

# Electric Powertrains and Energy Systems 2025

A sustainable and electrified future

26 – 27 March 2025  
Berlin, Germany

## IN FOCUS

*How is electrification  
changing global  
competition?*

### KEYNOTE LECTURES

FEV Group GmbH / Frontier Economics Ltd. / IAV GmbH /  
JSC Automotive GmbH / VDA / Volkswagen AG



# A sustainable and electrified future

## / POWERTRAIN SOLUTIONS AND COMPONENTS FOR BEV, REX, PHEV, AND FCEV

Technology, systems, sustainability, and cost-effectiveness

## / RENEWABLE ELECTRICITY GENERATION, STORAGE, AND GRID INFRASTRUCTURE

Storage systems, use of H<sub>2</sub> and its infrastructure, global systems

## / CHARGING INFRASTRUCTURE

Bidirectional and fast charging, grid integration, costs, range, charging time

## / INTERNATIONAL APPROACHES

Production, distribution chains, costs

## / CLIMATE PROTECTION AND SUSTAINABILITY

through solutions based on renewable electricity (LCA, CO<sub>2</sub> circular economy, CO<sub>2</sub> footprint)



**Prof. Dr. Peter Gutzmer**  
Editor-in-Charge ATZ | MTZ Group,  
Springer Nature

## Welcome

The transition to electricity-based energy and electric mobility is taking place in different ways in the various industrialized countries. In addition to political requirements, an important role is also being played by market acceptance and the overall orientation of the economy. China has clearly taken the lead, while markets in Europe and the USA are showing weaknesses.

What corrections and changes will emerge over the next few years? What developments are there regarding the costs, the driving range, and the charging time of BEVs and PHEVs? How is the charging infrastructure being expanded and what is the current situation of renewable energy generation, storage, and the grid infrastructure? Are political goals and funding still relevant to these times? And what role will hydrogen and fuel cells play in future mobility?

Take this opportunity to attend the 19th MTZ Conference Electric Powertrains and Energy Systems 2025. Experts from the automotive industry, energy providers, and grid operators will meet up with representatives from politics and science to discuss important topics for this sector.

On behalf of the Scientific Advisory Board

### HIGHLIGHT

**Ceremony of the  
Sustainability Award  
in Automotive**



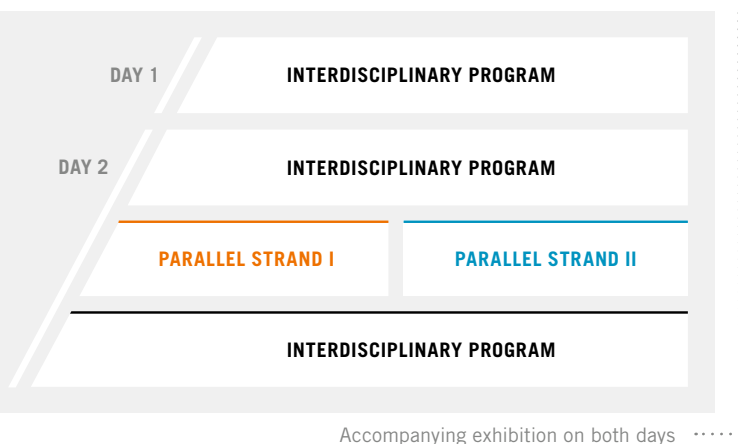
**SUSTAINABILITY AWARD  
IN AUTOMOTIVE**  
ATZ MTZ ARTHUR LITTLE

## Stay at the cutting edge!

- ✓ Highly relevant technical papers presented by renowned speakers
- ✓ Networking in the international expert community
- ✓ Innovative products and services

## Electric Powertrains and Energy Systems

The technological transformation in individual mobility on the basis of regenerative primary energy requires an intensified technical exchange of ideas between leading representatives of the automotive and energy industry on the one hand and science and politics on the other. For that reason, this congress will focus on topics that not only describe the change in vehicle powertrains, but also present technological solutions in the associated infrastructure, including the provision of primary energy. Discussions will concentrate on political framework conditions as well as on systemic innovations for the future and digital solutions.



