suggest your "NextGen".

Help your young colleague to build his or her (ELIV-)network for the future.

At the bottom left, there is an icon of two stylized figures climbing a set of stairs. At the bottom right, there are three buttons: 'Cancel', 'Save', and 'Send'.

List of Exhibitors (June 17, 2025)

Akkodis Germany Consulting GmbH
Apex.AI GmbH
Avelabs
AVIN Systems GmbH
AXON Kabel GmbH
Bourns Electronics GmbH
BTC Embedded Systems AG
Certivity GmbH
Cognizant Mobility GmbH
Continental Automotive Technologies GmbH
driveblocks GmbH
dSPACE GmbH
Eclipse Automation Germany GmbH
EDAG Engineering GmbH
ETAS GmbH
FEV.io GmbH

fiveD GmbH
Göpel electronic GmbH
Green Hills Software
Hamamatsu Photonics Deutschland GmbH
ITK Engineering GmbH
Kenotom
Lauterbach GmbH
MathWorks
Microchip Technology Inc.
Microsoft Deutschland GmbH
Minerva Systems SRL
Mirabilis Design Inc.
Neuman Aluminium Fließpresswerk GmbH
Neusoft Corporation
Nexdata Technology Inc.
ONEKEY GmbH

PercivAI
Persystems GmbH
Projektron GmbH
Qorix GmbH
SafeAD GmbH
Sleeve GmbH
Sonatus
SPREAD GmbH
TDK Corporation
TDK-Micronas GmbH
Tensor Embedded GmbH
tracetrone GmbH
Transformations-Hub MIAMy
UL Solutions
Vector Informatik GmbH
Wind River GmbH

Exhibition & Sponsorship

We connect you – and your company

Would you like to present your products and services to the industry's key players? Participate in the event as an exhibitor or sponsor. If you are interested, get in touch with:

Jasmin Habel – Project Consultant
Phone: +49 211 6214-213
E-Mail: jasmin.habel@vdi.de



Start-up Area

ELIV offers young companies the opportunity of presenting their latest developments and products in automotive electronics in the Start-up Area. Get the chance to meet the exclusive, international group of participants consisting of decision-makers and specialists from vehicle manufacturers, suppliers, and service providers as well as representatives from universities! In addition to a full-service package with a 4 sqm booth space in the Start-up Area, a presentation slot on the Start-up Stage is also included.

Interested in taking part?

To apply, request the registration documents for the Start-up Area. We are happy to provide assistance and further information:

Elena Langenfels
Project Consultant
Exhibition & Sponsorship
Phone: +49 211 6214-8662
Email: langenfels@vdi.de

See who is already participating in the Start-up Area:

Certivity GmbH | driveblocks GmbH | fiveD GmbH | Minerva Systems SRL | ONEKEY GmbH | PercivAI | Persystems GmbH | SafeAD GmbH | Sleeve GmbH | SPREAD GmbH | Tensor Embedded GmbH

Visit our Start-up Stage and learn about the latest innovations by young companies in the field of automotive electronics.

Listen to the following presentations, among others:

Automated Product Cybersecurity and Compliance by Jan C. Wendenburg, CEO, ONEKEY GmbH

driveblocks Autonomy Platform – a generalizable approach to industrial Autonomy through Physical AI by Dr. Alexander Wischnewski, CTO, driveblocks GmbH

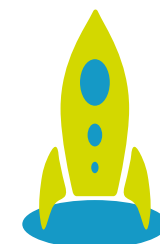
Accelerating Automotive Radar Innovation through Realistic Simulation by Marcel Hoffmann, Managing Director, fiveD GmbH

Agentic Engineering Intelligence: AI-supported development of Software-Defined Vehicles – from the idea to the aftermarket by Patrice Geiger, Head of Sales, SPREAD GmbH

Redesigning the OS kernel for usability, flexibility, speed and mixed criticality by Dr. Marco Solieri, CEO, Sqrrl a spinoff of Minerva Systems

Avoiding New ECU Development: Unlocking Hidden Potential in Legacy Systems by Dominik Jürgens, Managing Director, Tensor Embedded GmbH

in cooperation with



Members of the Program Committee



Dr. Patrick Bartsch, Principal Technology Evangelist, Auto – AWS Industry Products, AWS, Wolfsburg



Kai-Uwe Balszuweit, Vice President Quality Management E/E Systems, BMW Group, Munich



Jan Becker, CEO, Apex.AI, Inc., Palo Alto, CA, USA



Dipl.-Inf. Elmar Frickenstein, Elstein Consulting, Munich



Michael Hörig, Senior Vice President BBM Technology & Engineering, Robert Bosch GmbH, Stuttgart



Dipl.-Ing. Christof Kellerwessel, adck-consult, Cologne



Joachim Langenwalter, TMT CoPilots, Munich



Dipl.-Ing. Uwe Michael, mps, Rödermark



Dr. Burkhard Milke, Director GME Electrical Systems & Infotainment, Opel Automobile GmbH, Rüsselsheim



