Program

Powertrains of the Future

Berlin Powertrain Symposium
December 3 and 4, 2019, Berlin

Register now!
bit.ly/IAV-Symposium
Come and Join Us!

What will future powertrains look like?

Powertrains are increasingly diverse. At the same time, demands on part of the society, ambitious emission/CO₂ limits and the growing diversity of mobility concepts dictate framework conditions that make it necessary to adapt and combine drive system solutions.

For powertrains, this means that development engineers have to assess the combination of resource availability for the individual applications, costs and handling by end users together with the technical challenges and opportunities. This is joined by efforts to decarbonize the primary energy sources as a means of combating climate change.

The Berlin Powertrain Symposium provides a dialogue platform for the political/social and the economic/technological perspectives as a stage for discussions of future mobility concepts and powertrain solutions.

Attention will focus on the following questions:
- What kind of demands are being made of mobility concepts by society and policymakers?
- What are the medium- and long-term objectives?
- Which technical challenges require a cross-sectoral approach?
- How are powertrains and their components going to develop in this setting in future?
- Which are the most efficient engineering methods?

It is time for all affected industries to work together at these questions! You can look forward to keynote speeches by political makers and shakers of the energy and transport transition and take this opportunity for discussions with leading experts from the automotive industry.

See you there!

Matthias Kratzsch, IAV
CTO and Conference Chair

Dr.-Ing. Joachim Damasky, VDA
Chief Executive Officer

Key Contents

Technical complexity
How do we deal with it?
- Diversity of requirements and architectures
- Design complexity
- New infrastructures
- User behavior
- Individualization

Framework conditions
What moves us?
- Society and politics
- Energy policy roadmap
- Legislation objectives
- Primary energy sources
- Energy carriers of the future: new fuels
- Industry and sector coupling
- CO₂-neutral transport
- Emission legislation
- Local regulations

Powertrains of the future

Technical solutions
What will future powertrains look like?
- Powertrains for new vehicle concepts
- Architectures for the overall powertrain
- Impacts on e-components, combustion engines and transmissions
- Local zero emission
- New approaches to engineering and manufacturing

See you there!
Topic Cafés

Framework conditions. What moves us?

1. Future energy carriers
   Which energy carriers will be the future basis for mobility?

2. Implementing new infrastructures
   What is needed to make climate-neutral mobility and logistics acceptable?

3. Industry and sector coupling
   How can we work together to shape sustainability?

4. Future legislation and local regulations
   How do we create a common understanding of the objectives?

5. Climate protection and the national economies
   How do they go together?

Technical solutions. What will future powertrains look like?

6. User behavior and individualization
   What will dictate purchasing behavior in future?

7. Powertrains for new vehicle concepts
   Which technology mix do we have to expect?

8. Local zero emission
   Stab in the back for the combustion engine or incentive for engineers?

9. Diversity of requirements and architectures for the overall powertrain
   The engineer as complexity manager between customer and technology?

Keynote Speakers

Guido Beermann
State Secretary at the Federal Ministry of Transport and Digital Infrastructure

Markus Schäfer
Member of the Board of Management of Daimler AG Group Research & Mercedes-Benz Cars Development

Prof. Dr. Anders Levermann
Research Director, Potsdam Institute for Climate Impact Research

Dr. Joachim Damasky
Managing Director Technology and Environment, VDA

Prof. Dr. Henning Kagermann
Chair, National Platform “Future of Mobility”

Christian Hochfeld
Executive Director, Agora Verkehrswende

Stefan Siegemund
Acting Head of Division Renewable Energies and Mobility, dena (German Energy Agency)

Wolfgang Maus
CEO, WM Engineering & Consulting

Markus Schäfer
Manager of the Board of Management of Daimler AG Group Research & Mercedes-Benz Cars Development

Prof. Dr. Anders Levermann
Research Director, Potsdam Institute for Climate Impact Research

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Stefan Siegemund
Acting Head of Division Renewable Energies and Mobility, dena (German Energy Agency)

Wolfgang Maus
CEO, WM Engineering & Consulting
Tuesday, December 3, 2019

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<td>Politics meets industry</td>
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<tr>
<td>09:00 – 09:15</td>
<td>Welcoming address and introduction</td>
<td>Matthias Kratzsch, President and CTO, IAV</td>
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<tr>
<td>09:45 – 10:15</td>
<td>Keynote</td>
<td>Prof. Dr. Henning Kagermann, Chair, National Platform &quot;Future of Mobility&quot;</td>
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<tr>
<td>10:15 – 10:45</td>
<td>End-to-end approach to future mobility</td>
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<td>10:45 – 11:15</td>
<td>Coffee break</td>
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<tr>
<td>Session 2</td>
<td>Energy and transport transition</td>
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<tr>
<td>11:15 – 11:45</td>
<td>Powertrains of the future for cars and</td>
<td>Dr. Joachim Damasky, Managing Director Technology and the Environment, VDA</td>
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<td>commercial vehicles as seen by the VDA</td>
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<tr>
<td>11:45 – 12:15</td>
<td>Transport transition 2030; general political and fiscal conditions</td>
<td>Christian Hochfeld, Executive Director, Agora Verkehrswende</td>
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<td>12:15 – 12:45</td>
<td>Power fuels: missing link in a global energy transition</td>
<td>Stefan Siegmund, Acting Head of Division Renewable Energies and Mobility, dena (German Energy Agency)</td>
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<td>12:45 – 14:00</td>
<td>Lunch break</td>
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<td>Session 3</td>
<td>Climate and mobility</td>
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<tr>
<td>14:00 – 14:30</td>
<td>Do we need a global energy transition?</td>
<td>Prof. Dr. Anders Levermann, Research Director, Potsdam Institute for Climate Impact Research</td>
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<td>14:30 – 15:00</td>
<td>Energy and mobility mean prosperity – from the past to the future, based on physics</td>
<td>Wolfgang Maus, CEO, WM Engineering &amp; Consulting</td>
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<td>15:00 – 15:30</td>
<td>Will driving get more expensive? Implications of the energy transition at the expense of driving a car</td>
<td>Christian Malorny, Partner, Dr. Felix Spangenberg, Manager, A.T. Kearney</td>
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<td>15:30 – 16:00</td>
<td>Coffee break</td>
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<td>Session 4</td>
<td>Interaction</td>
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<td>16:00 – 17:00</td>
<td>Topic cafés</td>
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<td>17:00 – 17:45</td>
<td>Summary of the topic cafés with discussion</td>
<td>Johannes Winterhagen, moderator</td>
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<td>17:45 – 18:00</td>
<td>Summary</td>
<td>Matthias Kratzsch, President and CTO, IAV</td>
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<tr>
<td>19:30</td>
<td>Evening event at the Arminiusmarkthalle</td>
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**Wednesday, December 4, 2019**