## Scientific Advisory Board

Our Scientific Advisory Board, which is made up of prominent experts in their respective fields, provides support during the planning phase of the congress and helps to identify suitable topics.

With its expertise the board has made a valuable contribution to the choice of themes for the lecture program.



**Prof. Dr. Peter Gutzmer**  
Editor-in-Charge ATZ | MTZ Group,  
Springer Nature

Scientific Director of the Congress

**Dr. Norbert Alt**  
FEV Group GmbH

**Klaus Baumgärtner**  
BridgingIT GmbH

**Dr. Helmut Gander**  
MAHLE International GmbH

**Prof. Dr. Bernhard Geringer**  
Austrian Society of Automotive  
Engineers (ÖVK)

**Prof. Dr. Uwe Dieter Grebe**  
TU Vienna

**Axel Hausen**  
Netze BW GmbH

**Lars Hentschel**  
Volkswagen AG

**Dr. Urban Keussen**  
NeXtWind Management GmbH

**Benjamin Kleiner**  
e-mobil BW GmbH

**Christian Lensch-Franzen**  
APL Automobil-Prüftechnik Landau GmbH

**Thomas Müller**  
IAV GmbH

**Stephan Rebhan**  
Schaeffler Technologies AG & Co. KG

**Prof. Dr. Hans-Christian Reuss**  
University of Stuttgart

**Dr. Peter Sauermann**  
BP Europa SE

**Dr. Otmar Scharrer**  
ZF Friedrichshafen AG

**Dr. Michael Schlegel**  
BMW Group

**Alexander Toppelreiter**  
AVL Deutschland GmbH

**Prof. Dr. Karsten Wilbrand**  
Shell Global Solutions (Deutschland) GmbH

**08:30 Welcome and opening of the congress**

Prof. Dr. Peter Gutzmer, Editor-in-Charge ATZ | MTZ Group;  
Dr. Alexander Heintzel, Editor-in-Chief ATZ | MTZ Group

08:45 – 10:15, Plenum – Room 1

**KEYNOTE LECTURES I**

Moderation: Prof. Dr. Peter Gutzmer, Editor-in-Charge ATZ | MTZ Group

**KEYNOTE****08:45 Influence of ambient temperatures on the range of BEVs – physical limits and technical opportunities**

Lars Hentschel, Head of EAE, Volkswagen AG, Germany

**KEYNOTE****09:15 ICE-ban?****Solutions for today, tomorrow, and the day after tomorrow?**

Dr. Norbert Alt, COO & Executive Vice President,  
FEV Group GmbH, Germany

**KEYNOTE****09:45 Advancing SDV – cloud-driven powertrain optimization complemented by hardware updatability**

Marc Sens, Senior Vice President, IAV GmbH, Germany

10:15 Refreshment break with coffee and tea in the exhibition area

10:45 – 11:50, Plenum – Room 1

**Joint discussion with a fishbowl character with the keynote speakers and the auditorium**

Moderation: Dr. Alexander Heintzel, Editor-in-Chief ATZ | MTZ Group;  
Marc Ziegler, Deputy Editor-in-Chief MTZ

**10:45 Impulse lecture:****Pathways out of the crisis: the future of the automotive industry in 2025**

Isabel Cademartori, MdB, Transport Policy Spokeswoman for the  
SPD Parliamentary Group, German Federal Parliament, Germany

**11:00 Joint discussion:****Energy and mobility – how are global markets changing?**

Participants:

Dr. Norbert Alt, COO & Executive Vice President, FEV Group GmbH,  
Isabel Cademartori, MdB, German Federal Parliament,  
Lars Hentschel, Head of EAE, Volkswagen AG,  
Marc Sens, Senior Vice President, IAV GmbH,  
Nicole Steiger, Managing Director, JSC Automotive GmbH,  
all Germany

