6th International

Automotive Computing Conference

2024

November 18 + 19
### Munich | Germany
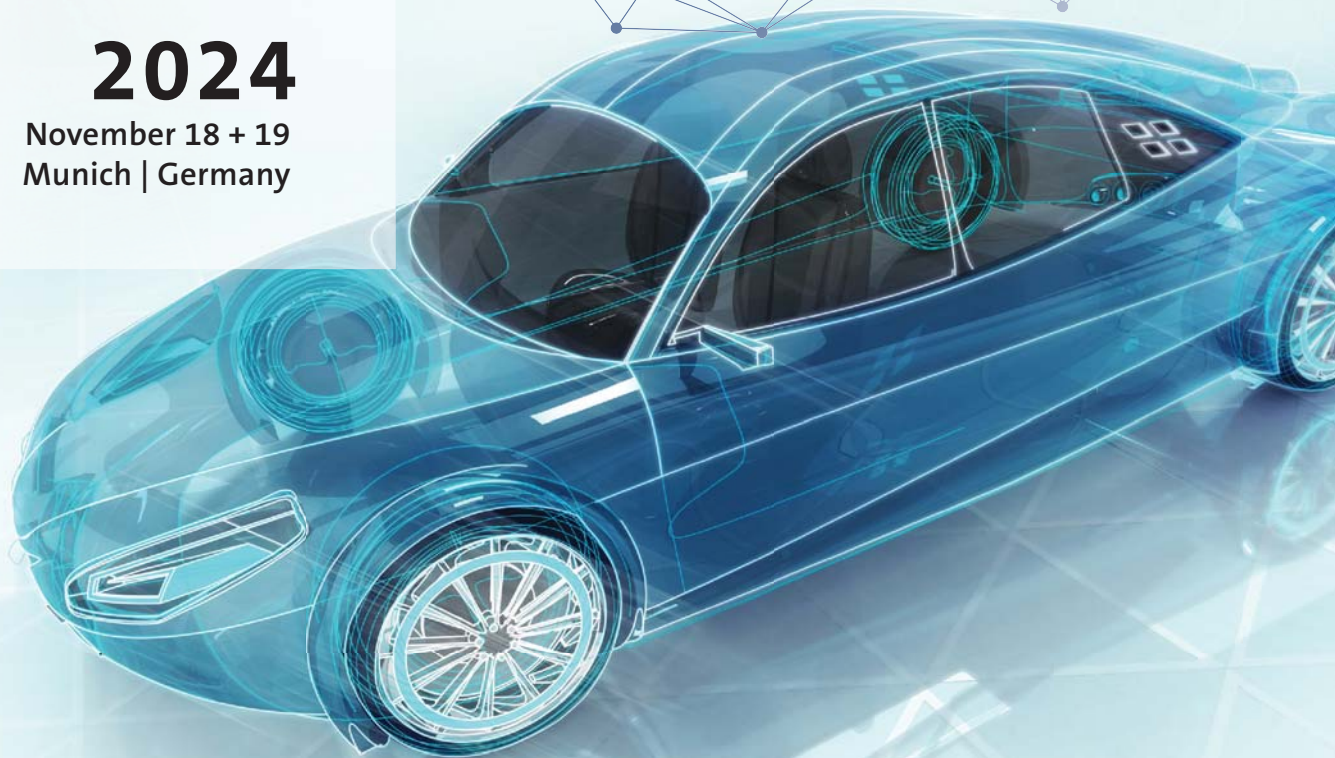
Main Topics

- **Hardware Requirements for Software Defined Vehicle and Software Abstractions**
- **How does Central Compute Platforms changes Technologies and Partnerships?**
- **Hardware/Software Co-Design for the Next Generation**
- **Automotive Computing with Chiplets Standardization**
- **Artificial Intelligence in the Vehicle**
- **Virtual Platforms and Zone Based Architecture in Automotive**

Preview of Top Speakers
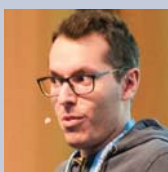
Fréderic Ameye
Ampere/
Renault Group