Maik Rohde, Head of IID-System, Volkswagen AG, Wolfsburg



Dipl.-Ing. Martin Schleicher, former Head of Software Strategy, Continental AG, Erlangen



Dipl.-Ing. Stefan Singer, Senior Director E/E Architecture Strategies, Renesas Electronics, Munich



Dr. Riclef Schmidt-Clausen, SVP PMT SDV-Hub, AUDI AG, Ingolstadt



Dr. Jutta Schneider, Director Vehicle Powernet and EE Hardware, Mercedes-Benz AG, Sindelfingen



Dipl.-Ing. Stefan Teuchert, Global Head EE/autonomous/software, TRATON Group R&D TREAS – Traton electric electronics autonomous and software, TRATON SE, Munich



Dr. Dirk Walliser, Walliser Advisory, former ZF Group, Aichwald



Dr.-Ing. Michael Winkler, CEO, HELLA Fahrzeugkomponenten GmbH, Bremen



Joachim Ziethen, Member of the Executive Board BU Electronics – Product Center Body/Lighting Electronics, HELLA GmbH & Co. KGaA, Lippstadt



Dr. Rolf Zöller, CEO and Founder DigiTrans Consulting, former Porsche AG and Porsche Digital, Tübingen (Chair)

Scientific Support

The VDI Society Automotive and Traffic Systems Technologies (FVT) with its five Technical Divisions offers a home for engineers from a wide range of disciplines in the fields of “road”, “rail”, “air” and “water” transport. Through active interplay with the working groups of the VDI Regional Associations, the students and young engineers as well as the other VDI Technical Societies, the VDI FVT is networked nationally and internationally with other cooperation partners. The stated task of the VDI FVT is to strengthen the perception of the engineering profession and to establish the VDI as a technical-scientific opinion leader in professional circles, politics and society. The aim here is to promote the interaction of the various mobility areas and to provide technical impetus, as well as to develop perspectives for cross-sectional topics relating to “People and Mobility” and “Means of Transports and Infrastructure.

More information: www.vdi.de/fvt



dSPACE is a leading provider of simulation and validation solutions worldwide for developing connected, autonomous, and electrically powered vehicles. Our range of end-to-end solutions is used particularly by automotive manufacturers

and their suppliers to test the software and hardware components in their new vehicles, long before a new model is allowed on the road. Our portfolio ranges from end-to-end solutions for simulation and validation to engineering and consulting services as well as support.

Contact:

dSPACE GmbH
Rathenastr. 26
33102 Paderborn – Germany
Phone: +49 5251 1638-0
Website: www.dspace.com



Sonatus is accelerating vehicle software innovation and the shift to software-defined vehicles. Our products serve as key building blocks for dynamic SDV architectures that empower vehicle manu-

facturers to innovate faster and deliver continuous improvements in costs, capabilities, quality, and user experience over the product lifecycle.

Contact:

Sunnyvale, California
(Global Headquarters)
330 Gibraltar Drive
Sunnyvale, CA 94089 – USA
Phone: +1 50 488-8500
Email: contact@sonatus.com
Website: www.sonatus.com



Engineers worldwide rely on MathWorks products to accelerate the pace of discovery, innovation, and development. MATLAB® is a programming environment for algorithm development, data analysis, and numeric

computation. Simulink® is a block diagram environment for simulation and Model-Based Design of multidomain and embedded engineering systems. The company produces over 120 additional products for specialized tasks such as image and signal processing, control systems, and deep learning.

Contact:

MathWorks
Weihenstephaner Str. 6
81673 Munich – Germany
Phone: +49 89 45235-6700
Email: contact@mathworks.de
Website: www.mathworks.de/automotive



Tata Technologies (BSE: 544028, NSE: TATATECH) is a global product engineering and digital services company focused on fulfilling our mission of helping the world drive, fly, build, and farm by enabling our customers to realize better products and deliver better experiences.

We are the strategic engineering partner businesses turn to when they aspire to be better. Manufacturing companies rely on us to enable them to conceptualize, develop, and realize better products that are safer and cleaner and improve the quality of life for all the stakeholders, helping us achieve our vision of #EngineeringABetterWorld.

Contact:

Tata Technologies GmbH
Friedrichstr. 15
70174 Stuttgart – Germany
Website: www.tatatechnologies.com





Qualcomm is enabling a world where everyone and everything can be intelligently connected. We are efficiently scaling the technologies that launched the mobile revolution to the next generation of connected smart devices.

Website: www.qualcomm.com/products/automotive

Participant Management & Information Customer Service Team

+49 211 6214-201
wissensforum@vdi.de

Simply book your participation online at
www.eliv-congress.com.



