



**AUTOMOTIVE CIRCLE**  
CONFERENCE

# MATERIALS IN CAR BODY ENGINEERING 2016

**9 – 11 MAY 2016**  
**BAD NAUHEIM, GERMANY**

**CAR BODY ENGINEERING**

**8 OEM**  
**PRESENTATIONS BY**

BMW, Fiat Chrysler,  
Opel, Peugeot Citroën,  
Volkswagen, Volvo



## WHAT IS RIGHT?

„The right material in the right place“. You certainly have heard this doctrine before – maybe even a bit too often. But it remains true, of course, and its optimal implementation remains the most important goal in car body lightweight design. However, the answers to what is „right“ differ substantially for different OEM, different car segments, different locations – and for very good reasons. Plus, these answers quite rapidly change over time, given new technologies and new market situations.

Hence, discussing state-of-the-art car body materials concepts and material applications for various vehicle segments is the aim of the annual Automotive Circle conference „Materials in Car Body Engineering“. Viable solutions for current car bodies as well as innovative approaches for the foreseeable future will be in focus from 9 to 11 May 2016 in Bad Nauheim, Germany – for the first time with three conference days and a new conference structure, reflecting the high importance of the topic.

Be there, join the network,  
we are looking forward to  
seeing you in Bad Nauheim!

Yours



**Dr. Dirk Meine**  
Presidium  
Automotive Circle, DE



# NEW CONFERENCE STRUCTURE

Two overlapping conference modules will be focusing on the increasingly important applications of composite and hybrid materials on the one hand, and on modern lightweight design based on new steel and light metal concepts on the other. In the joint session for both modules on the second conference day, current full car body materials concepts as well as innovative ideas and solutions for an intensive lightweight material mix will be at the focus of attention of the conference's international expert audience.



## MODULE 1

### COMPOSITES AND HYBRID MATERIALS

MONDAY, 9 MAY 2016, 9.00 H –  
TUESDAY, 10 MAY 2016, 16.00 H



## MODULE 2

### STEEL AND LIGHT METALS

TUESDAY, 10 MAY 2016, 8.30 H –  
WEDNESDAY, 11 MAY 2016, 16.00 H



### LIVE POLLS ON SITE

Ask your specific questions about trends in car body materials and benefit from the answers of the conference audience!

# INTERNATIONAL OEM ADVISORY BOARD



**Dr. Florian Meyer,**  
**Audi AG, DE**



**Thomas Heusser,**  
**Audi AG, DE**



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**BMW Group, DE**



**Dr. Daniel Wortberg,**  
**Daimler AG, DE**



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**CRF, an FCA**  
**company, IT**



**Andrea Pipino,**  
**CRF, an FCA**  
**company, IT**



**Dr. Jürgen Wesemann,**  
**Ford Forschungszent-**  
**rum Aachen GmbH, DE**



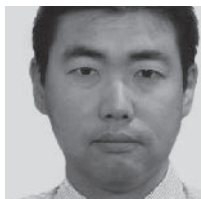
**Dr. Iksoo Kim,**  
**Hyundai Motor**  
**Group, RK**



**Rebecca Hitch,**  
**Jaguar Land Rover**  
**Ltd., GB**



**Anthony Riley,**  
**Jaguar Land Rover**  
**Ltd., GB**



**Takao Hayashi,**  
**Nissan Motors Co.,**  
**Ltd., JP**



**Martin Weisenburger,**  
**Adam Opel AG, DE**



Daniel Couratin,  
**Renault S.A.S., FR**



Ahmet Dogan,  
**Toyota Motor Europe  
NV/SA, BE**



Dr. Steffen Landua,  
**Volkswagen AG, DE**



Dr. Hansjörg Kurz,  
**Volkswagen AG, DE**



Richard Johansson,  
**Volvo Car  
Corporation, SE**



Per Mårtensson,  
**Volvo Car  
Corporation, SE**



## TUTORIALS

Just before Module 2 of the conference, two full-day, English-language tutorials offer newcomers in the field the opportunity to review the fundamentals and the current industrial use of steels and aluminium, respectively, in car body series production.



