KEY TOPICS

» E-Mobility and Highly Automated Driving (HAD)
» The Wire Harness System of the new AUDI A8 with HAD Level 3
» Wire Harness Architectures for Highly Automated Driving
» Functional Safety
» Efficient Development Processes for Future Wire Harness Systems
» Unshielded High-Voltage Wire Harness Systems

WITH PRESENTATIONS BY

AUDI | BMW | Daimler | DRÄXLMAIER
EDAG Gebauer & Griller | KOSTAL | Landshut
University of Applied Sciences | LEONI
MD ELEKTRONIK | Robert Bosch | Roland Berger
TE Connectivity | TU Dortmund University
TU Ilmenau University | Volkswagen
The major Automotive Wiring Harness Industry Get-Together in 2018

Specialist talks, exhibitions and networking at the 6th International Congress in Ludwigsburg. In 2018, the 6th International Congress Automotive Wire Harness – organized by Süddeutscher Verlag Veranstaltungen – will be presenting the latest trends and challenges in the industry. Thanks to the active support of the Advisory Committee, we have once again organized an attractive and well-thought-out program featuring many keynote presentations from leading automotive manufacturers. In addition to the high-caliber speakers and expertly devised presentations, participants value in particular the excellent atmosphere and the annual opportunity to exchange ideas with automotive wire harness specialists working for OEMs, the supply industry and development service providers. The Automotive Wire Harness Congress is becoming an increasingly international platform. Süddeutscher Verlag Veranstaltungen is acknowledging this evolution by providing professional simultaneous translation services into English and German during both days of the Congress. During the breaks, you will have the opportunity to visit the exhibitors’ booths in front of the congress hall and talk to the experts. To bring the first day of the Congress to a magnificent close, we will be inviting all participants to a celebratory evening event at the nearby Reithaus Ludwigsburg.

Come with us on an animalistic journey with Tobias Beck, the man who will talk about the secrets of beastly good communication and explains why you should never give flowers to sharks. Use this event as an opportunity to make new contacts and strengthen existing ones.

We look forward to welcoming you at the event and hope you gain lots of new inspirations and enjoy some fruitful discussions!

Georg Sterler
Former Head of Wire Harness System Development AUDI AG

Andras Hetenyi
Conference Manager Automotive Süddeutscher Verlag Veranstaltungen GmbH
ADVISORY COMMITTEE

Congress Manager and Chairman of the Advisory Committee

Georg Sterler
Former Head of Wire Harness System Development
AUDI

Frank Dambacher
Head of On-Board Power Supply
PORSCHE

Peter Doublek
Head of Physical On-Board Power Supply
BMW

Udo Hornfeck
Vice President Global R&D
LEONI

Dr. Rainer König
Senior Manager Wire Harness and DMU
DAIMLER

Dr. Wolfgang Langhoff
Director KROMBERG & SCHUBERT

Reinhard Prechler
Head of Development of On-Board Power Supplies, EMC and Antennas
AUDI

Christian Schäfer
Director Electrical and Electronic Systems
APTIV

Georg Scheidhammer
Managing Director Engineering Technology
DRÄXLMAIER

Hajo Wetzel
Director Global Advanced Engineering
TE CONNECTIVITY
8:00 a.m. HANDOUT OF CONGRESS DOCUMENTS

8:45 a.m. GREETING AND OPENING ADDRESS

Andras Hetenyi
Conference Manager Automotive
Süddeutscher Verlag Veranstaltungen

Georg Sterler
Former Head of Wire Harness System Development
AUDI

9:00 a.m. eMobility, connectivity and automated driving

Roland Berger
Dr. Wolfgang Bernhart
Senior Partner

Topics Impact on future vehicle electric and electronic architectures | Future core competences and implications for OEM engineering | Strategic consequences for suppliers

9:30 a.m. How Mobility-as-a-Service will change the vehicle and the production

Landshut University of Applied Sciences

Prof. Dr. Dieter Nazareth
Dean

Topics Back from the individual vehicle to the mass product | The OEM as B2B producer | jis-logistic is too expensive for mobility service providers

10:00 a.m. Challenges in wiring harness systems through functional safety relating to the process landscape

DRÄXLMAIER

Oliver Druhm
Head of Electrical System Design

Topics Changes in the automotive industry based on the required safety culture | What demands does the ISO 26262 place on the development process? | Why is it easier for new players to handle development?

