

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 H₂ 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, CO₂ circular economy, CO₂ footprint)

HIGHLIGHT

Ceremony of the Sustainability Award in Automotive



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



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.

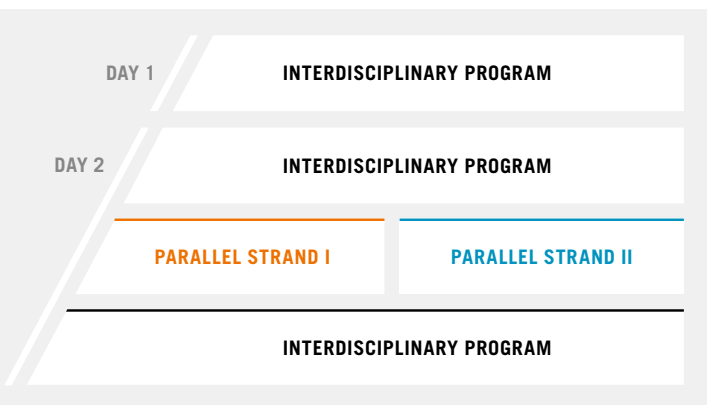
On behalf of the Scientific Advisory Board

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.



Accompanying exhibition on both days



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
EWE AG

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 Saueremann
BP Europa SE

Dr. Otmar Scharrer
ZF Friedrichshafen AG

Dr. Michael Schlegel
BMW Group

Alexander Toppelreiter
AVL Deutschland GmbH

Dr. Karsten Wilbrand
Shell Global Solutions (Deutschland) GmbH

Ursel Willrett
IAV 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 Lecture title to be announced**

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

10:45 Impulse lecture: Lecture title to be announced

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

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

**SUSTAINABILITY AWARD
IN AUTOMOTIVE**

**CEREMONY OF THE
SUSTAINABILITY AWARD IN AUTOMOTIVE**

The categories:

- Mobility concepts
- Technology
- Startup
- Open innovation for sustainability

The Organizers:

ATZ MTZ ARTHUR D. LITTLE

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

Volker Ambrosius, Senior Technical Consultant,
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

Patrick Strobl, Team Leader Electromechanical Drives,
TUM School of Engineering and Design, Department of
Mechanical Engineering, 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, IAV GmbH

16:30 **Bringing megawatt charging to life**

Dr. Felix Heider, Emobility Application Scientist,
Shell Global Solutions (Deutschland) GmbH,
[in cooperation with SBRS GmbH], Germany

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

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

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

Dr. Philip Grabherr, Head of Predevelopment Electronics and
Mechatronics, MAHLE New Mobility Solutions GmbH
[in cooperation with MAHLE International GmbH, Siemens AG],
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 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

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

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08:30 – 10:00, Plenum – Room 1

KEYNOTE LECTURES II

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

KEYNOTE**08:30 Lecture title to be announced**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 trainsFabian 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 Cross-system level verification and validation of lightweight rotors with flexible components**Katharina Bause, Department Manager,
Automated & Connected Mobility | Medical & Health Technology,
Institute of Product Engineering (IPEK),
Karlsruhe Institute of Technology (KIT), 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 Lecture title to be announced

N.N., Oerlikon Friction Systems (Germany) GmbH, Germany

11:00 Modular thermal systems for AD-capable electric vehiclesJoris 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;
Dr. Stefan Gossens, Vice President Hydrogen Strategy, Hydrogen
Industrial, Schaeffler Technologies AG & Co. KG, Germany
- 16:00 Effects of vibration on the reliability of fuel cell stacks**
Dr. Benedict Götz, Group Manager, Department System Reliability,
Fraunhofer Institute for Structural Durability and System Reliability
(LBF) [in cooperation with RheinMain University of Applied
Sciences], 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: Dr. Alexander Heintzel, Editor-in-Chief ATZ | MTZ Group

- 13:00 Benchmarks & best practices in sustainability reporting – Global ESG Monitor**
Michael Diegelmann, Executive Board, cometic AG, Germany
- 13:30 ESG strategies with value contribution: focusing sustainability to support a challenged industry**
Dr. Philipp Seidel, Principal,
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





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.

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Mr. Alex Woidich
Phone +49 611 7878-206
alex.woidich@springernature.com

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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 with simultaneous interpreting
(German – English / English – German)

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**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

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26 – 27 March 2025, Berlin, Germany

Your contact partner

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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.