Conference chair

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Conference office

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Accompanying trade exhibition

An accompanying trade exhibition is planned for both days of the conference. Interested companies will have the opportunity to present their products, processes, and services related to the topic and explain them through personal consultations.
Instead of or in addition to the exhibition space, online options for your company presentation are also available.
Please contact the conference organizer CMD to plan your exhibition or online presence.

Conference information:

https://diagnose-tagung.de

Conference fees, plus 19 % value added tax

Registration	until 04/04/27	from 04/05/27
Participants	1.380,00 €	1.580,00 €
University Staff	780,00 €	850,00 €
Speakers*	without charge	without charge
Online-Ticket	780,00 €	780,00 €

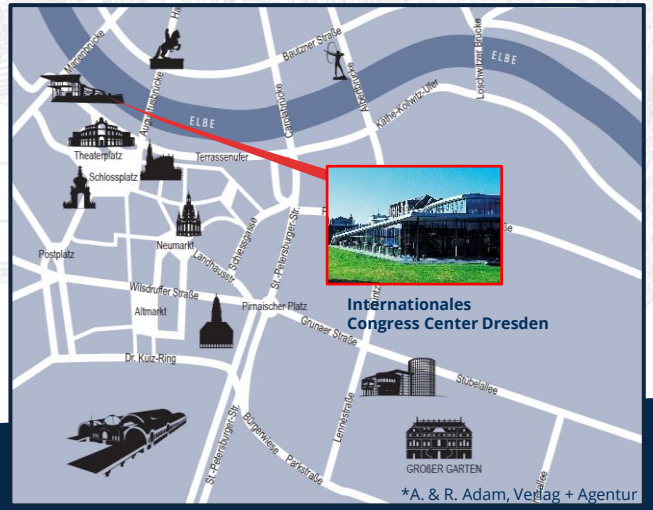
* The fee applies to one speaker per presentation. One co-author per presentation can register for the conference at a reduced rate (-50%).
The conference fees include participation at the conference, refreshments during breaks, and participation at the evening event.

Registration form: https://diagnose-tagung.de

*A. & R. Adam, Verlag + Agentur

Conference location

Internationales Congress Center Dresden
Ostra-Ufer 2, 01067 Dresden
www.dresden-congresscenter.de



Call for Papers

20th Conference

Diagnostics in Mechatronic Vehicle Systems

Current Developments and Innovations in Testing, Inspection and Diagnostics of E/E Systems

- Artificial Intelligence and Diagnostics
- Software-Defined Vehicle
- Cybersecurity and Diagnostics
- Predictive Maintenance
- Standardization of SOVD and PTI
- Battery Diagnostics

May 11 and 12, 2027 in Dresden

Chair of Vehicle Mechatronics
Prof. Dr.-Ing. B. Bäker, Dipl.-Ing. A. Unger

Technische Universität Dresden

Focusing on the future vehicle diagnostics

Dear conference attendees,

for 19 years, the Diagnostic Conference in Dresden has served as a central platform for professional exchange aimed at advancing vehicle diagnostics. With the shift toward software-defined, highly connected, and automated vehicles, this dialogue is becoming increasingly important. New vehicle architectures and digital technologies require a fundamental rethinking of established diagnostic concepts.

V2V communication, cloud-based services, electromobility, connected vehicle fleets, and on-demand service functions are transforming vehicles, processes, and value-creation structures throughout the entire lifecycle. Vehicles are evolving into software-centric system platforms capable of continuous further development. As a result, diagnostics is also shifting from reactive fault detection to becoming an integral part of data-driven and proactive system and service concepts.

Software-Defined Vehicles (SDV), Service-Oriented Vehicle Diagnostics (SOVD), and new vehicle operating systems present new challenges for diagnostics. Topics such as scalability, cybersecurity, over-the-air updates, data-driven condition monitoring, and AI-supported fault prediction are gaining in importance. Diagnostics is thus becoming a key enabler for availability, functional safety, efficient services, and new business models. Against this backdrop, the Diagnostics Conference will address current developments and explore the following key questions, among others:

- How are artificial intelligence, data-driven analytics, and new vehicle operating systems changing diagnostic, testing, and inspection processes?
- What role will SDV and SOVD play in future service-oriented diagnostic architectures?
- How must diagnostics for automated and autonomous driving functions evolve?
- What technological and regulatory frameworks will shape the next generation of vehicle diagnostics?

These and other issues, as well as current technological trends in vehicle diagnostics, will be discussed at the 20th Conference on “Diagnostics in Mechatronic Vehicle Systems” through development reports, system presentations, and practical and research papers.

We look forward to receiving your contribution.

Prof. Dr.-Ing. B. Bäker Dipl.-Ing. A. Unger

Planned topics for the conference

Diagnose und Funktionsentwicklung: Diagnostics and Functional Development:

- Artificial Intelligence and Machine Learning – New Approaches to Anomaly Detection and Diagnostics
- Remote and Cloud Diagnostics
- Cybersecurity and Diagnostics
- Predictive Diagnostics – Proactive Fault Detection and Maintenance Strategies
- Diagnostics in the Software-Defined Vehicle (SDV)
- Safety-Critical E/E Systems – Diagnostics and Testing Strategies of the Future
- Highly Automated Vehicles – Validation, Diagnostics and Functional Safety
- Testing Technologies for New Driver Assistance Systems
- Model-Based Diagnostics, Automated Diagnostic Generation and New Workshop Processes
- Hybrid Powertrains and Electric Mobility – New Requirements for Diagnostics Throughout the Vehicle Lifecycle
- Condition Monitoring of Connected Vehicle Systems and Car2X
- Vehicle Operating Systems – Validation, Diagnostics, and Anomaly Detection in New Platforms
- After-Sales and Service – Ensuring Diagnostic Capability Throughout the Entire Lifecycle

Standardization and Regulation:

- Framework Conditions for AI-Supported Diagnostic and Testing Procedures
- Integration of New Standards – Efficient Integration into the Diagnostic- and Testing Process
- New Framework Conditions (SOVD, ePTi, ODX, OTX) – Standards for Testing, Inspection, and Diagnosics
- The Future of Diagnostic Standards – Cross-Vendor Formats, Services, and Protocols

Other key areas::

- Digital Twin – Virtual Validation and Diagnostics
- Data Protection and Data Security – Vehicle Data Access, Diagnostics, and Backend
- Risk Management and System Security – Methods for Reliably Evaluating Complex Systems in the Context of Diagnostics

The following are addressed

Specialists, users, and interested parties in the following fields:

- Research and (pre-)development
- Diagnostics, testing, inspection, service, and customer support
- Functional development, networking, software and hardware development, communication
- System development, application, and testing
- Production and quality assurance
- Manufacturers, suppliers, and research institutions

Presentation and Abstract

Please send your abstract (in German or English, A4 format, 250–400 words, including the presentation title and the contact information for the presenter and authors; subject line: Diagnostic Conference 2027) by January 20, 2027, to the conference organizers listed on the reverse side.

The conference languages are German and English. Live interpretation will be provided in both languages. Each presentation is scheduled for 30 minutes (25 minutes for the presentation and 5 minutes for discussion).

A conference proceedings volume will be published to accompany the conference, in which the papers will be included. The full paper should be approximately 10 to 12 pages of continuous text (including figures) and must be submitted by **March 10, 2027**, to ensure timely printing of the conference proceedings.

Term

Deadline for Abstracts submission:	**Jan 20, 2027**
Notification to the authors:	**Feb 05, 2027**
Publication of the Conference Program:	**Feb 10, 2027**
Deadline for complete papers submission:	**Mar 03, 2027**

Conference Chair

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