11:50 Plenum – Room 1

**Ceremony of the Sustainability Award in Automotive**

A joint initiative of ATZ, MTZ, and Arthur D. Little GmbH



12:30 Lunch in the exhibition area

14:00 – 16:00, Plenum – Room 1

**POWERTRAINS**

Moderation: Dr. Otmar Scharrer, ZF Group

**14:00 Powertrain optimization****through highly integrated electronic systems**

Dr. Alexander Hoffmann, Team Manager,  
Systems Engineering Power Electronics, IAV GmbH, Germany

**14:30 Efficiency-optimized electric axle for commercial vehicle applications through system integration of highly efficient components**

Dr. Simon Schneider, Project Manager,  
Project House Fuel Cell Systems, MAHLE International GmbH;  
Michael Ernstorfer, Head of Transmission Design,  
MAHLE ZG Transmissions GmbH, Germany

**15:00 AI-powered powertrain concept development**

Mario Oswald, Skill Team Leader, Virtual Vehicle,  
AVL List GmbH, Austria

**15:30 Challenges in finding the optimal electric drive unit for electric vehicles**

Florian Oberneder, Research Associate, TUM School  
of Engineering and Design, Gear Research Center (FZG),  
Technical University of Munich, Germany

16:00 Refreshment break with coffee and tea in the exhibition area

16:30 – 18:00, Plenum – Room 1

## INFRASTRUCTURE

Moderation: Ursel Willrett,  
Senior Technical Consultant (ret.), form. IAV GmbH

### 16:30 Bringing Megawatt Charging to life

Dr. Felix Heider, E-Mobility Application Scientist,  
Shell Global Solutions (Deutschland) GmbH  
[in cooperation with Shell Research Ltd., United Kingdom, Shell  
Global Solutions International B.V., Netherlands and SBRS GmbH,  
Germany]

### 17:00 Charging and driving off: charging infrastructure for heavy goods vehicles in Europe

Dirk Braun, Practice Lead Mobility & Automotive,  
fasterhead GmbH & Co. KG, Germany

### 17:30 Transformation of the eMobility infrastructure – the wireless charging revolution

Thomas Würz, Head of Wireless Power Transfer, Siemens AG,  
Germany [in cooperation with MAHLE International GmbH and  
MAHLE New Mobility Solutions GmbH], Germany

approx.

18:00 End of the first day of the congress

### 19:30 Networking dinner at the restaurant Zollpackhof Berlin



Enjoy a delightful evening and interesting conversations over dinner  
with colleagues and speakers.



SUSTAINABILITY AWARD  
IN AUTOMOTIVE

ATZ MTZ ARTHUR D. LITTLE

Due to their importance for the economy and society, the automotive industry and mobility providers bear special responsibility for achieving climate protection and general sustainability goals.

The Sustainability Award in Automotive, which is jointly organized by the ATZ/MTZ Group and sustainability and industry experts from the consultancy Arthur D. Little, honors outstanding examples of sustainable contributions to mobility.

#### The categories:

- Mobility concepts
  - Technology
  - Startup
  - Open innovation for sustainability
- (Special Category UK SPOTLIGHT AWARD)

Award Partner

#### Arthur D. Little GmbH

Arthur D. Little helps you meet today's most pressing challenges and seize tomorrow's most promising opportunities.

We expand your capabilities by working side by side with you, drawing on our network of innovators, entrepreneurs, technologists, and academics.

We believe in an open world and create connected communities and ecosystems through our open consultancy approach.