Dr. Barbara Kempkes
dSpace GmbH

Oliver Briemle
ZF

Dr. Hans-Jörg Vögel
BMW

Dr. Thorsten Huck
Robert Bosch

Dr. Ericles Sousa
UCIe Consortium

A conference organized by:

SV Veranstaltungen

Founding Partners:

arm   **EB** Elektrobit   **Synopsys**®

Monday, November 18, 2024

09:00 Reception, Check-In & Networking

09:30 Welcome and Opening

Anne von Türckheim-Horch,
Project Manager,
SV Veranstaltungen GmbH

Martin Schleicher,
Head of Software Strategy,
Continental AG

09:40 **Key-Note:** Centralized E/E Architectures of Tomorrow (Single System-on-chip): how to Ensure Security & Safety of Hyperconverged SDVs?
- Adoption of central computers
- Zone control as supporting architecture
- The view of central compute at Chinese OEMs

Frederic Ameye,
Software Technical Lead,
AMPERE / Renault Group

E/E Architectures and Zonal Architectures

10:15 Central Computing in the Car: Driving the Future of Software-Defined Vehicles
- The importance of central compute architectures in software-defined vehicles
- The impact of AI and system performance as key differentiators
- Overview of Qualcomm's Snapdragon Ride Flex SoC and its capability to support mixed-criticality workloads on a single processor

Thomas Dannemann,
Senior Director Product Marketing, Qualcomm

10:40 Q&A with speakers

10:50 Coffee break and networking

11:20 Innovations in E/E Architecture:
Exploration Behind the peak of Inflated Expectations
- Updated view on technology evolution for the software-defined vehicle
- Upcoming new requirents: x-by-wire, domain fusion designs, native ADAS L3 architectures

Dr. Thorsten Huck, Vice President Center E/E Architectures (XC/EYA), Robert Bosch GmbH and

Dr. Andreas Achtzehn,
Lead Cross-Domain Reference Architectures,
Robert Bosch GmbH

11:45 Zonal Architecture –
Processing of the Components/Zones

Robert Leibinger,
Automotive Processors Marketing Director Europe,
NXP Semiconductors

12:10 Integration and Validation for SDV Architectures
- Integration Software in the loop and hardware in the loop for SDV architectures

Dr. Barbara Kempkes,
Strategic Product Manager, dSPACE GmbH

12:35 Future in-Vehicle-Network Architecture for the SDV in Collaboration with the Compute
- TSN, virtualisation and zonalisation
- Planning strategies for network and compute
- Hardware requirements for a SDV and software abstractions

Alexander Damisch,
Vice President Dependable Networks,
TTTech Computertechnik AG

13:00 Joint Lunch and Networking

14:10 Opening of the 2nd session

Christian Malter,
Senior Director / Automotive Business Development,
Synopsys

14:15 Strategies and Collaboration for Tackling Cybersecurity
- Choosing the right partners and collaborations to successfully implement cybersecurity measures in a development project.
- Collaboration: interdependencies between hardware and software (vendors) and key aspects for successful system integration
- Technology: comparison of (software) separation technologies and how they impact system security.

Arnaud Van Den Bossche,
Director Business Development,
Green Hills Software GmbH

14:40 Scaling up Automated Driving Software Validation for Multiple Hardware Platforms using Cloud based Acceleration
- How can an ADAS SW stack be ported to different embedded automotive HW compute platforms
- Why an accelerated functional model of the NPU is needed
- How can the cloud be used for CI/CD and how can this cloud-based testing be used to validated software functional performance with different embedded NPUs

Mustafa Ali,
Product Director, aiMotive

15:05 **Panel:** HW/SW Co-Design for the next generation of AI enabled HPCs
Panelists:

