



# 13<sup>th</sup> International AVL Emissions and Energy Forum

April 23 – 24, 2024 | Ludwigsburg | Germany

## Preface

We are currently experiencing very busy and challenging times. First and foremost, of course, is the energy transition and its consequences for the vehicle and engine industry, the impact of which on our industry is an important focus of the 13<sup>th</sup> International AVL Emissions and Energy Forum. The creation of a new energy base and the associated technologies for sustainable mobility are core elements for the energy transition and the realization of a CO<sub>2</sub>-neutral economy.

The 13<sup>th</sup> International AVL Emissions and Energy Forum will take place on April 23 and 24 in Ludwigsburg near Stuttgart, Germany. The Forum will focus on the climate-neutral energy basis for the mobility of the future. This topic will be considered holistically, from energy conversion and emissions to recycling. The path to CO<sub>2</sub>-neutral mobility leads through the provision of clean fuels such as e-fuels and hydrogen for existing vehicles, the development of alternative drive systems and fuels, and the establishment of the necessary infrastructure. Traditionally, the AVL Emissions and Energy Forum focuses on the pollutant emissions of vehicles and engines, especially with regard to the upcoming Euro-7/VII emissions standard, which includes exhaust and non-exhaust emissions such as those from tires and brakes. With this holistic and technology-open approach from conventional, hybrid to fully electric drive systems, the 13<sup>th</sup> International AVL Emissions and Energy Forum is an excellent platform for a fact-based discussion on climate-neutral propulsion systems and energy sources.

As in previous forums, we expect more than 200 national and international guests at the Forum am Schlosspark in Ludwigsburg near Stuttgart. In more than 20 exciting presentations, the expert audience will be presented with current solution approaches for the creation of a new energy basis for sustainable mobility and the implementation of emissions legislation, while at the same time there will be sufficient time for the necessary technical discussions and expert talks.

On behalf of AVL Deutschland and the members of the Program Advisory Board, I wish all conference participants an interesting conference, exciting discussions and a pleasant stay in Ludwigsburg.

We look forward to welcoming you in April 2024 in the beautiful city of Ludwigsburg.

On behalf of the Program Advisory Board

Prof. Dr.-Ing. Gennadi Zikoridse



## Advisory Board



**Dr. Harald Beck**  
MAN Truck & Bus SE



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AVL Deutschland GmbH



**Dr. Stefan Schmerbeck**  
Volkswagen AG



**Prof. Gennadi Zikoridse**  
University of Applied Sciences Dresden

## General Information

### Venue

Forum am Schlosspark  
Stuttgarter Straße 33  
71638 Ludwigsburg  
Germany

### Tickets

Registration fee	1.050 €
Registration until December 31, 2023 (early bird)	850 €
For members of Universities	500 €
For students	210 €
Speakers (free of charge)	0 €

### Presentation languages

German and English (simultaneous translation)

### Registration and further information

<https://www.avl.com/en-de/events/13th-int-avl-emissions-and-energy-forum>

### Contact

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## Conference Program | April 23, 2024

Time [Session 1: Keynotes;](#)

[Moderator: R. Jeutter – AVL Deutschland GmbH](#)

09:00 Welcoming and Opening of the Forum

R. Jeutter – AVL Deutschland GmbH

09:15 Speed, Energy and Resource Efficiency – Key Factors for a Successful Transition of the Transport Sector

Dr. B. Stephan – Greenpeace e. V.

10:00 Progress in the Roll-Out of Climate-Friendly On-Road Fuels for Europe's Vehicle Fleet

Prof. T. Garbe – Volkswagen AG

10:45 [Break](#)

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[Session 2: Energy and Infrastructure;](#)

[Moderator: Prof. J. Krahl – OWL University of Applied Sciences and Arts](#)

11:15 Technology Neutrality as the Key to Effective Climate Protection – Results From the FFV Fuel Study IV

Dr. D. Bothe, A. Pfannenschmidt, F. Schrogl – Frontier Economics Ltd.; Dr. U. Kramer – Ford-Werke GmbH

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11:45 Charging Infrastructure Masterplan II and Deutschlandnetz (German Network): How Germany is Speeding up the Roll-Out of Charging Infrastructure

J. Pallasch – NOW GmbH

12:15 Do We Need E-fuels to Reach the Climate Targets?