**ARTHUR D. LITTLE**

[www.adlittle.com](http://www.adlittle.com)



08:30 – 10:00, Plenum – Room 1

KEYNOTE LECTURES II

Moderation: Dr. Alexander Heintzel, Editor-in-Chief ATZ | MTZ Group

KEYNOTE

08:30 Framework conditions for the ramp-up of electromobility

Dr. Marcus Bollig, Managing Director,  
German Association of the Automotive Industry (VDA), Germany

KEYNOTE

09:00 Return of the combustion engine in China

Nicole Steiger, Managing Director,  
JSC Automotive GmbH, Germany

KEYNOTE

09:30 No powertrain transition without energy infrastructure

Dr. David Bothe, Director, Frontier Economics Ltd., Germany

10:00 Refreshment break with coffee and tea in the exhibition area

10:30 – 12:00, Parallel strand I – Room 1

COMPONENTS

Moderation: Stephan Rebhan, Schaeffler Technologies AG & Co. KG

10:30 Closed-loop simulation of the thermal and electromagnetic behavior of electric drive trains

Fabian Jonczyk, Research Associate, Teaching and Research  
Area Mechatronics in Mobile Propulsion, RWTH Aachen University  
[in cooperation with dSPACE GmbH], Germany

11:00 iPSM: the potentials of the ironless stator for electric drives

Lennart Leopold, Head of Product Development,  
Vaionic Technologies GmbH, Germany

11:30 Electrically excited synchronous machine brushless system

Camelia Jivan, Project Manager eAxles/EESM, Valeo, France;  
Thomas Hennings, Senior Project Manager Traction Drives,  
MAHLE GmbH, Germany

12:00 Lunch in the exhibition area



10:30 – 12:00, Parallel strand II – Room 2

THERMAL CHALLENGES

Moderation: Prof. Dr. Uwe Dieter Grebe, TU Vienna

10:30 Innovative immersive cooling: a unique thermal management system for batteries, powertrain, and power electronics in electric vehicles

Prof. Dr. Kamel Azzouz, Thermal Research and Innovation  
Director, Valeo, France

10:50 Next GEN thermoelectrical insulation for Zero-TP

Ulf Christoffer, Head of Product Development,  
Oerlikon Friction Systems (Germany) GmbH, Germany

11:10 Modular thermal systems for AD-capable electric vehicles

Joris Fokkelman, Head of Energy Management,  
Schaeffler AG, Germany

11:30 Comparison of fresh and aged dielectric fluids for direct battery cooling

Rico Pelz, Manager Analytical Laboratory, System Functionality,  
APL Automobil-Prüftechnik Landau GmbH, Germany

13:00 – 14:30, Parallel strand I – Room 1

BATTERY STORAGE

Moderation: Prof. Dr. Hans-Christian Reuss,  
Institute of Automotive Engineering (IFS), University of Stuttgart

- 13:00 **Battery thermal management for fast charging based on nonlinear model predictive control**  
Lukas Acker, Research Assistant, Institute of Powertrains and Automotive Technology, TU Vienna, Austria
- 13:30 **Managing the latest thermal propagation requirements with experience of FEV**  
Dr. Tobias Kaufmann, Technical Specialist,  
FEV Europe GmbH, Germany
- 14:00 **Circular battery pack development for light electric vehicles using detachable cell connections**  
Theo Seiler, Project Lead, Institute of Product Engineering (IPEK),  
Karlsruhe Institute of Technology (KIT), Germany

14:30 Refreshment break with coffee and tea in the exhibition area

15:00 – 16:30, Plenum – Room 1

HYDROGEN FUEL

Moderation: Prof. Dr. Bernhard Geringer,  
Austrian Society of Automotive Engineers

- 15:00 **Optimizing the development of fuel cell trucks through simulation and expertise**  
David Mühlgabner, Technical Expert E/E Powertrain,  
AVL List GmbH, Austria
- 15:30 **Innovations for a sustainable hydrogen energy mobility ecosystem**  
Prof. Dr. Tim Hosenfeldt, Senior Vice President Central Technology,  
Schaeffler AG
- 16:00 **Effects of vibration on the reliability of fuel cell stacks**  
Dr. Matthias Enders, Scientific Employee, Group Future Mobility I  
Department System Reliability, Fraunhofer Institute for Structural  
Durability and System Reliability (LBF), Germany
- 16:30 **Closing remarks**  
Prof. Dr. Peter Gutzmer, Editor-in-Charge ATZ | MTZ Group;  
Dr. Alexander Heintzel, Editor-in-Chief ATZ | MTZ Group