## STEEL IN CAR BODY ENGINEERING

**9 MAY 2016, 10.00 – 18.00 H**

*Prof. Dr. Hardy Mohrbacher, NiobelCon bvba*

- \* Steel material classes and alloys
- \* Properties of low and high alloyed steels; microstructures
- \* Applications of the different material classes
- \* Form hardening (TRIP, TWIP)
- \* Material characterisation and quality control

## ALUMINIUM IN CAR BODY ENGINEERING

**9 MAY 2016, 10.00 – 18.00 H**

*Prof. Dr. Jürgen Hirsch, Institut für Metallkunde und Metallphysik der RWTH Aachen University/Hydro Aluminium Deutschland, DE*

*Dr. Axel Förderreuther, Novelis Deutschland GmbH, DE*

- \* Material properties of aluminium
- \* Practice-relevant aluminium alloy classes
- \* Aluminium panels, extrusion profiles and castings
- \* Aluminium processing (surface, forming, joining)
- \* Examples for an aluminium-optimised car body lightweight design

## TUTORS



**Prof. Dr. Hardy  
Mohrbacher**



**Prof. Dr. Jürgen  
Hirsch**



**Dr. Axel  
Förderreuther**



## LIVE-STREAM

You cannot be present in Bad Nauheim?  
Make use of our free LIVE-Stream-Service  
and follow the marked presentations  
online!



# PROGRAMME

MONDAY, 9 MAY 2016

MODULE 1

## MODULE 1: COMPOSITES AND HYBRID MATERIALS

8.45 h **Welcome and conference introduction**

*Dr. Dirk Meine, Automotive Circle*

### FRP IN INDUSTRIAL APPLICATION

9.00 h **Lightweight design through multi-material-systems: structural body parts made of continuous-fibre reinforced thermoplastic with PUR outer skin in "Class A" quality**

*Sebastian Teuscher, Alexander Spiegel, EDAG Engineering GmbH, DE*

9.30 h **Thermoplastic composite structural part on Body in White (BIW) for truck market application: composite firewall**

*Cécile Demain, Solvay S.A., FR*



10.00 h **Use of fibre reinforced composites in automotive lightweight design – Chances and challenges**

*Dr. Olaf Täger, Volkswagen AG, DE*

10.30 h **Coffee and contacts**

### COMPOSITES AND THEIR COMPONENTS

11.00 h **From bobbin to preform to part**

*Dr. Markus Schneider, Toho Tenax Europe GmbH, DE*

11.25 h **Carbon-fibre reinforced plastics (CFRP) in car body applications – status and perspectives**

*Dr. Markus Schneider, Voith Composites GmbH & Co. KG, DE*

11.50 h **Thermoplastic FRP in automobile production: Lightweight potential and state of the art**

*Dr. Christian Obermann, Bond-Laminates GmbH, DE*

12.15 h **Live-polls in the auditorium**

12.30 h **Lunch break**

13.45 h **Polymer Hybrids – a new class of matrix materials for large scale composite manufacturing**

*Dr. Guido Streukens, Evonik Resource Efficiency GmbH, DE*



- 14.10 h**     **Operation Monitoring for raising maximum design strain envelopes of primary FRP structural elements**  
*Stefan Herrmann, csi entwicklungstechnik GmbH, DE*
- 14.35 h**     **Reactive plastics in lightweight design applications**  
*Jens Winiarz, Hennecke GmbH & Co. KG, DE*
- 15.00 h**     **Cost efficient manufacturing and material solutions in advanced composite forming**  
*Dr. Christian Koroschetz, AP&T AB, SE*
- 15.25 h**      **Coffee and contacts**



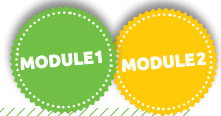
### **COMPOSITE MATERIALS: IMPULSES FROM ACADEMIC RESEARCH**

- 16.00 h**     **Chances of endless FRTP in automobile production**  
*Prof. Dr. Peter Michel, Fraunhofer Institute for Mechanics of Materials (IWM), DE*
- 16.20 h**     **Production of multiaxial tapes for automotive lightweight applications**  
*Prof. Dr. Lothar Kroll, Technische Universität Chemnitz, Institute of Lightweight Structures / Cetex gGmbH, DE*
- 16.40 h**     **Lightweight fibre reinforced composites – Current developments towards automotive serial production**  
*Prof. Dr. Volker Altstädt, University of Bayreuth / Neue Materialien Bayreuth GmbH, DE*
- 17.00 h**     **Structural design of spot weldable force transmission elements for FRTP automotive panels**  
*Dr. Axel von Hehl, IWT Stiftung Institut für Werkstofftechnik, DE*
- 17.20 h**     **Joining of endless fiber reinforced plastics suitable for lightweight design**  
*Christian Gröschel, Institute of Polymer Technology, University Erlangen-Nuremberg, DE*

