

# Call for Papers

22nd International VDI Congress  
**Dritev**

Your proposal for the  
future development of  
powertrain engineering!

## Submit your abstract covering following topics:

- **Market and Customer; Industry requirements, Legislation and Environment**
- **Drivetrain Architectures and Vehicle Integration**
- **Transmission Systems**
- **Electric motor**
- **Power electronics**
- **Subsystems and mechanical/mechatronic/electrical Drive Components**
- **Operating Strategies**
- **Digitalization: Data and Security in the Drive System**
- **Development & Validation**
- **Value Engineering/Value Analysis**
- **Production Concepts**



+ **Accompanying conference**  
Powertrain Systems in Mobile Machines

+ **Exhibition**  
with more than 100 exhibitors



## Exhibition

The International VDI Congress Dritev belongs to the most prestigious events of the automotive industry in the world. In 2022 more than 100 companies will be presenting innovative and trendsetting products and services turning the exhibition into the central market place of the congress.

## Who should exhibit?

Manufacturers and service providers focusing on the following:

- Powertrain concepts and transmissions for cars, commercial vehicles and mobile machinery
- E-machines and power electronics
- Mechatronic and electronic transmission components
- Other components relevant to propulsion
- Oils and lubricants
- Evaluation and simulation
- Testing and metrology
- Production of drivetrains and components

Participate in the exhibition for excellent return or show thought leadership by sponsoring the event!

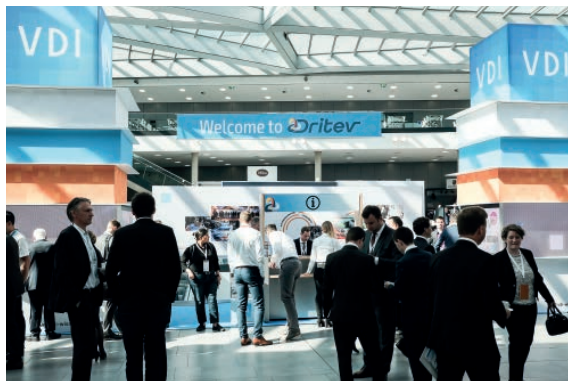
## Details about the exhibition and the sponsorship program 2022:

### Contact

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## Partners

VDI Society Product and Process Design (GPP)  
VDI Society Vehicle and Transport Technologies (FVT)



## Program Committee



1st line, from left to right

- Dipl.-Ing. Georg Bednarek**, Director Regulations & Certification, Stellantis, Rüsselsheim, Germany
- Dr. Karsten Bennewitz**, Head of Hybrid Systems, e-traction, Electrical Components, Volkswagen AG, Wolfsburg, Germany
- Dr. Carsten Bänder**, Director Global Product Management, Magna PT B.V. & Co. KG, Untergruppenbach, Germany
- Dr. Thomas Casper**, Manager Integration Transmission and Drivetrain, Dr.-Ing. h.c. F. Porsche AG, Weissach, Germany
- Dr.-Ing. Michael Ebenhoch**, Senior Vice President Car Powertrain Technology, ZF Friedrichshafen AG, Kressbronn
- Dr. Andreas Fink**, Vice President E-Mobility, Head of Business Unit Electric Traction Drive (ET), ZF Friedrichshafen, Schweinfurt, Germany
- Dipl.-Ing. Hans-Peter Fleischmann**, Director Dual Clutch Transmission Development and Series Support Transmission, AUDI AG, Ingolstadt, Germany

2nd line, from left to right

- Dr. Thomas Hackl**, Vice President Engineering & Advanced Engineering, Hofer powertrain, St. Ulrich, Austria
- Dipl.-Ing. Volker Heinz**, Director, Engineering, DualTronic® and Clutch Systems, BorgWarner Drivetrain Engineering GmbH, Ketsch, Germany
- Pascal Hervet**, Chief Technology Officer, VALEO Powertrain Systems, Cergy-Pontoise, France
- Thomas Landsherr**, Vice President, Engineering Powertrain – Transmission and Driveability Development (EPD), MAN Truck & Bus SE, Munich, Germany
- Dr. Thilo Leineweber**, Senior Vice President Gasoline Systems Transmission Control, Robert Bosch GmbH, Schwieberdingen, Germany
- Dr. Rainer Link**, Senior Vice President Engineering, GKNePowertrain, Lohmar, Germany
- Thomas A. McCarthy**, Director – Energy, Propulsion & Sustainability Research and Advanced Engineering, Ford Motor Company, Dearborn, USA

