

cti symposium

AUTOMOTIVE · POWERTRAIN · SYSTEMS

05/06
DEC

BERLIN

STRATEGIES AND TECHNOLOGIES ON THE PATH TO CARBON-FREE MOBILITY



Thorsten Jablonski
Volkswagen Group
Components



Prof. Dr Maximilian Fichtner
Helmholtz Institute Ulm



Marcus Lott
Opel Automobile



Anja van Niersen
Milence



Giovanni Palazzo
Volkswagen Group
Charging / Elli

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CTI SYMPOSIUM 2023

14

DEEP DIVE
SESSIONS



80+

EXPERT
LECTURES



25h

CONTENT &
NETWORKING



70+

EXHIBITORS



600+

INDUSTRY
REPRESENTATIVES



CTI NETWORKING NIGHT

Fasten your seat belts! Enjoy the relaxed atmosphere and get spoilt with finest food and drinks at the CTI Networking Night

Your great opportunity for extensive business contacts!

TECHNOLOGIES AND STRATEGIES FOR CARBON-NEUTRAL AUTOMOTIVE POWERTRAIN SYSTEMS

The automotive industry is rapidly moving towards zero-emission mobility, which is possible with a variety of drive systems and primary energy sources. Although the industry has gained valuable experience in the mass production of low-emission vehicles, the key question remains: What solutions will enable the necessary transition to carbon-neutral powertrains across all segments and markets, and who are the right business partners to achieve these goals?

Our symposium will address these challenges in numerous plenary and session presentations, as well as in two panel discussions: „The BEV for everybody“ and „Who will take the commercial vehicle volume – FCEV, H2 ICE or BEV?“. There is much to discuss at all levels, and to remain successful, an interdisciplinary exchange between automakers and suppliers at all levels is necessary.

The CTI Symposium brings together experts and decision-makers from passenger car and commercial vehicle OEMs, system and component suppliers, engineering service providers, software developers and market specialists to provide you with the latest developments, innovations and ideas, valuable suggestions and new contacts.

We look forward to welcoming you to CTI SYMPOSIUM GERMANY 2023 and its accompanying exhibition.

The Chairmen of the CTI SYMPOSIUM GERMANY



Prof. Dr Ferit Küçükay, Director, Center for Automotive Engineering, Innovationsgesellschaft Technische Universität Braunschweig mbH

Prof. Dr Malte Jaensch, Chair of Sustainable Mobile Powertrain, Technical University of Munich, Germany



**EXCLUSIVE.
INSPIRING.
LIVE.**

International Executives,
Experts and Exhibitors

Participation in Discussions
with Key Speakers and
Panelists

14 Dive Deep Sessions
into Latest Powertrain
Technology

Extensive Networking
Opportunities Bringing
You into Conversation

CTI SYMPOSIUM SPONSORING & EXHIBITION



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7.00 Check-In and Opening of the Exhibition

8.30 Opening of the CTI SYMPOSIUM GERMANY 2023 by the Chairmen and CTI



Prof. Dr Ferit Küçükay,
Director, Center for Automotive Engineering,
Innovationsgesellschaft Technische Universität
Braunschweig mbH, Germany



Prof. Dr Malte Jaensch,
Chair of Sustainable Mobile Powertrains,
Technical University of Munich, Germany



Sylvia Zenzinger,
Conference Director CTI SYMPOSIA,
Car Training Institute, Germany

Plenary Speeches (Morning Session)

8.50

Transformation Story of the Volkswagen Group Components to An Electric Powertrain Supplier



Thorsten Jablonski,
Head of Technical Development
and Product Management,
Volkswagen Group Components,
Germany

9.10

Mercedes-Benz Transformation & Electrification



Konstantin Neiß,
Director E-Drive System & Center of Competence
E-Drive Units + Chairman of YASA, Mercedes-Benz,
Germany

9.30

The Opel Way to Electromobility



Marcus Lott,
Senior Vice President, Stellantis Lead
Engineering Central Europe,
Opel Automobile GmbH, Germany

9.50 Joint Discussion with the Plenary Speakers

10.10 Coffee Break and Visit to the CTI SYMPOSIUM Exhibition

11:00 Executive Discussion “The BEV for Everybody“

Panelists: Thorsten Jablonski | Marcus Lott | Prof. Dr Maximilian Fichtner | Adam Green, CTO, Lynk & Co, Sweden