10:30 a.m. COFFEE BREAK, NETWORKING AND CHANCE TO VISIT THE EXHIBITION

11:15 a.m. The new Audi A8

Audi

Reinhard Prechler
Head of Development of On-Board Power Supplies, EMC and Antennas

Topics Concept and key figures | Challenge HAF | Future perspective

11:45 a.m. Influence of a Service Oriented Vehicle EE Architecture (SOA) on the wiring harness system

EDAG

Gerhard Becker
Head of Electrics/Electronics Vehicle Engineering

Topics Reliable signal and power distribution | Intelligent fuse concept | Wiring harness variant reduction according standard sub wiring harnesses

12:15 p.m. eMobility, autonomous driving, miniaturization... What else should a plug connection do?

KOSTAL

Wolfgang Neumann
Director Technology Development

Topics eMobility: Thermal management in the connector | Autonomous driving: Reliability of a plug connection | Miniaturization: Connectors at the limit of processing and validation
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:30 p.m.</td>
<td>Trends in the development of E/E Architectures</td>
<td>Dr. Andreas Brösse</td>
<td>Automated, Connected, Electrified, Shared/Services: Four core elements of the BMW Strategy Number One &gt; Next The new requirements for the E/E architecture affect the entire E/E system</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BMW</td>
</tr>
<tr>
<td>3:00 p.m.</td>
<td>3D-Master Wiring Harness – Virtual product design and verification based on KBL 2.4</td>
<td>Dr. Jonas Neckenich</td>
<td>Combination of installation space- and product-oriented design Complete 3D product documentation Model-based verification of harness data</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Daimler</td>
</tr>
<tr>
<td>3:30 p.m.</td>
<td>Functional safety within the wiring system – impact on product, production processes and organizational implications</td>
<td>Dr. Karlheinz Morgenroth</td>
<td>Functional safety as an essential basis for highly autonomous driving Effects on product, production landscape at Tier 1 Organizational implications</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bernd Schneider</td>
<td>LEONI</td>
</tr>
<tr>
<td>4:00 p.m.</td>
<td>COFFEE BREAK, NETWORKING AND CHANCE TO VISIT THE EXHIBITION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:30 p.m.</td>
<td>The EM-shield-free physical high-voltage wiring system</td>
<td>Michael Wortberg</td>
<td>Opportunities and difficulties of filtering Beneficial use of flat cables Technological and vehicle-specific differences</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>DRÄXLMAIER</td>
</tr>
<tr>
<td>5:00 p.m.</td>
<td>Support of emergency functions in highly automated vehicles through combination of smart fusing and model-based diagnosis of power supply cables</td>
<td>Prof. Dr. Stephan Frei</td>
<td>Smart fuses Controlled overstraining of power networks and E-components Diagnosis of health status and prognosis of remaining lifetime</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TU Dortmund University</td>
</tr>
<tr>
<td>5:30 p.m.</td>
<td>The new Volkswagen harness development process – data driven and rule based</td>
<td>Dr. Tobias Carsten Müller</td>
<td>Future tool chain for harness development at Volkswagen Component data in the development process Rule based development, automated construction</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Volkswagen</td>
</tr>
<tr>
<td>6:30 p.m.</td>
<td>EVENING EVENT IN THE REITHAUS LUDWIGSBURG. MORE INFORMATION ON PAGE 10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8:15 a.m.  GREETING AND OPENING ADDRESS FOR THE SECOND CONGRESS DAY

