



### Conference Chairs



**Dipl.-Ing. (Univ.) Ottmar Sirch**  
BMW Group



**Dr.-Ing. Carsten Hoff**  
CLAAS KGaA mbH

### Keynote-Speaker



**Dipl.-Ing. Oliver Bettgens**  
CARIAD SE

### Overview Speaker

**Ph.D. Elena Barbarini**  
System Plus Consulting

**Dr. Martin Brüll**  
Continental Automotive GmbH

**Markus Kordel**  
Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR)

**Dr. Sebastian Pohlmann**  
Skeleton Technologies Group

**Prof. Dirk Uwe Sauer**  
ISEA Institut für Stromrichtertechnik und Elektrische Antriebe

**Alexander Schultz-Storz**  
Panasonic Industry Europe GmbH

### EEHE conference 2021 in Essen

With the internationally established EEHE event, Haus der Technik brings together developers, users and researchers for electrics / electronics in hybrid and electric vehicles and electrical energy management in one place and offers a unique forum for intensive technical exchange in this specialist field. In this way, the participants meet all the key players in this broad field of expertise at a single conference.

In 2021, the EEHE conference will finally take place again as a face-to-face event. We expect around 200 participants, 40 speakers and poster presentations as well as an exiting industry exhibition.

Electric and electronic architectures for various electrified powertrains take centre stage just like power electronics, high and low voltage energy storage systems, charging technology and components. Further topics are general issues concerning electric mobility, market development and regulations but also safe and reliable on-board electricity supply for highly automated and autonomous driving.



**Haus der Technik e.V.**  
Hollestraße 1 | 45127 Essen

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Online participation possible



**Online-Buchung:**  
www.eehe.de



#### Participation Fee

Regular Fee	1.485 Euro
Online Fee	995 Euro
Co-author, employee of university, graduate students	485 Euro
Students	245 Euro

**Registration on** [www.eehe.de/registrierung](http://www.eehe.de/registrierung)



Electric & Electronic Systems in Hybrid and Electric Vehicles and Electrical Energy Management  
**8.-9. November 2021 in Essen**

[www.eehe.de](http://www.eehe.de)

#### Book your booth at the exhibition

Join the exhibition and present your company, products and services.

**More information:** [www.eehe.de/exhibition](http://www.eehe.de/exhibition)

#### Venue

Haus der Technik e.V.  
Hollestraße 1, 45127 Essen



## EEHE conference on November 8-9, 2021

The large number of submissions resulted in an extremely attractive program. In addition to electrics / electronics architectures for all types of electrified vehicles, power electronics, high-voltage and low-voltage energy storage systems, charging technology and components for these applications, the conference also focuses on issues relating to electromobility, market development and regulations as well as a safe and reliable power supply in vehicles for highly automated vehicles or autonomous driving.

These specialist topics are presented in detail in 10 parallel sessions and can be discussed directly after the lecture. Special highlights of this event are the keynote from CARIAD SE, overview lectures on E / E architectures from the point of view of the Agricultural Industry Electronics Foundation, trends and new technologies for storing electrical energy, developments in power semiconductors as well as infrastructure and operating strategies for electromobility. A plenary discussion on the future of the hybrid vehicle, which heralded the age of electromobility, is expected with great excitement. Representatives from Daimler AG and Renault SA are available here to introduce their theses and views on the topic and then to discuss them with the audience.

An attractive evening event rounds off the program.



**Detailed information:**  
[www.eehe.de](http://www.eehe.de)

Conference language  
is English

## Agenda

### 1. Day // November 8, 2021

#### 09:00 | Greeting

Dr.-Ing. Carsten Hoff, CLAAS KGaA mbH  
Dipl.-Ing. Ottmar Sirch, BMW Group

#### 09:10 | Introduction

Dipl.-Ing. Ottmar Sirch, BMW Group

#### 09:30 | Keynote: Electrifying Everything Pushing Forward with Plug-In Hybrids and All-Electric Drives

Dr. Andreas Fink, ZF Group

#### 10:10 | Coffee break and Exhibition

### 10:25 | Parallel session 1

#### Session 1A: Power Electronics I: Traction Inverters

M.Sc. Ruben Bärenweiler, ZF Friedrichshafen // Maximilian Barkow,  
Dr. Ing. h.c. F. Porsche AG // Dr. Dilder Chowdhury, NEXPERIA //  
Johannes Häring // University of Bayreuth