Plenary Speeches (Afternoon Session)

4.45

The Transformation of Propulsion



Prof. Dr Maximilian Fichtner,
Executive Director & Head of Solid State Chemistry,
Helmholtz Institute Ulm (HIU), Germany

5.15

GenAI, & ChatGPT’s Impact on Future Automotive Development and Engineering



Hamidreza Hosseini,
Founder & CEO ECODYNAMICS GmbH and
Lecturer, WHU Otto Beisheim Business School,
Germany

7.30

CTI Networking Night

6 DECEMBER 2023 | PLENARY PROGRAMME

8.00 Check-In and Opening of the Exhibition

Plenary Speeches

8.30
Magna's Next Gen eDrive Portfolio



Prof. Dr. Andreas Doctor
Senior Vice President Engineering,
Magna Powertrain, Germany

8.50
**Polestar 0 Project – Creating a Fully
Climate-Neutral Car by 2030**



Hans Pehrson,
Project Lead, Polestar 0,
Polestar, Sweden

9.10
Zero Emission Transport Solutions



Loek van Seeters,
Director Product Planning,
DAF Trucks N.V., The Netherlands

9.30 **Joint Discussion with the Plenary Speakers**

9.50
Renewables on the Road: A Better Grid Through a New Charging and Energy Ecosystem



Anja van Niersen
CEO,
Milence, The Netherlands



Giovanni Palazzo
Senior Vice President,
Volkswagen Group Charging & CEO,
Elli, Germany



**Moderated by:
Lazar Backovic,**
Editor and Journalist,
Handelsblatt, Germany

10.30 **Coffee Break and Visit to the CTI SYMPOSIUM Exhibition**

11.15 **Expert Discussion Who Will Take the Heavy-Duty Vehicle Volume – FCEV, Green ICE or BEV?**

Panelists:



Gernot Graf,
Head of Powertrain
Functions & Systems,
AVL List GmbH, Austria



Florian Hacker,
Deputy Head Resources &
Transport Division,
Öko-Institut e.V., Germany



Michael Himmen,
Managing Director,
Hydrogenics GmbH,
Germany



Loek van Seeters,
Director Product Planning,
DAF Trucks N.V., The Netherlands

5 DECEMBER 2023 | DEEP DIVE SESSIONS

11.45 - 1.15

12.45 Partner Presentation

Novel Multi-Functional Shift System for EV Drivetrains

John Jennings, Director Innovation & eMobility,

Amsted Automotive, USA

Lunch Break and Visit to the CTI Symposium Exhibition

12.45 Partner Presentation

Advancing Efficiency & Reliability in High-Voltage E-Motor Applications

Harvey Haworth, Global E-Mobility Market Development Manager,
Victrex, UK

12.45 Partner Presentation

A: E-Drives

B: E-Motors

C: Market, Strategy and Supply Chain

1.15 **MEB-Performance, the New Drive for the ID Family**
Dr. Jens Böhl – Head of Department Electric Drives,
Volkswagen AG Wolfsburg, Germany and
Dr Andreas Schmidt, Head of Department Development Drive
Modules, **Volkswagen Group Components Kassel**, Germany

A Novel Design of Permanent Magnet Motor with Ultra-High Power Density for Electric Vehicles
Dr Håkan Sandquist, Director Propulsion Hardware and System,
InfiMotion Technology Europe AB, Sweden

The Importance of Propulsion Technology and the Supply Chain to Deliver Mainstream BEVs at Scale
Michael Southcott, Manager,
S&P Global, UK

1.45 **ORA Lightning Cat: High Efficient Electric Vehicle Powertrain Architecture**
Rolf Albrecht, Chief Engineer BEV Powertrain System Design,
Great Wall Motors, P.R. China

Taking EESM Traction E-Motors to the Next Level
Bernhard Schmitt, Global Engineering Director, Electric Motors,
BorgWarner, Germany

Impact of Automotive Magnet- and Rare-Earth-Free E-Motor Trends on Material Shortages
Simon Noll, Consultant E-Mobility,
P3 automotive GmbH, Germany

2.15 **Revolutionizing BEV Design: The Optimal Powertrain Configuration for Maximum Performance and Efficiency**
Dr Jörg Gindele, Senior Director, Business Expansion &
Transformation, **Magna Powertrain International GmbH**, Germany

I²SM - a Sustainable, Compact and Highly Efficient E-Motor
Dr Joao Bonifacio, Manager System Development,
ZF Friedrichshafen AG, Germany