3rd line, from left to right

- Dr.-Ing. Florian Mulzer**, AGCO Transmission Specialist, AGCO GmbH, Marktoberdorf, Germany
- Dipl.-Ing. Konstantin Neiß**, Director Transmission & Electric Drivetrain, Daimler AG, Stuttgart, Germany (Vice Chairman)
- Dr. Markus Nussbaumer**, Head of Longitudinal Transmissions, Advanced Development, BMW Group, Munich, Germany
- Thomas Pfund**, Senior Vice President R&D Automotive Systems, Schaeffler Automotive Buehl GmbH & Co. KG, Buehl, Germany
- Prof. Dr.-Ing. Stephan Rinderknecht**, Full professor and Head of the Institute for Mechatronic Systems in Mechanical Engineering, TU Darmstadt, Germany
- Dr. Gerd Rösel**, Head of Hybrid Electric Vehicle, BU – Innovations and eProductHouse, Vitesco Technologies GmbH, Regensburg, Germany
- Dipl.-Ing. Michael Schäfer**, Head of Transmission Development, Volkswagen AG, Wolfsburg, Germany

4th line, from left to right

- Prof. Dr.-Ing. Karl Viktor Schaller**, Munich, Germany
- Ralf Schmid**, Senior Vice President E-Machine, Robert Bosch GmbH, Stuttgart, Germany
- Prof. Dr.-Ing. Karsten Stahl**, Full Professor and Director of the Institute for Machine Elements/FZG, Technical University of Munich, Garching, Germany
- Prof. Dr.-Ing. Peter Tenberge**, Director, Head of Chair of Industrial and Automotive Drivetrains, Ruhr-Universität Bochum, Germany
- Dipl.-Ing. Matthias Zink**, CEO Automotive, Schaeffler AG, Buehl, Germany (Congress Chairman)

Submit your abstract now!

## Call for submission of contributions

Is your expertise focused on any of the areas concerning the main topics? If so, we'd be delighted for you to contribute with a presentation.

### Please submit a brief abstract of max. one A4 page by

**October 23, 2021**, summarising your presentation. You can submit your paper at [www.dritev.com](http://www.dritev.com).

### Dates:

- Submission of abstracts by **October 23, 2021**
- Information about acceptance to authors by **mid-December 2021**
- Submission of manuscripts by **March 24, 2022**

### The summary must include:

- A striking title of your article
- The contact details of the speaker and any co-authors
- A table of contents with the key messages of your contribution
- Details about any of your own previous publications on this subject
- A comment on the degree of innovation
- **The precise title and key points of your presentation for publication in the program brochure (obligatory)**

German and English are the approved languages for presentation. The permitted presentation time is 20 minutes, with additional time for discussion afterwards. Presentations and manuscripts must be submitted in **English**.

Based on the abstract, the program committee will decide on the acceptance and order of presentation in the Dritev congress program, optionally also in the parallel running program of the conference "Powertrain Systems in Mobile Machines".

Each applicant will be informed about the results in writing and will receive information about further steps. Speakers (one author per article) participate free of charge.

Authors of the accepted presentations undertake to submit a manuscript (12–16 pages). The manuscripts of the accepted presentations are published via a citable medium.

### Publish your research results in a scientific journal

The scientific journal "Forschung im Ingenieurwesen" (Engineering Research) gives you the opportunity to publish an extended version of your conference publications. Expand your conference contribution by going into more detail about the underlying theories, methodology used and the results of your study. You can then submit your manuscript via the following link:

[www.editorialmanager.com/fiin](http://www.editorialmanager.com/fiin) (online submission)

taking the formal submission requirements into account. If your contribution passes the initial publisher's review, it will be further reviewed by independent experts in a double-blind process (peer review).

[www.springer.com/journal/10010](http://www.springer.com/journal/10010)

### Best Presentation Award for Junior Engineers

The best lecture of one Junior Engineer (up to 33 years old) will be honoured with the Best Presentation Award for Junior Engineers "Dritev 2022".

Speakers, who would like to participate in this contest, are requested to state their date of birth with their contact details.

