

March 3–4, 2027 | Bamberg



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

International Conference 2027

Call for Papers

Submit your abstract until: **October 31, 2026**

Driving the Convergence of E/E Systems for Electric Vehicles & Humanoid Robotics

The **eehe conference** focuses on the most important questions currently discussed in the area of electrical and electronic systems and offers the opportunity to get in touch with OEMs and 1st and 2nd Tiers from the automotive industry.

Main Topics

Future E/E Architectures for passenger cars, heavy duty and other Vehicles

- E/E architectures, topologies and systems for
 - Hybrid/electric and hydrogen/fuel cell vehicles
 - Reliable power supply systems for automated driving and X-by-Wire
 - Domain, zonal and centralized architectures
- Electrical charging systems and vehicle-to-x solutions
- High voltage safety and standards incl. EMC
- Future voltage levels (48 V/400 V/800 V and beyond)
- Interoperability and EMC challenges

Energy management in future E/E architectures

- Electrical energy management and operating strategies
 - Control strategies for improved efficiency
 - Diagnostics and safety
 - Connectivity, big data, cloud computing and cyber security
- Battery management systems and algorithms
- Energy management for vehicle-to-x (grid, home, device)

Components for future E/E architectures

- Components for energy storage, power distribution and conversion
 - Batteries, converters, chargers and inverters
 - Semiconductors and passive components
 - Wiring harnesses and connectors
 - Integration
- New technologies and materials for power electronics and the requirements for qualification, reliability and robustness

Test and validation for hybrid and electric vehicles

- New test methods and tools for components, systems and vehicles
- Innovations for simulation and virtual development
- Software validation with non-deterministic self-learning and machine-learning algorithms

Focus Topics for 2027

- Standardization for future charging systems and its influence on vehicle systems
- Comprehensive BEV / FCEV solutions and their impact on energy and low voltage architectures
- High voltage and 48 V components and systems
- Modelling und Simulation für Hybrid and Electric Vehicles
- Ultra fast Charging Technologies and Concepts (Charging beyond 500 kW)
- Innovative Charging Technologies for convenience
 - @high temperature and @higher SOC
- Power supply and distribution concepts for fault-tolerant systems

NEW in 2027

E/E in Humanoid Robotics

Humanoid robotics is emerging as a highly dynamic application field for advanced electrical and electronic (E/E) systems.

Building on the strong technological commonalities with the automotive domain, **eehe 2027** introduces a dedicated **parallel session on E/E in Humanoid Robotics**.

The aim of this session is to explore and leverage synergies between both domains by transferring proven automotive technologies, architectures, and development approaches to humanoid robotic systems. In particular, both automotive systems and humanoid robots face comparable challenges with respect to scalable and reliable E/E architectures, power distribution, energy efficiency, and functional safety.

The increasing system complexity in humanoid platforms creates a strong demand for robust and standardized solutions, where automotive experience in high-volume, safety-critical environments provides a valuable foundation.

We invite contributions on topics including:

- Electrical and electronic system architectures for humanoid robots
- Power supply, battery systems, and energy management
- Electric actuators, drives, and motion control
- Sensors, perception, and sensor fusion
- AI, cognition, and embodied intelligence
- Embedded software and real-time control
- Functional safety, cybersecurity, and dependable systems
- Design, testing, validation, and industrial deployment of humanoid robots

Every presentation (20 minutes) is followed by a 10 minute Q & A session. The conference language will be English.

Deadline for abstract submission: October 31, 2026

- Title/Headline in English
- Abstract in English
- Classification into Main Topics



Please upload your paper on
www.eehe.de/en/upload-cfp
(Upload will be open starting mid-July, 2026!)



Milestones

Please upload your paper on www.eehe.de/en/call-for-papers
(Upload will be open starting mid-July, 2026!)



October 31, 2026

Deadline for abstract submission

December 2026

Decision of Acceptance

Mid-February 2027

Submission of final presentation

March 3–4, 2027 | Bamberg

Conference Venue

Welcome Kongresshotel Bamberg
Mußstraße 7 · 96047 Bamberg
Germany

Conference Chairmen



Dr.-Ing. Carsten Hoff
dSPACE GmbH



Dipl. Inf., Dipl.-Ing. (BA) Thomas Weber
Mercedes-Benz Group AG

Scientific Advisory Board and Program Committee

Daniel Andree
HELLA GmbH & Co. KGaA

Prof. Dr.-Ing. Mohamed Ayeub
University of Kassel

Dipl.-Ing. Markus Demmerle
Hyundai Motor Europe
Technical Center GmbH

Dr. Michael Frauenhofer
Audi AG

Prof. Dr.-Ing. Stephan Frei
TU Dortmund University

Dipl.-Ing. Manuel Gärtner
STMicroelectronics

Dipl.-Ing. Bastian Hartmann
Ford-Werke GmbH

Dr.-Ing. Jan Lichtermann
Robert Bosch GmbH

Dr.-Ing. Anatoliy Lyubar
Vitesco Technologies GmbH

Dr. rer. nat. Hartmut Pröbstle
BMW Group

Dipl.-Ing. Tim Puetz
Aptiv

Dr.-Ing. Tomas Reiter
Infineon Technologies AG

Prof. Dr. rer. nat. Dirk Uwe Sauer
RWTH Aachen University | CARL &
FZ Jülich | Helmholtz Institute Münster

Dr.-Ing. Marc Thele
Dr. Ing. h. c. F. Porsche AG

Conference Fee

€ 1,585.– (regular) | € 545.– (Speaker/Poster Author)

Contact | Organisation

Dipl.-Kffr. Katharina Röder
P +49 (0)201 1803-234
E k.roeder@hdt.de

Dipl.-Bw. Anja Funke
P +49 (0)201 1803-285
E a.funke@hdt.de

HDT (Haus der Technik e. V.) · Hollestraße 1 · 45127 Essen / Germany · hdt.de