**17.40 h**      **Get Together / Meet the Speakers**  
*The speakers of the conference day will be available for further individual discussions.*

**19.00 h**     **Networking Night**

TUESDAY, 10 MAY 2016



**MODULE 1: COMPOSITES AND HYBRID MATERIALS**

**MODULE 2: STEEL AND LIGHT METALS**

*(Joint session of both modules)*

**8.45 h**      **Welcome and conference introduction for Module 2 participants**

*Dr. Dirk Meine, Automotive Circle*

**„OFF-TOPIC“ KEYNOTE**

**9.00 h**      **From Berlin to Brasilia – Demands, materials, innovations, architecture and history of football stadiums across four continents**

*Prof. Dr. Andreas Groß, Fraunhofer Institute for Manufacturing Technology and Advanced Materials IFAM, DE*

**MODERN MIXED-MATERIALS CONCEPTS**

**10.00 h**      **An example for the manufacturing implementation of an innovative steel-CFRP lightweight design concept: the hybrid B-pillar in the new BMW 7 Series**

*Peter Frei, BMW Group, DE*

**10.30 h**      **Challenges of high volume composite manufacturing**

*Per Mårtensson, Volvo Car Corporation, SE*

**11.00 h**      ☕ **Coffee and contacts**

**11.30 h**      **Development of hybrid joining technologies with series production feasibility for advanced multi-material car body structures**

*Thomas Olfermann, Laboratory for Materials Science and Joining Technology (LWF), University of Paderborn, DE*

**12.00 h**      **Composite/metal joining strategy at PSA Peugeot Citroën**

*Mathieu Kielwasser, Groupe PSA, FR*

**12.30 h**      🗨️ **Live-polls in the auditorium**

**12.45 h**      🍴 **Lunch break**

- 14.00 h**    **From third generation AHSS to sandwich materials: new projects overview**  
*Michele Tedesco, CRF, an FCA company, IT*
- 14.30 h**    **Virtual Material Lab – new approaches for materials simulation in structural parts design**  
*Dr. Katja Jöchen, Volkswagen AG, DE*
- 15.00 h**    **Realization of a new mixed material concept for a BEV within the European funded project ALIVE**  
*Dr. Jörn Tölle, Benteler Automobiltechnik GmbH, DE*
- 15.30 h**    ☕ **Coffee and contacts**

*End of Module 1*

**MODULE 2**

## **MODULE 2: STEEL AND LIGHT METALS**

### **ALUMINIUM**

- 16.15 h**    **Recent progress in aluminium quality standardisation**  
*Bart Sprengers, Aleris Aluminium Duffel, BE*
- 16.45 h**    **Optimised aluminium lightweight solutions for car body modules**  
*Akio Niikura, Ph.D., UACJ Corporation, JP*
- 17.15 h**    **Approach for an all-aluminium lightweight car body for electric vehicles**  
*Prof. Dr. Jürgen Hirsch, Hydro Aluminium Rolled Products GmbH, DE*

**17.45 h**     **Get Together / Meet the Speakers**  
*The speakers of the conference day will be available for further individual discussions.*

**19.00 h**    **Networking Night**

WEDNESDAY, 11 MAY 2016



**MODULE 2: STEEL AND LIGHT METALS**

**ALUMINIUM (CONTINUED)**

**9.00 h**      **Pushing the limits of formability:  
A new aluminium outer skin sheet product  
for most demanding car body parts**  
*Dr. Sabine Philippe, Constellium, FR*

**STEEL-BASED LIGHTWEIGHT DESIGN**

**9.30 h**      **Efficient hot forming process due to innovative  
heating and material concepts**  
*Tobias Opitz, Volkswagen AG, DE*

**10.00 h**       **Coffee and contacts**

**10.45 h**      **New press hardened steels and tailored blanks  
applications**  
*Dr. Francis Schmit, Dr. Sebastian Cobo, ArcelorMittal  
Global R&D, FR*

**11.15 h**      **Innovative steel alloys for the hot  
stamping process**  
*Prof. Dr. Hardy Mohrbacher, Niobelcon bvba, BE  
Dr. Jian Bian, Niobium Tech Asia Pte. Ltd., SG*