**Georg Sterler** Former Head of Wire Harness System Development AUDI

8:30 a.m.  Electrification MINI – the next logical step

**Dr. Martin Tietze**
Head of Process Electronics, Autonomous Driving MINI, Compact Class BMW

**Dr. Julian Broy**
Vehicle responsibility for the electrics/electronics process chain and fully automated driving in product line UKL BMW and MINI

**Topics**
- Retrospective: MINI as the pioneer of electrification
- Deep dive MINI COUNTRYMAN PLUG-IN HYBRID
- Future perspective

9:00 a.m.  Thermal simulation of HV Wiring Harnesses - Impacts on the development process

**Daimler**

**Frank Hübner**
Development Engineer

**Topics**
- Introduction of the simulation method "Thermal Networks" I Exchange formats for thermal models I Impacts on the development process of HV Wiring Harnesses

9:30 a.m.  Dissimilar Joining of Aluminium and Copper – Technologies and Challenges

**TU Ilmenau University**

**Anna Regensburg**
Research Assistant

**Prof. Dr. Jean Pierre Bergmann**
Head of Production Technology

**Topics**
- Challenges for joining aluminium and copper
- Influence of the interface morphology on the aging behaviour
- Current approaches – influence of phase transformations on the joint formation

10:00 a.m.  COFFEE BREAK, NETWORKING AND CHANCE TO VISIT THE EXHIBITION

10:45 a.m.  Screened high voltage cables with aluminum wire braided screen

**Gebauer & Griller Kabelwerke**

**Gottfried Fleischer**
R & D Manager Cable Harness

**Kurt Herrmann**
R & D Manager Wires

**Topics**
- Buildup of screened high voltage cables with aluminum wire braided screen
- Properties and result of actual measurements
- Outlook on possible weight and cost savings

11:15 a.m.  Future in vehicle network architectures and their impact on electronic control units and connector systems

**Robert Bosch**

**Martin Hager**
Head of Center of Competence Mechanical Engineering for electronic control units

**Dr. Andreas Lock**
Vice President, Head of Center of Competence E/E-Architecture

**Topics**
- Future developments of network architectures in vehicles
- New challenges for electronic control units and their connector systems
- Integration of Ethernet functionalities in automotive connector systems
11:45 a.m.  LUNCH BREAK, NETWORKING AND CHANCE TO VISIT THE EXHIBITION

1:00 p.m.  The 48V vehicle electrical system in series production

Markus Gigler
Feature Developer
Development Energy Management

 Topics
Current versions of the 48V power grid
Effects on the physical wiring system
Future prospect: The 48V wiring harness system of the next generation

2:00 p.m.  Aging effects of cables for ethernet applications

MD ELEKTRONIK

Johannes Trä
Director Development

Topics
Links for Gigabit and MultiGig Ethernet in vehicles I Unshielded and shielded cables for automotive Ethernet I RF- and EMC behavior before and after aging

2:30 p.m.  Fault simulation on highly available power systems

Hochschule Landshut

Florian Bierwirth
Masters Student – Wire Harness Development

Prof. Dr. Jürgen Gebert
Faculty of Electrical Engineering and Industrial Engineering

Topics
Critical faults on vehicle power systems
Short circuit modelling with Modelica®
Simulation compared to real measurement

3:00 p.m.  CLOSING WORDS: GEORG STERLER

END OF THE 6TH INTERNATIONAL CONGRESS ON AUTOMOTIVE WIRE HARNESS 2018
The following companies are Sponsors at the 6th International Congress Automotive Wire Harnesses 2018:

**DRÄXLMAIER**

The DRÄXLMAIER Group supplies premium automobile manufacturers worldwide with complex wiring harness systems, electrical and electronic components, exclusive interiors, and battery systems.