P. Ellet – ZF Friedrichshafen AG

12:45 [Lunch Break](#)

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[Session 3: Circular Economy;](#)

[Moderator: Dr. S. Schmerbeck – Volkswagen AG](#)

14:15 The Future of the Automotive Circular Economy

M. Püschner – German Association of the Automotive Industry

14:45 Upcycling Commercial Vehicles to FCEVs – Sustainability Requirements and Efficient Operating Strategy

Prof. A. Gelner – Technische Hochschule Ingolstadt; M. Mair – Quantron AG

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15:15 The Closed-Cycle Engine – An Important Element for the Zero-Emission Reconversion of Green Hydrogen  
L. Kniestedt, M. Steiner, Dr. C. Reiser – WTZ Roßlau gGmbH; Prof. H. Rottengruber – Otto von Guericke University Magdeburg

15:45 Break

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Session 4: Sustainable Propulsion;  
Moderator: Prof. U. Gärtner – Daimler AG

16:15 Fit for 55 in Heavy Goods Transport – Discussion of an Ecologically and Economically Advantageous Approach  
R. Döbereiner, W. Gruber, H. Theissl, F. Hofer – AVL List GmbH

16:45 Polarstern II Sets Sustainable Standards for Ship Propulsion Systems  
D. Wilde – Alfred Wegener Institute

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17:15 End

18:30 Evening Event

## Conference Program | April 24, 2024

Time Session 5: Commercial Engine;  
Moderator: Dr. H. Beck – MAN Truck & Bus SE

09:00 Solution for a Sustainable Powertrain in the Off-Highway Sector: Hydrogen Engine  
Dr. M. Schwaderlapp, A. Plumpe – Deutz AG

09:45 An Analysis of the Combustion and Emissions Behavior of Different Mixture Formation Concepts With a Hydrogen ICE  
S. Knapp, M. Bucherer, Dr. H. Kubach, Dr. U. Wagner, Prof. T. Koch – KIT, Institute of Internal Combustion Engines (IFKM)

10:15 Experimental Study on the Combustion of Ammonia/Hydrogen/Air Mixtures Under Engine-Like Operating Conditions in a Constant Volume Combustion Chamber  
Prof. H.-P. Rabl, J. Triebkorn – OTH Regensburg

10:45 The New E 38 MAN Stationary Gas Engine for Natural and Special Gas  
Dr. P. Wöhner, T. Bachmann, M. Leistner, T. Malischewski, F. Menzinger, M. Stenglein – MAN Truck & Bus SE

11:15 Break

## Conference Program | April 24, 2024

Session 6: EU7/Brake and Tire Emissions;  
Moderator: Dr. D. Florian – AVL List GmbH

- 11:45 EU7 Brake Emissions Testing Challenges  
K. Kolbeck, H. Bacher – BMW Group
- 12:15 Brake Wear Particle Emissions – Current Status and Trends in Measurement and Reduction  
Dr. D. Hesse – Volkswagen AG
- 12:45 Tire Wear (Emissions) and Challenges in the Context of Euro 7  
M. P. Huber, P. Fischer, L. Schubert – Graz University of Technology

### 13:15 Lunch Break

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Session 7: EU7/Tailpipe Emissions and Energy;  
Moderator: Prof. G. Zikoridse – University of Applied Sciences Dresden

- 14:30 Euro 7 Implementation Challenges  
H. Schmidt – TÜV Nord Mobilität GmbH & Co. KG

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- 15:00 Type Approval of Heavy Commercial Vehicles With Hydrogen Combustion Engines – Requirements, Challenges and Solutions  
Dr. A. Münzer – TÜV Nord Mobilität GmbH & Co. KG (IFM)
- 15:30 Measurement Challenges for Euro 7  
K. Engeljehring – AVL List GmbH
- 16:00 Application to Combine Real and Virtual Sensor Signals for OBM  
R. Ruiz-Carrillo – AVL List GmbH
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- 16:30 Summary  
Prof. G. Zikoridse – University of Applied Sciences Dresden
- 16:45 Closing Remarks  
R. Jeutter – AVL Deutschland GmbH
- 17:00 End

## ORGANIZATION

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