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<tr>
<th>Time</th>
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<th>Speaker</th>
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<tr>
<td><strong>Session 5</strong></td>
<td><strong>Politics meets industry</strong></td>
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<tr>
<td>08:45 – 09:00</td>
<td>Welcoming address and warm-up</td>
<td>Matthias Kratzsch, President and CTO, IAV</td>
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<tr>
<td>09:00 – 09:20</td>
<td>The Future of Research and Development in Times of Transforming Mobility</td>
<td>Markus Schäfer, Member of the Board of Management of Daimler AG Group Research &amp; Mercedes-Benz Cars Development</td>
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<td>09:20 – 10:00</td>
<td>Panel discussion</td>
<td>Markus Schäfer, Member of the Board of Management of Daimler AG Group Research &amp; Mercedes-Benz Cars Development Prof. Dr. Peter Gutzmer, Chief Technology Officer, Schaeffler Dr. Ulrich Eichhorn, Chairman of the Managing Board, IAV</td>
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<td>10:00 – 10:30</td>
<td>Coffee break</td>
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<td><strong>Session 6</strong></td>
<td><strong>New mobility</strong></td>
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<td>10:30 – 11:00</td>
<td>Electrification for the future</td>
<td>Dr. Tobias Lösche-ter Horst, Director Battery Innovation, Volkswagen</td>
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<td>11:00 – 11:30</td>
<td>Perspectives and requirements of CO₂-free mobility</td>
<td>Guido Beermann, State Secretary at the Federal Ministry of Transport and Digital Infrastructure</td>
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<td>11:30 – 12:00</td>
<td>Digitization in the automotive industry from the IT point of view</td>
<td>Jan Hördt, Chief Technologist, Hewlett Packard Enterprise</td>
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<td>12:00 – 13:00</td>
<td>Lunch break</td>
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<td><strong>Session 7</strong></td>
<td><strong>Complexity of technical solutions</strong></td>
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<tr>
<td>13:00 – 13:30</td>
<td>The challenge of sustainable future mobility: combining renewable energy carriers with power unit products</td>
<td>Eisuke Kimura, Senior Chief Engineer, Honda R&amp;D Co., Ltd.</td>
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<td>13:30 – 14:00</td>
<td>From mobility requirements to future modular powertrains</td>
<td>Dr. Christoph Danzer, Team Manager Powertrain Synthesis, IAV</td>
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<td>14:00 – 14:30</td>
<td>Overall optimization approach to improving the environment: future prospects for combustion engines</td>
<td>Mitsuo Hitomi, Senior Innovation Fellow, Mazda Motor Corporation</td>
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<td>14:30 – 15:00</td>
<td>Quantifying real driving emissions by means of driving statistics based on a virtual development environment</td>
<td>Dr. Heiner Markert, Senior Manager, Bosch Center of Artificial Intelligence</td>
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<td>15:00 – 15:30</td>
<td>Coffee break</td>
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<td><strong>Session 8</strong></td>
<td><strong>Fuels and commercial vehicles</strong></td>
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<td>15:30 – 16:00</td>
<td>CO₂ legislation for trucks: VECTO as pioneer for new technologies to minimize CO₂, illustrated by WHR</td>
<td>Hannes Marlok, Project Manager Waste Heat Recovery, Mahle</td>
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<td>16:00 – 16:30</td>
<td>Comparison of future hydrogen-based drive concepts for commercial vehicles</td>
<td>Robin Tempelhagen, Chair for Energy Conversion Systems for Mobile Applications, Otto von Guericke University Magdeburg</td>
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<td>16:30 – 17:00</td>
<td>Studies of fuels with medium ethanol concentrations (E20–E25)</td>
<td>Dr. Andreas Kolbeck, Technology Expert, Shell</td>
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<td>17:00 – 17:15</td>
<td>Summary and end of the event</td>
<td>Matthias Kratzsch, President and CTO, IAV</td>
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Evening Event

December 3, 2019, 19:30 h
Arminiusmarkthalle
Arminiusstrasse 2–4, 10551 Berlin
You are cordially invited to join us at Arminiusmarkthalle to review the day’s impressions and discussions. Use this opportunity to cultivate your existing contacts and expand your network in an inspiring setting.

Directions and other information

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