Press



Justine Otto
wf-presse@vdi.de

Exhibition & Sponsoring



Jasmin Habel
+49 211 6214-213
jasmin.habel@vdi.de



Martina Slominski
+49 211 6214-385
slominski@vdi.de

Program



Annick Cathrin Braun
+49 211 6214-8646
annick.braun@vdi.de



Birgit Bremer
+49 211 6214-273
birgit.bremer@vdi.de

Start-ups



Elena Langenfels
+49 211 6214-8662
langenfels@vdi.de

Organisational matters



Verena Feger
+49 211 6214-244
feger@vdi.de



Follow #eliv
on LinkedIn



ELIV - Electronics in Vehicles



+ 100 Speakers
+ 85 Exhibitors
+ 1,000 Congress delegates

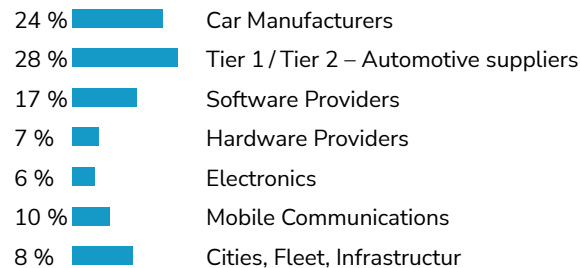


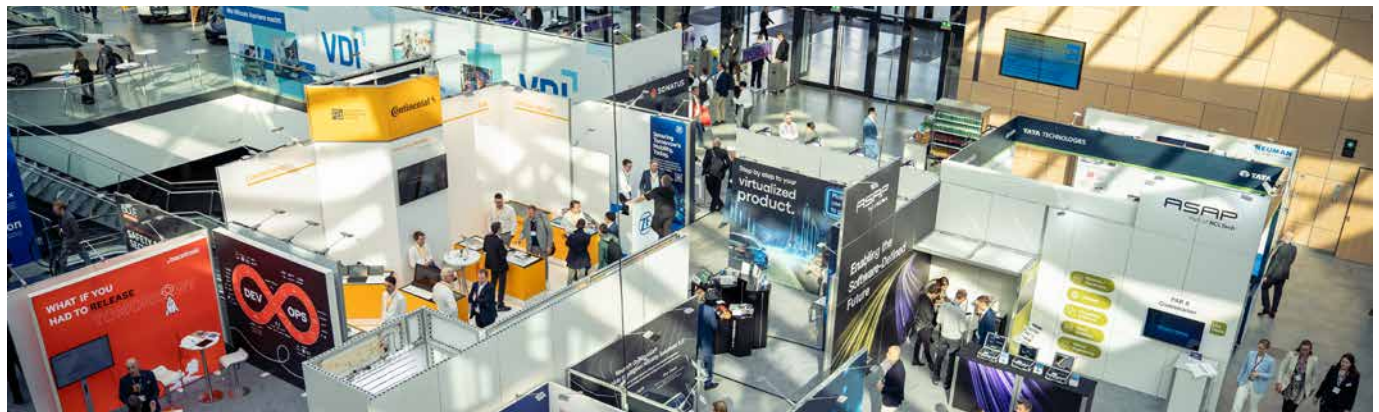
Good Reasons to be part of this industry meeting:

- ✓ Technical content of high quality: more than 80 expert presentations with technical depth
- ✓ ELIV is the world's largest Congress for Automotive Electronics, Software and Applications – be part of the community in Bonn!
- ✓ Reach out to long-known fellow experts, find new project partners and pave the way to establish new business ties
- ✓ Free entrance to the parallel running "E/E for Commercial Vehicles"
- ✓ Speakers corners – debate with the presenters personally
- ✓ Great trade exhibition with about 85 international exhibitors gives an overview of new products and solutions
- ✓ A dedicated stage for Start-ups
- ✓ Lightning Talks: Exciting pitch format for automotive innovations

Who you will meet:

Delegate groups: decision-makers, engineers, technicians, developers etc. from the field of industry (OEM, Tier 1+2), economy, research & development





ELIV - Electronics in Vehicles

The ELIV (Electronics in Vehicles) congress is an exceptional event that brings together top industry professionals and experts in the field of automotive electronics. It offers a unique combination of strategic keynote presentations and an unparalleled technical program, making it a perfect platform for both technical executives seeking insights into industry trends and engineers involved in research and development looking to acquire the latest technical know-how.



Participation Fee

ELIV 2025

October 15-16, 2025
Bonn
(01TA101025)

Please select price category (price p. p. plus VAT): Congress
Participation fee EUR 2,190.-

The following services are included:

- Access to Keynotes and Sessions of the ELIV and parallel Conference Electric/Electronics for Commercial Vehicles
- Digital event documentation
- Event-App Access
- Beverages during breaks
- Lunch on both Congress Days
- Night of Electronics on the MS RheinMagie
- Visit of the exhibition, Start-up Area and special Start-up Program

Please register online at
eliv-congress.com



Any more questions?
Contact us!

Phone: +49 211 6214-201
Fax: +49 211 6214-154

Email: wissensforum@vdi.de
Web: www.eliv-congress.com

Venue

World Conference Center Bonn
Platz der Vereinten Nationen 2
53113 Bonn
Germany

Accommodation

A limited number of rooms have been reserved for congress participants.
Please visit www.eliv-congress.com for further information.

More Hotels close to the congress venue may be found via our
HRS service www.vdi-wissensforum.de/hrs.