1 *Christian Malter,* Senior Director / Automotive Business Development, Synopsys (Chairman)
2 *Robert Leibinger,* Automotive Processors Marketing Director Europe, NXP Semiconductors
3 *Oliver Brimle,* Head of AD Components and Connectivity, ZF
4 *Marc Serughetti,* Vice President Product Management.& Application Engineering, Synopsys Inc
5 *Dr. Hans-Jörg Vögel,* Head of Hardware-Software-Co-Design, BMW AG

15:45 Coffee break and networking

Monday, November 18, 2024

16:15 — **Cost Reducing for Architectures/ EE Architecture Revolution**
Jens Ohler,
Managing Director, eCarX

16:35 — **Gear Up for Innovation: Disrupting Automotive Semiconductor with RISC-V**
• Open-Source HW for Automotive
Alexander Kocher,
CEO, Quintauris GmbH

Chiplets – Quo Vadis?

16:55 — **Disaggregating Automotive Computing with Chiplets**
• The future of automotive computing with chiplets
• Advancing automotive computing with chiplets
• Exploring chiplet technology for the next-generation of automotive system-on-chip architectures
Dr. Ericles Sousa,
SoC Architect, UCIe Consortium Automotive WG CO-Chair

17:20 — **Enabling an Open Eco-System for Chiplet based Automotive SoCs**
• Why are Chiplets the future for automotive SoCs? Incl. the road towards first generations
• The current automotive chiplets market place and it this future developement
• SW environment as prerequisite for OEMs / Tier1s acceptance
Ole Godbersen,
Director Semiconductors for Future Vehicle Architectures, Robert Bosch GmbH

17:45 — **Chiplet Market – Development for Chiplets – Overview**
Alexander Rensink,
XXX, TSMC

Collaboration

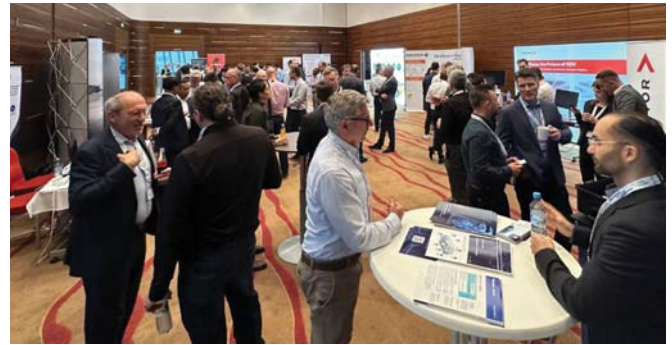**18:05** — **Collaboration – Best practice**
Michael Niklas-Höret,
Stratetic Partnership Manager,
Continental/Autosar Spokesman

18:30 — **Q&A with speakers**

18:40 — **Conclusion by the chairman**

18.45 — **Evening Event with Networking Opportunities**

Wednesday, November 19, 2024

09:00 — **Welcome and Opening of the 2nd conference day**
Bernhard Rill,
Director Automotive Partnerships, Arm

Virtualizing Strategies & Virtual Platforms

09:05 — **The Power of AI: Edge and On-Device Innovations in the Automotive Industry**
- The importance and benefits of integrating AI at the edge and on-device within the automotive industry, in particular for advancing autonomous driving functions and enhancing in-vehicle experiences.
- Key differences and synergies between AI at the edge and AI on-device in automotive applications.
- How Qualcomm's expertise in developing open and integrated hardware and software platforms is helping to advance AI technologies.

Krunoslav Orcic,
Senior Director Engineering, Qualcomm

09:30 — **Increasing Adoption of Virtual Platforms and Shifting left SW Development with fast Virtual Platforms**
- Architecture native accelerated virtual platforms for maximum simulation speed
- Connecting virtual platforms for a full electronics digital twin

Nicolai Behmann,
Technical Solution Architect, Siemens and

Tapan Vikas,
Account Technology Manager, Siemens

10:00 — **High-Speed, Next-Generation Virtual Prototypes for SDV**
- Delivering binary equivalence while mapping multiple architecture types to server processors
- Ensuring mixed criticality freedom from interference
- Integration with existing cloud and on-prem flows

Bill Neifert,
SVP Partnerships, Corellium

10:25 — **Q&A with speakers**

10:35 — **Coffee break and networking**

11:05 — **Accelerating SDV development with Electronics Digital Twins**
- What are Electronics Digital Twins
- Use cases and requirements
- Deployment in the clouds

Marc Serughetti,
Vice President Product Management & Application Engineering, Synopsys Inc.