#### Session 1B: Energy and Power Management

Remy Fontaine, Opel Automobile GmbH // Pascal Knappe, RWTH  
Aachen University // Benjamin Löwer, University of Kassel // Dr.-Ing.  
Florian Uhrig, Vitesco Technologies GmbH

#### 12:25 | Lunch and Exhibition

#### 13:45 | Overview 1A: Batteries for EVs and powertrains – Current trends and performance data

Prof. Dirk Uwe Sauer, ISEA Institut für Stromrichtertechnik und Elektrische Antriebe

#### 13:45 | Overview 1B: Power Semiconductors – Market evolution and related technical developments

Ph.D. Elena Barbarini, System Plus Consulting

#### 14:15 | Short Coffee Break

### 14:20 | Parallel session 2

#### Session 2A: Infrastructure

Dr. Juma Alaydi, IUG // Dipl. Ing. Leonhard Bartsch, Ford Motor  
Company // Winfried Möll, Bender Industries GmbH & Co. KG

#### Session 2B: 48 V Architectures and Systems

Horst Mettlach // Opel Automobile GmbH // Richard Weldle, Vitesco  
Technologie // Dipl.-Ing. Dirk Zündorf, Renesas Electronics Europe  
GmbH

#### 15:50 | Coffee break and Exhibition

### 16:05 | Plenary Discussion: Hybrid – Quo Vadis

#### Impuls lecture 1: Thoughts from a traveller from 12 to 48 V and beyond to High Voltage

Thomas Weber Daimler AG

#### Impuls lecture 2: Hybrid – the 3 coming step to reach a full electric world

Nicolas Fremau Renault

#### 17:35 | End of first day

#### 18:30 | Evening Reception

### 2. Day // November 9, 2021

#### 08:30 | Overview 2A: Agricultural industry applications, uses cases and challenges of the medium voltage (48V)

Alexander Schultz-Storz, Panasonic Industry Europe GmbH

#### 08:30 | Overview 2B: Storing 60 Wh/kg in 15 s: Novel Ultra-capacitor Technologies

Dr. Sebastian Pohlmann, Skeleton Technologies Grou

### 09:05 | Parallel session 3

#### Session 3A: Reliable Power Supply I

Florian Bierwirth, BMW Group // Michael Gerten, Technical University  
Dortmund // Anika Henke, TU Dortmund University

### Session 3B: 48V Components

Dr. Andreas Baumgardt, Molabo GmbH // Dr. Christina Antonius,  
Clarios Advanced Solutions GmbH // Fabio Mello, TDK Electronics AG

#### 10:25 | Coffee break and Exhibition

### 10:55 | Parallel session 4

#### Session 4A: Power Electronics II – Charging

Rafael Jimenez, Lear Corporation // Tim Karcher, innoelectric AG //  
Dr.-Ing André Körner, Hella GmbH & Co. KGaA

#### Session 4B: Reliable Power Supply II

Dipl.-Ing. Christian Sültrop, Fraunhofer Institut für Integrierte Systeme  
und Bauelementetechnologie IISB // Julian Taube, Technical University  
München // Laurenz Tippe, Technical University München

#### 12:25 | Lunch Break and Exhibition

#### 13:45 | Overview 3A: Modular Design of Mobile Charging Infrastructure with Fuel Cell Systems for Energy Supply

Andreas Markus Kordel, DLR

#### 13:45 | Overview 3B: URBANIZED – modUlaR and flexible solutions for urBAN-sized Zero-Emissions last-mile Delivery

Dr. Martin Brüll, Continental Automotive GmbH

#### 14:15 | Short Coffee Break

### 14:20 | Parallel session 5

#### Session 5A: Energy Storage Systems

Dr. David Ensling, VARTA Microbattery GmbH // Dr.-Ing. Björn  
Kleinsteiberg, HELLA GmbH & Co. KGaA // Dipl.-Ing. (FH) Dennis  
Kurzweil, Ford Research & Innovation Center Aachen // Roland  
Matthé, Opel Automobile GmbH

#### Session 5B: Future Vehicle Power Supply Architectures

Dr. Antoni Ferré, LEAR Corporation // Dr.-Ing. Joachim Fröschl,  
BMW Group // Sebastian Rohm, AB Mikroelektronik GmbH // Jon  
Siegers, Vicor Corporation, USA

#### 16:20 | Summary and Goodbye

#### 16:30 | End of Conference