



International Conference 2023



Conference language is English

**eehe – electrical + electronic systems in hybrid &
electric vehicles, electrical energy management**

DATE June 13-14, 2023

LOCATION Haus der Technik e. V., Essen/Germany

LEADERS Dipl.-Ing. (Univ.) Ottmar Sirch, BMW Group
Dr.-Ing. Carsten Hoff, dSPACE GmbH

eehe.de

FB010/40635



June 13-14, 2023 in Essen

International Conference 2023

electrical + electronic systems in hybrid & electric vehicles
electrical energy management

welcome

We welcome you to the **eehe International Conference 2023** in the modern conference rooms at our headquarters of the HDT in Essen.

The permanent increase in electromobility, reinforced by successful market launches of highly electrified vehicles and the call for a significant reduction in global CO₂ emissions resulting from the Paris climate summit, require a rethink of the entire automotive and supplier industry.

At the same time, new trends are developing through progressive digitalisation and the application of highly automated technologies, such as autonomous driving. Electromobility is developing beyond normal driving into a digital means of transport and requires new competences, alliances and concepts.



**electrical
systems**



**electronic
systems**



**electrical
energy management**

The design of electric vehicles or electric cars (plug-in hybrids, full hybrids, micro-hybrids and vehicles with start-stop functions, etc.) is not only confronted with advancing developments, but also with ever increasing demands on costs and efficiency. Protagonists from research and science are facing up to the complex challenge and exchanging views on the important topics of the future together over two days at the **eehe – electrical + electronic systems in hybrid & electric vehicles, electrical energy management**.

What does eehe 2023 offer?

With **eehe – electrical + electronic systems in hybrid & electric vehicles, electrical energy management** – HDT provides a brilliant opportunity for developers, users and researchers to meet. The conference attendants thus have a chance to meet all important players in the industry at a single conference.

eehe.de

Agenda

Day 1 // June 13, 2023

09:00 | Welcome + Introduction

Room 1

Dipl.-Ing. Bernd Hömberg, Haus der Technik e. V.

Dr.-Ing. Carsten Hoff, dSPACE GmbH

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

09:10 | Introductory lecture

Dr.-Ing. Carsten Hoff, dSPACE GmbH

09:15 | Keynote 1

Room 1 // Session chair: Dr.-Ing. Carsten Hoff

Challenges for Development of new Electric Vehicles

Thomas Weber, Mercedes-Benz AG

10:00 | Coffee break + Room change

10:15 | Session 1

1A // Batteries & Battery Management

Room 1 // Session chair: Prof. Dr. rer. nat. Dirk Uwe Sauer +
Dr.-Ing. Marc Thele

MBA Lilly Han, Shanghai Azureve Technologies Co., Ltd. //

Dipl.-Ing. (FH) Dennis Kurzweil, Ford-Werke GmbH // Akshay Misra,
STMicroelectronics // Dr. Sebastian Pohlmann, Skeleton Technologies

1B // Architectures

Room 2 // Session chair: Dipl.-Ing. Peter Schmitz +
Prof. Dr. rer. nat. Ludwig Brabetz

Leo Tassilo Peters, TU Munich // Rainer Knorr,

Vitesco Technologies GmbH // M. Sc. Mathias Dunst, fka GmbH //

Jan Helfrich, Kromberg & Schubert Automotiv GmbH & Co. KG

12:15 | Lunch break + Exhibition

13:45 | Overview 1

1A // Fuel Cells in Commercial Vehicles

Room 1 // Session chair: Dr.-Ing. Carsten Hoff

**More than 5 million km real-life experience
with Hyundai Xcient Fuel Cell Truck**

Markus Demmerle, Hyundai Motor Europe Technical Center GmbH

1B // VDA Working Group AK30

Room 2 // Session chair: Dipl.-Ing. (Univ.) Ottmar Sirch

**Systematic Approaches for the Selection of Wiring System Structures
with Increased Reliability Requirements**

Dr. Roland Jancke, Fraunhofer Institut

14:15 | Poster session

14:45 | Coffee break

15:00 | Session 2

2A // High Voltage & Charging Safety

Room 1 // Session chair: Dipl.-Ing. Markus Demmerle + Thomas Weber

Tim Pawlak, Mercedes Benz AG // Dipl.-Ing. Christian Stutz, Siemens AG // M.Sc. Chaithra Bhat Beedubail, Panasonic Industry Europe GmbH

2B // Methods & Tools

Room 2 // Session chair: Prof.Dr.-Ing. Stephan Frei + Dr.rer.nat. Hartmut Pröbstle

Dr. Michael Kiffmeier, CARIAD SE // M.Sc. Dominic Huschke, Volkswagen AG // Dr. Michael Grill, FKFS

16:30 | End of Day 1

18:00 | Come together Erich-Brost-Pavillon | Zollverein

Day 2 // June 14, 2023

08:30 | Keynote 2

Room 1 // Session chair: Dipl.-Ing.(Univ.) Ottmar Sirch

Smart Vehicle Architecture

Christian Schäfer, Aptiv

09:00 | Coffee break + Room change

09:10 | Session 3

3A//Reliability & Diagnoses

Room 1 // Session chair: Prof.Dr.-Ing. Hans-Georg Herzog + Dr.-Ing. Jan Lichtermann