A Humble Journey Towards Carbon Neutrality
Jean-François Giroux, R&D Decarbonisation Director,
Valeo, France

2.45 Coffee Break and Visit to the CTI SYMPOSIUM Exhibition

3.30 **Dual-Rotor, Radial-Flux Electric Machines for Low-Cost and Highly Efficient Drive Units**
Alexander Rosen, Co-Founder and System Engineer,
DeepDrive, Germany

Dana's Next Generation E-Motors Using Advanced Cooling Methods
Steven Vanhee, Senior Thermal System Engineer,
Dana Inc., Belgium

Copper, a Strategic Raw Material. Availability, Circularity and GHG Emissions Pathway
Fernando Nuno, Clean Energy Transition Programme Manager,
International Copper Association, Belgium

4.00 **Key Enabling E-Drive Technologies for Premium Segments**
Matthieu Rihn, Head of Component Kit Design,
Marelli EPT Strasbourg SAS, France

Step from Round Wire to UPIN for an EESM Drive Family
Carsten Siepker, Electrotechnic Engineer P3 Projects,
Valeo eAutomotive Germany GmbH, Germany and
Anthony Gimeno, Electric Motors Engineer, **Renault**, France

Quality Improvement Through AI-Based Usage of Production and Field Data Analytics
Jens Saberi, Senior Manager Software Systems Solutions,
Magna Powertrain International GmbH, Germany

4.30 Change to Plenum

5 DECEMBER 2023 | DEEP DIVE SESSIONS

11.45 - 1.15

12.45 Partner Presentation

Lunch Break and Visit to the CTI Symposium Exhibition

12.45 Partner Presentation

D: Commercial Vehicle Drives

E: Thermal Management & Operation Strategy

1.15 **Central Drive - Modularisation and Performance Steps for Commercial Vehicles**

Stefan Karlsson, Senior Expert Engineer,
Scania CV AB, Sweden

EV Torque Management Systems, A Sophisticated Way to Reach Efficiency Targets

Hannafia Spånberg, Director Engineering Europe,
BorgWarner, Sweden

1.45 **JJE 2-Speed Electric Beam Axle for Medium Duty Truck**

Dr Yang Cao, Transmission Senior Supervisor,
Jing-Jin Electric, China

ZF TherMaS: Holistic Thermal Management for BEV

Alessio Paone, Senior Manager,
ZF Friedrichshafen AG, Germany

2.15 **Dana Spicer Zero-6 e-Transmission**

Patxi Garcia, Product Planning Manager, Commercial Vehicle Europe,
Dana Incorporated, Spain

Efficient Design of Thermal Management Systems for BEV with a Tool-Based Engineering Process

Dr Matthias Steinsträter, Project Manager,
IAV GmbH, Germany

2.45 Coffee Break and Visit to the CTI SYMPOSIUM Exhibition

3.30 **Comparison of Pneumatic and Electro-Mechanic Actuators for E-Transmissions in Commercial Vehicles**

Patrick Starke, Development Engineer,
IAV GmbH, Germany

Battery Heating in Customer Operation

Marcel Sander, Research Associate,
Technische Universität Braunschweig, Germany

4.00 **One or Two Motors, up to 4 Speeds – Family of Electric Drive axles for Heavy Duty Commercial Vehicles**

Dr Gereon Hellenbroich, Manager, **FEV Europe GmbH**, Germany and Weiping Wei, Program Director, **eKontrol Co., Ltd**, China

AI Based Automatic Generation of Optimal Thermal System Architectures

Pierre-Emmanuel Dumouchel, CEO,
Dessia Technologies, France

4.30 Change to Plenum



5 DECEMBER 2023 | DEEP DIVE SESSIONS

11.45 - 1.15

Lunch Break and Visit to the CTI Symposium Exhibition

12.45 Partner Presentation

ePOP - a Software Solution Built for Powertrain Optimisation of Performance, Cost and Sustainability

Bence Falvy, CTO, **ZeBeyond Ltd.**, UK

12.45 Partner Presentation

F: Development Methods, Tools & Testing

G: Sustainability and Life Cycle

1.15 **Advanced Design Validation Planning Techniques for Automotive E-Axle Development**

Alwin Tuschkan, Project Manager IODP,
AVL List GmbH, Austria

Security and Sustainability in the Supply of Raw Materials for Rare Earth Permanent Magnets