DRÄXLMAIER develops pioneering wiring harness technology as well as electrical and electronic components, all directly in-house. DRÄXLMAIER is working on the future of emission-free mobility with its solutions for low-voltage and high-voltage battery systems. As a market leader for interior systems in premium automobiles, the DRÄXLMAIER Group also supplies premium automobile manufacturers with ambient lighting, center consoles, door panels and instrument panels, as well as complete door and cockpit modules. Customers of the Top 100 Automotive Supplier include Audi, BMW, Jaguar, Land Rover, Maserati, Mercedes-Benz, MINI, Porsche and VW.

www.draexlmaier.com

**EDAG**

EDAG, an independent, global engineering partner, develops ready-for-production concepts and solutions to ensure the mobility of the future, and currently employs a workforce of more than 8,300 in the development of complete vehicles and production plants.

With more than 1,600 electrical/electronic engineers and technicians in Germany, and facilities at further international locations, we offer innovative solutions from electric system engineering to connected driving and eMobility.

In Ludwigsburg, we will be presenting our strategy for the E/E architecture of the future. Our “Vision 2025” firmly focuses on the division of the vehicle into different geometrical zones and connection via the automotive Ethernet. Increased data speed and weight savings of up to 30% included!

www.edag.de

**Mentor**

Mentor, a Siemens business, is a world leader in software solutions for electronics and electrical systems applications. We provide products, consulting services and support for electrical system engineering and manufacturing, from initial platform architecture definition to in-service maintenance.

Mentor’s client base includes OEM’s, Tier 1 suppliers, wire harness manufacturers, both small and large, and specialist vehicle manufacturers. The Capital tool chain is the solution to support the design, analysis, manufacture, and service of electrical connectivity and communication systems for Automotive, Aerospace and complex Machinery. With best-in-class integrations with Dassault Systemes Catia, Siemens NX and Teamcenter, Capital supports true cross-functional product development as part of the Model Based Enterprise, whilst eliminating many hours of traditional manual processes and prototyping to deliver working products to market faster.

www.mentor.com/electrical

**TE Connectivity Ltd.**

TE Connectivity Ltd. (NYSE: TEL) is a $13 billion global technology and manufacturing leader creating a safer, sustainable, productive, and connected future.

For more than 75 years, our connectivity and sensor solutions, proven in the harshest environments, have enabled advancements in transportation, industrial applications, medical technology, energy, data communications, and the home.

With 78,000 employees, including more than 7,000 engineers, working alongside customers in nearly 150 countries, TE ensures that EVERY CONNECTION COUNTS.

www.te.com
The following companies are already registered and will inform you about their products and services at the congress:

**MEET THE INDUSTRY WHERE THE INDUSTRY MEETS.**

What is better than a huge advertising shake? A firm handshake! Take the opportunity! Present your company to this professional audience – your target group – without any scattering losses.

**Your first contact**

Nicolai von Gratkowski
Manager Exhibition & Sponsoring

+49 8191 125-123
nicolai.vongratkowski@sv-veranstaltungen.de
DINNER SPEAKER
Tobias Beck

Enjoy the first evening with relaxing music, a festive meal, a cocktail bar and an interesting dinner-speaker who knows: Beastly good communication is certainly no coincidence.

Tobias Beck gives the impulse to think in a creative and different way. He animates people to hold up the mirror to themselves.

You will find out why you should never give flowers to sharks and where dolphins like to spend their holidays.

On 13 March 2018 from 6.30 p.m. at Reithaus Ludwigsburg!
DATE OF EVENT
TUESDAY 13 AND
WEDNESDAY 14 MARCH 2018

EVENT LOCATION
Forum am Schlosspark, Ludwigsburg
Stuttgarter Strasse 33
71638 Ludwigsburg, Germany
P: +49 7141 910 3910
www.forum.ludwigsburg.de

ROOM RESERVATION
Note: Hotels bookings are subject to availability.

Schlosshotel Monrepos
Domäne Monrepos 22 | 71634 Ludwigsburg
P: +49 7141 302-0
reservierung@schlosshotel-monrepos.de
www.schlosshotel-monrepos.de
Preferential rate: single room €155
(Quote “SV Veranstaltungen” when booking by 12 February 2018). The hotel is 5 minutes by car from the event venue “Forum am Schlosspark”.

