

# cti symposium

AUTOMOTIVE • POWERTRAIN • SYSTEMS

03/04  
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2024  
BERLIN

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FOR  
PAPERS



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# STAYING AHEAD IN THE TRANSITION TOWARDS SUSTAINABLE MOBILITY



The automotive industry continues its transition towards sustainable mobility. While the technological development of alternative powertrain technologies is progressing at high speed, the road towards a green, carbon-neutral future is not entirely smooth as technological, political and regulatory stumbling blocks remain.

Innovation in seemingly mature technologies such as electric motors continues unabated while novel tools and methods, such as artificial intelligence, offer new paths towards even faster and leaner technology development, encapsulated in this year's motto: "powertrain reloaded". At the same time, the focus has widened, and it is now well understood that the whole energy-vehicle ecosystem needs to be considered when aiming to shape the mobility of tomorrow.

Considering the scope of the challenges still ahead, an interdisciplinary exchange between automobile manufacturers and suppliers at all levels is essential. The CTI SYMPOSIA are the ideal meeting ground for manufacturers of passenger cars and commercial vehicles, system and component suppliers, engineering service providers, software developers, and market specialists.

We look forward to your presentation proposals for our 23<sup>rd</sup> CTI SYMPOSIUM in Berlin.

Best regards

**Prof. Dr Malte Jaensch**

Chair of Sustainable Mobile Powertrains,  
Technical University of Munich

Chairman CTI SYMPOSIUM

INTERNATIONAL DELEGATES,  
EXHIBITORS & SPEAKERS

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PLENARY SPEECHES

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DEEP DIVE  
TECHNICAL SESSIONS

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# IMPRESSIONS 2023

20+  
COUNTRIES



70+  
EXPERT LECTURES  
AND PANELS



60+  
EXHIBITORS



25h  
CONTENT &  
NETWORKING



12h+  
NETWORKING  
HOURS



750+  
INDUSTRY  
REPRESENTATIVES

# BE PART OF THIS #1 BUSINESS PLATFORM

Deadline for paper proposal submission  
~~15 APRIL 2024~~  
**DEADLINE EXTENDED 17 MAY 2024**

## PARTICIPATE AS SPEAKER

Experts of all development areas in the field of automotive drivetrains, components like e-motors, batteries, electric/electronics, semiconductors and software but also experts in function integration, system engineering are invited to hand in a paper proposal for CTI SYMPOSIUM GERMANY 2024.

## HOW TO HAND IN YOUR PAPER PROPOSAL

Paper proposals should be submitted via our online form at [cti-symposium.world/de/cfp](https://cti-symposium.world/de/cfp)  
Due to the broad range of topics multiple entries are possible.

## CRITERIAS

Submissions will be evaluated based on criterias such as:

- Topic's importance in relation to the conference theme and audience
- Short (!) explanation why the topic is important (Why) and objective
- Description of the technical background, which new topics/knowledge are conveyed to the audience; description of the methodology used (how)

- Presentation of case studies or application results
- Customer involvement is highly encouraged
- Advantages and benefit over existing solutions
- Future outlook

## **Selection criteria**

- Topic submissions are evaluated by the advisory board according to their technical content and relevance to the conference topic and target group.
- This evaluation forms the basis for acceptance and allocation in the program.
- The allocation of presentations and times will be determined during the preparation of the program depending on the topics to be covered.
- Commercial presentations will not be accepted.

## IMPORTANT DATES

Information of the authors about the advisory board's decision:

**Mid of August**

Deadline for presentation material submission:

**Begin of October**

## **If your topic is accepted:**

The following documents are mandatory to be handed in for the conference:

- Job history (format will be provided)
- Digital photo (color, high resolution)
- Presentation slides (formats and masters will be provided)
- 1 page topic summary (format will be provided)
- Presentation duration: 20min + Q&A
- All documents are required in English.
- One speaker per presentation has free access to the event.

The advisory board endeavours to evaluate the submitted entries objectively. The members of the advisory board use a points-based evaluation system and provide feedback on the content. The sum of the points and feedback leads to the selection of the presentations for the programme.

We ask for your understanding that due to the limited number of presentation slots, unfortunately not all attractive topics can be included in the programme.