Nuala Bertram, Rare Earths - Sales Manager,
Iluka Resources Limited, Australia

1.45 **Customer Oriented Electric Drivetrain Durability Development**

Mingfei Li, PhD-Student and Dr Fabian Noering, Data Scientist,
Volkswagen AG, Germany

Steel Decarbonisation and the Raw Material Implications

Liesbet Gregoir, Sustainability Manager,
Cargill, Belgium

2.15 **Establishing a Digital Twin with Self-Correcting Reliability Predictions Based on Large Fleet Data**

Detlev Runkel, Senior Solutions Strategist, **Hexagon**, Germany

Contribution of Wheel Bearings to Sustainability

Andreas Becker, Expert Wheel Bearing Technology PassCar,
Schaeffler Technologies AG & Co. KG, Germany

2.45 **Coffee Break and Visit to the CTI SYMPOSIUM Exhibition**

3.30 **Performing Calibration of Dynamic Vehicle Behavior of BEVs on E-Axle Level**

Björn Wultsch, Project Manager IODP,
AVL List GmbH, Austria

Accelerating the Journey towards a Greener Battery – Webasto’s Holistic Approach

Robert Gantner, Head of Business Development Battery Systems Globally for Automotive, **Webasto Group**, Germany

4.00 **Integrated Software Solution for Electrified Powertrain Design and Analysis with a Focus on NVH**

Dr Paul Langlois, Software Engineering Director,
SMT, UK

Silicon Carbide (SiC) based Semiconductors Power the Way to Sustainability and Circular Economy

Ole Gerkenmeyer, Director,
Wolfspeed Europe GmbH, Germany

4.30 **Change to Plenum**

6 DECEMBER 2023 | DEEP DIVE SESSIONS

12.00 – 1.30

1.00 Partner Presentation

Fun To Drive For Everyone

Nico De Visscher, Chief Engineer Design & Development,
TREMEC, Belgium

Lunch Break and Visit to the CTI Symposium Exhibition

1.00 Partner Presentation

Axial Flux Motors, the Path to Mass Production

Peter Leijnen, CTO, **Traxial BV**, Belgium

1.00 Partner Presentation

H: E-Drives

I: Power Electronics

J: FCEV Drives & FCEV Components

1.30

Designing to Overcoming Barriers to High-Speed Motors

Martin Burgbacher, Executive Director Engineering,
American Axle & Manufacturing, Germany

Advanced Inverter Topologies Drive Efficient BEV Architectures

Dr Ayman Ayad, System Engineer for HV Systems,
Vitesco Technologies GmbH, Germany

Development of a Prototype Fuel Cell Powered Toyota Hilux

Joachim De Boever, Technical Manager,
Toyota Motor Europe, Belgium

2.00

Optimising Overall Efficiency of Electric Drives for Automotive Traction Applications

Dr Alexander Rambatius, Senior Expert System Application
Electric Drives, **Valeo**, Germany

High Power Density, Low-Cost Next-Generation Inverter Technology for Electric Mobility

Dr Pascal David, Engineering Manager - Advanced Systems
Innovation Electric Drives Europe, **BorgWarner**, Luxembourg

PEMFC Single Cell Concept for the Increase in Performance Through Sensor Integration

Johannes Knaier, Research Associate,
Karlsruher Institut für Technologie (KIT), Germany

2.30

Coffee Break and Visit to the CTI SYMPOSIUM Exhibition

3.15

Sustainable High-Speed EDU Gen-2

Wilhelm Vallant, Senior Product Manager,
AVL List GmbH, Austria

Optimised EDU System Efficiency and Performance Using Optimised Pulse Patterns

Dr Simon Klacar, Head of Propulsion System & Electric Drive,
InfiMotion Technology Europe AB, Sweden

High-Performance Fuel Cell Stack Modules for Heavy Duty Applications

Dr Stefan Dwenger, Director Product Engineering,
EKPO Fuel Cell Technologies GmbH, Germany

3.45

Torque Vectoring Architectures in eDrives – High Performance Solutions for Unique Markets

Pascal Walter, Team Leader, **hofer powertrain products** and
Severin Schneider, Manager Advanced Development,
ElringKlinger AG, Germany

Silicon Carbide-Based Drive System: Key Performers Enabling E-Mobility

Alexander Reich, Head of Product Management High Voltage
Electronics, **Vitesco Technologies**, Germany and
Aly Mashaly, Director Application and Technical Solution Center,
Rohm Semiconductor Europe, Germany