Favorit Hotel BEST WESTERN Ludwigsburg
Gartenstrasse 18 | 71638 Ludwigsburg
P: +49 7141 97677-0 | info@hotel-favorit.de
www.hotel-favorit.bestwestern.de
Preferential rate: single room €95
(Quote “SV Veranstaltungen” when booking by 10 February 2018 to secure the room at this preferential rate). The hotel is 5 minutes by car from the event venue “Forum am Schlosspark”.

Hotel Goldener Pflug
Dorfstrasse 2-6 | 71636 Ludwigsburg
P: +49 7141 4411-0 | kontakt@goldenerpflug.info
www.goldenerpflug.info
Preferential rate: single room €113
(Quote “SV Veranstaltungen” when booking by 12 February 2018 to secure the room at this preferential rate). The hotel is 10 minutes by car from the event venue “Forum am Schlosspark”.

ATTENDANCE FEE
The standard attendance fee for the Automotive Wire Harness congress (13–14 March 2018) is €1,795 plus VAT.

INFORMATION FOR PARTICIPANTS

This fee includes the following services:

» Participation in the congress
» Congress documentation and App-Access
» Lunch on both days of the congress
» Industry get-together with evening meal (March 13)
» Refreshments during breaks
» Opportunity to visit the accompanying trade exhibition

REGISTRATION
Please register using the enclosed coupon or online at www.sv-veranstaltungen.de. Once we have received your written registration, you will be registered as a participant. We will then send you written confirmation of registration and an invoice that must be settled before the start of the event. In the event of cancellations received after 27 February 2018 or non-appearance, the full participation fee will be billed. However, a replacement participant can be designated. For cancellations before this date, a €150 administration fee will be charged. Cancellations and registrations must be made in writing. The event organizer reserves the right to change the location and/or time of the whole event or individual parts of it or to alter or cancel it at short notice.
I WISH TO REGISTER FOR THE CONGRESS AUTOMOTIVE WIRE HARNESS (818.101.15) AND UNDERSTAND THAT THE REGISTRATION IS BINDING:

- For the price of €1,795 plus VAT
- I intend to participate in the industry get-together/evening event (Tuesday, 13 March 2018)
- I am interested in exhibition and sponsoring opportunities.

Please send me a free-of-charge, no-obligation information pack

<table>
<thead>
<tr>
<th>Surname</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>First name</td>
<td></td>
</tr>
<tr>
<td>Position</td>
<td>Department (with internal code)</td>
</tr>
<tr>
<td>Company/Institute</td>
<td></td>
</tr>
<tr>
<td>Street/PO box</td>
<td></td>
</tr>
<tr>
<td>Post code, city or town, country</td>
<td></td>
</tr>
<tr>
<td>E-Mail</td>
<td></td>
</tr>
<tr>
<td>Mobile-Phone</td>
<td></td>
</tr>
<tr>
<td>Phone</td>
<td></td>
</tr>
<tr>
<td>VAT no.</td>
<td>Date, Signature</td>
</tr>
</tbody>
</table>

Please send the invoice to

- Department
- Name

In future, I would like to receive the invoice:

- [ ] by e-mail
- [ ] by post

Legally binding authorized e-mail address for invoice dispatch

DATA PROTECTION NOTE

Your personal details will be processed by SV Veranstaltungen GmbH for the purpose of customer care (e.g. confirmation of registration). Furthermore, we use your data for our internal market research. Additionally, you will be informed occasionally by SV Veranstaltungen GmbH and about similar own offers or services (e.g. same or similar events) by e-mail. You may object to the use of your data at any time in writing to Süddeutscher Verlag Veranstaltungen GmbH, Justus-von-Liebig-Straße 1, D-86899 Landsberg or by e-mail to info@sv-veranstaltungen.de. Süddeutscher Verlag Veranstaltungen GmbH will not sell on your data to third parties for their advertising purposes. Please also take note of our General Terms of Business.