11:30 — **Virtual Platforms / Hypervisor**
- Why automotive chiplets and why now
- Value of chiplets
- How to make the righthand turn

Gregor Struller,
Head of Product Line 1 High-Performance Computer R&D, Continental Automotive Technologies GmbH

Safety and Security

12:00 — **Has the holy Grail been Found? Using Linux for Safety-related Applications**
Open-source software is at the focus of software-defined vehicles
- Open-source software has been hard to use in safety-related functions
- A new concept now permits to use Linux even for such safety-related applications

Dr. Moritz Neunkirchner,
Senior Director, Elektrobit Automotive GmbH

12:20 — **The Path towards 2030 Automotive Performance Middleware**
- What lies beyond AUTOSAR

Nico Hartmann,
CTO, Qorix.ai

12:45 — **Optimizing Safe Data Transport for Advanced Automotive EE Architectures**
- Optimizing use of coherent and non-coherent NoCs
- Physically-aware NoC design
- unctionally safe NoC architectures

Ashley Stevens,
Director Product Management, Arteris

13:10 — **Q&A with speakers**

13:00 — **Joint Lunch and Networking**

Artificial Intelligence in the Vehicle

14:30 — **Opening of the Final Session**
Dirk Diekhoff,
Senior Director Head of Partner Management, Elektrobit

14:35 — **Key-Note: Automated Driving - Driven by AI**
- Advanced Automated Driving Functions are adding customer value and provide a premium individual mobility experience
- AI is a key enabling technology to realize ground-breaking automated driving functions
- AI poses challenges in safety-relevant functions – and a major leap in demand for elaborate embedded compute power.

Dr. Hans-Jörg Vögel,
Head of Hardware-Software-Co-Design, BMW AG

15:10 — **Accelerating the Ecosystem Towards Software Defined Vehicles**
- Evolvement of SOAFEE.next for the AI-enabled SDV
- Virtual platform reference support
- Foundational heterogenous compute platform including path to Automotive chiplets

Suraj Gajendra,
VP Products and Solutions Automotive Line, Arm

15:35 — **Getting ASIL for AI: A novel Approach for Perception Software**
- The topic contributes to perception, certification, new AI models and embedded deployment of AI

Stefan Milz,
CEO, Spleenlab GmbH

16:00 — **Closing words**
Dirk Diekhoff

16:10 — **End of the conference**

Members of the Advisory Board

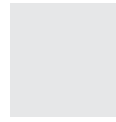**Dirk Diekhoff**
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Simon Fürst
BMW

Alexander Lenk
Amazon Web Services

Benjamin Petz
Mercedes-Benz

Christian Malter
Synopsys

Bernhard Rill
Arm GTM EMEA

Martin Schleicher
Continental

Björn Schuh
independent
(formerly AUDI)

6th International
AUTOMOTIVE COMPUTING CONFERENCE

Registration information
November 18 and 19, 2024

Event location
NH Hotel Munich Ost
Einsteinring 20
85609 Aschheim (near Munich)
+49 30 2238 0233
reservierungen@nh-hotels.com

Rooms: € 119 (breakfast included)

Please book directly at the hotel with the **reservation number
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- Early bird (until September 15, 2024)   **€ 1,495**
- Regular fee   **€ 1,695**
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- Ordering of digital conference documentation for   **€ 310**
  (available from November 20, 2024)

Services
The regular fee includes the following services:
- Participation in the conference
- Conference documentation
- Refreshments during the breaks
- Lunch on both conference days
- Get-together on November 18, 2024
- Opportunitty to visit the accompanying trade exhibiton

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