Presentation in coordination

4.15

Change to Plenum

6 DECEMBER 2023 | DEEP DIVE SESSIONS

12.00 – 1.30

1.00 Partner Presentation

Lunch Break and Visit to the CTI Symposium Exhibition

1.00 Partner Presentation

New Electric Axles and Battery Systems in BEV

Hartmut Schneeweiss, Sen. Mgr. Technology & Innovation,
eAx solutions GmbH, Germany

K: Commercial Vehicle Drives

L: Battery System Technologies

1.30

Topic in Coordination

Dario Bignami, **Presentation cancelled** Engineering Management,
Chief Engineer, **REE Automotive**, UK

Li-Ion Battery Immersion Cooling: Safe, Fast & Cool!

Dr Gérard Quoirin, Battery Specialist,
TotalEnergies Lubrifiants, France

2.00

Revolutionising Logistics for Tailored Vehicle Platform by Modular Battery Swapping Station Solution

Sven Steinwascher, CTO,
GETEC Getriebe Technik GmbH, Germany

A Breakthrough Thermal Management Module for Battery Immersive Cooling

Dr Moussa Nacer-Bey, Advanced Development Technical Leader,
Valeo, France

2.30

Coffee Break and Visit to the CTI SYMPOSIUM Exhibition

3.15

Innovative Multi-Speed Transmissions with Dog Clutches for a Semi-Trailer

Adel Turic, Scientific Assistant,
Technical University of Darmstadt, Germany

Mastering Thermal Runaway – How to Design Safer Battery Systems

Mareike Schmalz, Manager Battery Advanced Development,
APL GmbH, Germany

3.45

Integrating Sustainability as an Indicator in Early Design Phase of Heavy-Duty Vehicles

Nicolas Kratzer, PhD Candidate and Research Project Assistant,
CD-Laboratory for Sustainable Product Management Enabling a
Circular Economy, **University of Graz**, Austria

Development of Wireless Battery Management System (wBMS) for Automotive Applications

Davide Cavaliere, Battery Management Systems Product Manager,
Marelli, Japan

4.15

Change to Plenum

6 DECEMBER 2023 | DEEP DIVE SESSIONS

12.00 – 1.30

1.00 Partner Presentation

Lunch Break and Visit to the CTI Symposium Exhibition

1.00 Partner Presentation

M: Fluids for Cooling and Lubrication

N: HEV-Drive Technologies

1.30

Additive Technology to Improve Efficiency and Durability of the E-Axle System

Dr Susie Hurley, Senior Driveline Advisor,
Afton Chemical, United Kingdom

AI Based Controller for HEV Engine Stop Control

Jeroen De Smet, Senior Manager,
Toyota Motor Europe, Belgium

2.00

Achieving a Unified Electric Powertrain System Cooled and Lubricated with a Single E-Fluid

Branimir Mrak, Senior Research Engineer,
Flanders Make, Belgium

Unlocking the Potential of Green-Methanol: Indirect Electrification of the Transport Sector

Felix Fellner, Academic Researcher,
Technical University of Munich, Germany

2.30

Coffee Break and Visit to the CTI SYMPOSIUM Exhibition

3.15

Trends and Developments in Heat Transfer Fluids for Electric Vehicles

Dr Karolina Jablonka, Senior Technical Manager,
Valvoline Global Operations, The Netherlands

Hybrid Transversal 8-Speed DCT. Innovative Compound Design with P2/P3 Structure for High Performances

Matteo Scribano, High Performance Transmission Lead Product Engineer Engineering, **Dana Inc. - Rivoli**, Italy

3.45

Enhancing EDU Efficiency and Power Density Through Fluid Optimization

Falvio Sarti, Testing Engineer, Project Manager,
TotalEnergies, France

Elevate Your Logistics and Municipal Fleet's Range with Our Range Extender Solution

Joachim Trumpff, General Manager,
GETEC Getriebe Technik GmbH, Germany

4.15

Change to Plenum





Register now

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CONFERENCE FEE

	Early Bird (until 29 Sep. 2023)	Regular Fee (from 30 Sep. 2023)	Module
5 - 6 December 2023	2,500 €*	2,600 €*	P2300550M012

* excl. VAT per person. A substitute may attend in your place at no additional cost.

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Concept and Content

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