M.Sc. Luise Hötzel, University of Kassel // M.Sc. Michael Gerten, TU Dortmund // Marvin Rübartsch, TU Dortmund

3B // Applications

Room 2 // Session chair: Juris Tlatlik + Dr.-Ing. Anatoliy Lyubar

Ralf Eckhardt, Texas Instruments (TI) // Dr. Michael de Rooij, Efficient Power Conversion // Haris Muhedinovic, Vicor Corporation

10:40 | Coffee break + Poster + Exhibition

11:00 | Session 4

4A // Power Electronics

Room 1 // Session chair: Dipl.-Ing. Manuel Gärtner + Dr.-Ing. Tomas Reiter

Ph.D. Elena Barbarini, System Plus Consulting //

M.Sc. Benedikt Köberlein, BMW AG // Fabio Mello, TDK Electronics AG

4B: Efficiency of Electric Drives

Room 2 // Session chair: Prof. Dr.-Ing. Hans-Georg Herzog +
Dr. rer. nat. Hartmut Pröbstle

Dipl.-Ing. Matthias Töns, Vitesco Technologies GmbH //
Dipl.-Ing. Klaus Lang, HBK // Alexander Rosen, DeepDrive

12:30 | Lunch break

14:00 | Overview 2

2A // Low Voltage Batteries

Room 1 // Session chair: Prof. Dr. rer. nat. Dirk Uwe Sauer

The Evolution of Low Voltage Batteries in Vehicle Power Supply Systems

Dipl.-Phys. Jürgen Ringler, BMW Group

2B // Charging Infrastructure

Room 2 // Session chair: Dr.-Ing. Vera Lauer

Power grids Hamburg

Bastian Pfarrherr, Stromnetz Hamburg

14:30 | Session 5

5A // New Semiconductors Technologies & Concepts

Room 1 // Session chair: Dipl.-Ing. Manuel Gärtner +
Prof. Dr.-Ing. Stephan Frei

Hans Winter, VisIC technologies Inc // Benjamin Schmidt,
Infineon AG // Sebastiano Yuri Ciardo, STMicroelectronics

5B // Challenges for Fast Charging

Room 2 // Session chair: Dr.-Ing. Vera Lauer + Dipl.-Ing. Roland Matthé

Michael Scholz, P3 automotive GmbH // Dr. Faical Turki,
Compleo Charging Solutions AG // Prof. Dr. rer. nat. Dirk Uwe Sauer, ISEA,
RWTH Aachen

16:00 | Summary and farewell

Room 1

Dr.-Ing. Carsten Hoff, dSPACE GmbH
Dipl.-Ing. (Univ.) Ottmar Sirch, BMW Group

16:10 | End of Conference



You can find the detailed agenda online at
eehe.de/en/agenda-2023

Conference chairs

The chairmen of the international conference **eehe 2023** are:



Dipl.-Ing. (Univ.) Ottmar Sirch

BMW Group (passive)

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Dr.-Ing. Carsten Hoff

CEO

dSPACE GmbH

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Scientific advisory board and Program Committee

Prof. Dr. rer. nat. Ludwig Brabetz

University of Kassel

Dipl.-Ing. Markus Demmerle

Hyundai Motor Europe

Technical Center GmbH

Prof. Dr.-Ing. Stephan Frei

TU Dortmund University

Dipl.-Ing. Manuel Gärtner

STMicroelectronics

Prof. Dr.-Ing. Hans-Georg Herzog

Technical University Munich

Dr.-Ing. Vera Lauer

Daimler AG

Dr.-Ing. Jan Lichtermann

Robert Bosch GmbH

Dr.-Ing. Anatoliy Lyubar

Vitesco Technologies GmbH

Dipl.-Ing. Roland Matthé

Stellantis N. V.

Dr. rer. nat. Hartmut Pröbstle

BMW Group

Dr.-Ing. Tomas Reiter

Infineon Technologies AG

Dipl.-Ing. Peter Schmitz

Ford Research & Innovation

Center Aachen

Prof. Dr. rer. nat. Dirk Uwe Sauer

ISEA, RWTH Aachen

Dr.-Ing. Marc Thele

Dr. Ing. h. c. F. Porsche AG

M. Sc. Juris Tlatlik

PHOENIX CONTACT

Power Supplies GmbH

Senior Director R&D and

Quality Management



Who should take advantage of the conference?

The attractive agenda of the eehe conference is aimed at experts, managers and scientists as well as students working on the electrification of vehicles. A must-attend event for manufacturers, suppliers, development partners and employees of universities and research institutions:

- architectures and components for electrification, on-board energy networks, on-board systems and components
- electric charging with infrastructure
- electrical energy management
- low-voltage storage
- battery management
- power electronics
- E / E systems in the field of motor vehicles and commercial vehicles

Book your stand at the exhibition

The Haus der Technik offers state-of-the-art conference and exhibition rooms in the listed building in Essen's city center. The integration of the industrial exhibition into the catering area enables the participants to have an informal and lively exchange with the exhibitors' experts.

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



More information and the order sheet
eehe.de/en/exhibition



Contact

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Host



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Online booking at
eehe.de/en/binding-registration