**CTI SYMPOSIUM GERMANY  
ADVISORY BOARD**

# MAIN FOCUSES

## ELECTRIC POWERTRAINS

- xEV Powertrains
- Powertrain Design
- Component Integration
- Integrated Cooling Concepts
- Vehicle Platform Concepts
- Performance Optimisation
- Vehicle Integration

## POWER ELECTRONICS

- Power Electronic Topologies
- Switching and Control Strategies
- Multi-Level Architectures
- Power Electronic Components
- SiC and GaN Semiconductors
- Performance Optimisation
- High-Voltage Architectures

## COMMERCIAL VEHICLE POWERTRAINS

- BEV Powertrains
- FCEV Powertrains
- Fuel Cells and Fuel Cell Systems
- (Hydrogen) Combustion Engines
- Megawatt Charging
- High-Voltage Architectures Beyond 800 V
- Multispeed transmission for commercial vehicles

## ELECTRIC MOTORS

- Electric Motor Topologies
- Design of Electric Motors
- Sustainability in EM Design
- Cooling of Electric Motors
- High-Speed Concepts
- In-Wheel Motors
- Winding Technology

## AUTOMOTIVE BATTERIES

- Cell Chemistries
- Battery and Cell Management
- Recycling and 2nd Life
- Battery Cooling
- Battery Safety
- Strategies for Fast Charging
- Battery Architectures

## AUTOMOTIVE FUEL CELLS

- Fuel Cells
- Fuel Cell Systems
- Auxiliary Components
- Control of Fuel Cell Systems
- Degradation
- Performance Optimisation
- Vehicle Integration

I'm glad to answer your questions

**Sylvia Zenzinger**

Conference Director

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# MAIN FOCUSES

## HYBRID POWERTRAINS

- Powertrain Topologies
- HEV Powertrains
- PHEV Powertrains
- Operating Strategy
- Energy Management
- Performance Optimisation
- Synthetic Fuels

## ADVANCED MANUFACTURING AND POWDER METALLURGY

- Powertrain Component Manufacturing
- Sustainability in Manufacturing
- 3D Printing
- Novel Manufacturing Technologies
- Powder Metallurgy in Electric Motors
- Power Metallurgy for Powertrain Components
- Green Steel Production

## COOLING FLUIDS AND LUBRICANTS

- Powertrain Cooling Fluids
- Transmission Fluids
- Multipurpose Fluids
- Sustainability
- Water-based Lubricants
- Tribology
- Measurement and Testing

## AUTOMOTIVE TRANSMISSIONS

- Single-Speed Transmissions
- Multi-speed Transmissions
- CVT Transmissions
- Disconnects and Shift Elements
- Efficiency Optimisation
- Cooling Strategies
- Vehicle Integration

## ARTIFICIAL INTELLIGENCE IN POWERTRAINS

- Artificial in Powertrain Development
- AI in Powertrain Control
- AI in Data Analysis and Testing
- AI Tools and Methods
- Novel Applications of AI in Powertrains
- Design Optimisation using AI
- Case Studies

## DEVELOPMENT METHODS, TOOLS AND TESTING

- Novel Development Methods and Tools
- Test Procedures
- Functional Safety
- On-Board Diagnostics
- Sustainability in Powertrain Design
- AI-Assisted Development Methods
- NVH-Optimised Design

# MAIN FOCUSES

## OPERATING STRATEGY, ENERGY AND THERMAL MANAGEMENT

- Operating Strategies for xEVs
- Thermal Management Systems and Strategies
- Energy Management Strategies
- Coolant System Design
- AI-Assisted Management Strategies
- Coolant System Architectures
- Performance Optimisation

## MARKETS, POLICIES AND SUPPLY CHAINS

- International Market Trends
- Affordability of BEVs
- Trends in Consumer Behaviour
- International Policy
- Circularity
- Life-Cycle Assessments
- Sustainable Supply Chains

## ENERGY AND MOBILITY

- Liquid and Gaseous Energy Carriers
- Integration of BEVs into the Energy System
- Bidirectional Charging
- Charging and Refuelling Infrastructure
- Vehicles as Part of the Energy Transition
- Novel Concepts for Sustainable Mobility
- Assessment of Environmental Impacts



**Submit your topic proposal online**

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# cti symposium

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