13:00 – 14:30, Parallel strand II – Room 2

SUSTAINABILITY

Moderation: Marc Ziegler, Deputy Editor-in-Chief MTZ

- 13:00 **Benchmarks & best practices in sustainability reporting – Global ESG Monitor**  
Ariane Hofstetter, Executive Board, cometis AG, Germany
- 13:30 **Value creation through ESG: focusing sustainability to support a challenged industry**  
Felix Hoffmann, Manager,  
Patrick Moser, Principal, Arthur D. Little GmbH, Germany
- 14:00 **Future-proofing electric vehicles: key principles for designing sustainable battery housings for BEV**  
Matthias Korten, Research Associate, Institute for Automotive  
Engineering (ika), RWTH Aachen University, Germany

The current congress program  
and further information  
can be found online:

[www.atzlive.com/powertrain](http://www.atzlive.com/powertrain)





## IAV

As one of the automotive industry's leading global engineering and technology partners, IAV develops the digital mobility of the future. The company has been developing innovative concepts, methods, and solutions for 40 years and generated sales of 974 million euros in 2023.

With 7,900 employees, IAV brings together the best from a wide variety of worlds: the automotive and IT world, the hardware and software world, and the product and service world. In addition to vehicle and powertrain development, the company focused on topics such as e-mobility and autonomous driving at an early stage and is now one of the leading technology providers in these fields.

Alongside its development centers in Berlin, Gifhorn, and Chemnitz/Stollberg, IAV has further locations in Germany, including Munich, Sindelfingen, and Ingolstadt, as well as in Europe and Asia and in North and South America.

## Your presentation platform

Take this opportunity to present your latest products and services to the specialist audience: as an exhibitor in our exclusive exhibition and/or as a sponsor with an attractive advertising presentation. Make use of this industry meeting place to make valuable contacts with customers.

For information on the various presentation options, please contact:

Mr. Alex Woidich  
Phone +49 611 7878-206  
[alex.woidich@springernature.com](mailto:alex.woidich@springernature.com)

Cooperation partner



[www.iav.com](http://www.iav.com)

Media partners





**Registration fee**

€ 1,595.– plus VAT

This includes the conference documentation, the use of the digital event platform, the catering during breaks, and the evening event on 26-03-2025.

**Date**

26 – 27 March 2025

**Venue**

Pullman Berlin Schweizerhof  
Budapester Straße 25  
10787 Berlin, Germany

**Languages used in the presentations**

German and English

**Hotels**

Some hotels have room blocks at reduced prices for the participants. You can find more information on the events page of our website.

**Further Information  
and Online Registration:**

[www.atzlive.com/powertrain](http://www.atzlive.com/powertrain)

**Participants**

This ATZlive congress is aimed at executives and engineers as well as experts in industry, authorities, NGOs, and scientific institutes who are involved in powertrain development, the generation and distribution of hydrogen and electricity, the expansion and integration of the power grid, international markets, production networks, and supply chains.

**Further Information  
and Online Registration:**

[www.atzlive.com/powertrain](http://www.atzlive.com/powertrain)



Electric Powertrains and Energy Systems 2025  
26 – 27 March 2025, Berlin, Germany

**Your contact partner**

Marc Vestweber  
Abraham-Lincoln-Straße 46  
65189 Wiesbaden, Germany

Phone +49 611 7878-132  
ATZlive@springernature.com

**Organizer****ATZlive** // Spotlight on Powertrain and Vehicle Engineering

Our events are a regular fixture in the calendar for vehicle and engine developers. Here you can expect innovative specialist conferences on up-to-date subjects concerning vehicle and powertrain technology – from the viewpoints of research, development and use.

Our close collaboration with the editorial teams of our specialist magazines ATZ and MTZ keeps us fully up-to-date on the latest topics and trends on the market.

Springer, with its automotive technology brands in the ATZ and MTZ Group, is part of Springer Nature, one of the world's leading publishing groups for scientific, educational and specialist literature.