## Topics

### 1. Market and Customer; Industry requirements, Legislation and Environment

- 1.1. Diversification of markets and regional solutions
- 1.2. Regional strategies for future energy sources for transportation
- 1.3. Compliance with CO<sub>2</sub> limits, legal frameworks
- 1.4. System performance today and tomorrow (efficiency, range...)
- 1.5. Sustainability (Recycling, conservation of resources...)
- 1.6. Mobility concepts, urban ecosystems
- 1.7. Customer expectations/market barriers/enablers
- 1.8. Influences of the transformation in the automotive industry on strategic and operative development work

### 2. Drivetrain Architectures and Vehicle Integration

- 2.1. Drive topologies (BEV, P0-P4, conventional)
- 2.2. Impact of energy sources on powertrain architectures
- 2.3. Integration of electrified drivetrains
  - 2.3.1. EE architectures
  - 2.3.2. On-board power supply 12V, 48V, 400V, 800V
  - 2.3.3. EMC
  - 2.3.4. Functional safety, high voltage security, crash safety
- 2.4. Impact of e-concepts on gearbox solutions
- 2.5. Packaging
- 2.6. Weight/power density
- 2.7. Efficiency rate/system efficiency
- 2.8. NVH
- 2.9. Storage systems
- 2.10. Thermal management

### 3. Transmission Systems

- 3.1. Conventional transmission concepts (AT, DCT, CVT, AMT, MT)
- 3.2. Hybridized transmission concepts
- 3.3. Axle drives
- 3.4. All-wheel drive systems

### 4. Electric motor

- 4.1. Technologies
- 4.2. Scaling (performance, package)
- 4.3. Dimensioning, calculation
- 4.4. Installation conditions/tolerances/dynamic suggestions
- 4.5. Cooling concepts
- 4.6. Isolation systems

### 5. Power electronics

- 5.1. Integrated circuit packaging, cooling, scaling
- 5.2. Wide band gap
- 5.3. Dimensioning, calculation, simulation
- 5.4. Charging technologies
- 5.5. Functional and physical integration

## 6. Subsystems and mechanical/mechatronic/electrical Drive Components

- 6.1. Influences on components
- 6.2. Integration
- 6.3. Vibration damping
- 6.4. Transmission components (clutches, gear wheels, synchronizations, bearings...)
- 6.5. Lubrication and tribology
- 6.6. Sensor and actuator technology
- 6.7. Cable, plugs and shielding components

## 7. Operating Strategies

- 7.1. Driving profiles and load spectra
- 7.2. Powertrain application
- 7.3. Control strategies/algorithms
- 7.4. Individualisation of powertrain

## 8. Digitalization: Data and Security in the Drive System

- 8.1. Strategies and technologies
- 8.2. Cyber Security
- 8.3. Networking/Over-The-Air-Updates
- 8.4. Influences and opportunities with ADAS and Autonomous Driving
- 8.5. Function on Demand
- 8.6. Artificial Intelligence

## 9. Development & Validation

- 9.1. Methods and tools
- 9.2. Simulation and testing
- 9.3. aSpice development processes

## 10. Value Engineering/Value Analysis

- 10.1. Modularity
- 10.2. Design to Cost
- 10.3. Manufacturing technology

## 11. Production Concepts

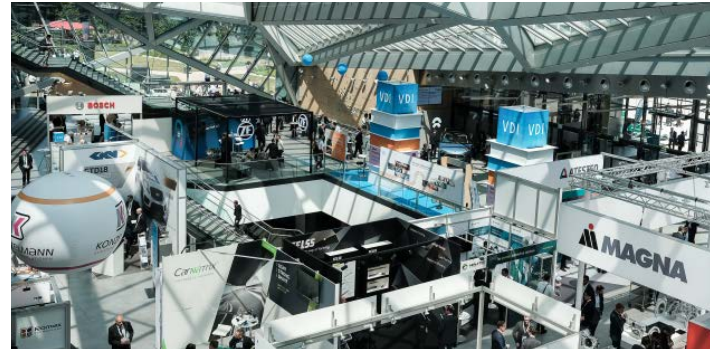
- 11.1. Standardisation
- 11.2. Variant flexibility in production, complexity management
- 11.3. Value streams and supply chain management
- 11.4. EOL tests

## Questions concerning the content of the congress?



### Contact

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## The participants

### Attendees by company type

System and component suppliers

45 %

OEs

20 %

Engineering services

15 %

Construction and mechanical engineering

14 %

Metal processing industry

6 %

### Function

Specialists

37 %

Head of department

21 %

Project manager

19 %

CEOs / Managing director

14 %

Others

9 %