**11.45 h**      **Influencing of sheet metal forming performance by  
various surface textures**  
*Florian Dietrich, Adam Opel AG, DE*

**12.15 h**       **Live-Polls in the auditorium**

**12.30 h**        **Lunch break / Meet the Speakers**  
*The speakers of the conference day will be available for  
further individual discussions.*

**13.45 h Galvanized hardened steel components for BIW applications**

*Josef Faderl, voestalpine Stahl GmbH, AT*

**14.15 h Design and optimization of steel car body structures via local laser treatment**

*Markus Wagner, Fraunhofer IWS, DE*

**14.45 h OEM outlook**

*OEM Advisory Board members on latest trends and current challenges in modern lightweight car body concepts.*

**15.00 h Concluding remarks and farewell address, end of the conference**

*Subject to change (status as of 28 April 2016)*

**Programme updates at:  
[www.automotive-circle.com](http://www.automotive-circle.com)**

# TERMS & CONDITIONS

## REGISTRATION PROCEDURES

Vincentz Network GmbH & Co. KG  
Automotive Circle  
Plathnerstr. 4c, DE-30175 Hannover  
T +49 511 99 10-376, F +49 511 99 10-379  
kristin.skandera@vincentz.net

## ONLINE REGISTRATION

www.automotive-circle.com

## DATE AND VENUE

Conference: 9 – 11 May 2016  
Tutorial: 9 May 2016

Hotel Dolce Bad Nauheim  
Elvis-Presley-Platz 1, DE-61231 Bad Nauheim  
T +49 6032 303-0, F +49 6032 303-529  
www.dolce-bad-nauheim-hotel.com  
reservation\_dolce@dolcebadnauheim.com

We kindly ask you to make your own hotel reservation at the conference hotel, please refer to Automotive Circle. The hotel offers special room rates from 135,- € to 155,- € depending on different cancellation conditions. The mentioned room rates include 5,- € breakfast per person and per day.

## CONFERENCE FEES

### Conference:

Early-Bird Module1+ Module2: 2.295,- €  
Standard Module1+ Module2: 2.495,- €  
Early-Bird per Module: 1.550,- €  
Standard per Module: 1.750,- €

### Tutorial:

Per Tutorial: 825,- €

Early-bird price available until 10 April 2016. Students will get 50 % discount on standard prices on presentation of a valid student ID.

\* All prices plus 19 % German VAT.  
All conferences in Europe are subject to VAT. To reclaim, please contact your local tax office.

## CONFERENCE FEES INCLUDE

**Conference:** Fees including full conference participation, incl. conference materials and list of delegates, the authority for downloading the presentation on the internet, luncheons, catering and the participation in the evening networking event.

**Tutorial:** The participation fee include the attendance in the tutorial, list of delegates, the proceedings and the coffee break.

## CONFERENCE LANGUAGE

The conference will be translated simultaneously into English and German. Please note that the contents of lectures and presentations at simultaneously interpreted conferences are predominately composed in the English language.

## CANCELLATIONS

Fees will be refunded in full if notice of cancellation is received by 10 April 2016. 50 % of the conference fees will be refunded in case notification of cancellation is received later, but not later than 24 April 2016. Delegates who fail to attend without notifying the organiser will be liable for the whole conference fees. Substitutions of delegates may be made at any time.

Cancellations and changes should be notified in writing. In all cases date of postmark shall apply. Any fees to be refunded will be paid after the end of the conference. The organiser reserves the right to change the programme content or to cancel the event due to important reasons. Cancellation fees of third parties that may appear in this context will not be reimbursed.

## DATA PROTECTION

Vincentz Network produces a list of delegates for each event which may include the following information: company name, address (zip code, city, country), name and job function of delegate. This list of delegates will be made available for all conference delegates, speakers, exhibitors and sponsors of the event, who may use the data for promotional purposes. Objection against publication and circulation of this data may be made at any time until 3 weeks prior to the event and has to be made in writing to the organiser. Company's name, city and country might be published on the internet as reference for upcoming Automotive Circle conferences.

## PLEASE NOTE

By registering you understand that your participation and attendance at the conference may be videotaped, filmed and/or audio recorded. You agree that the recording may be used for any lawful purposes that Vincentz Network, or its designees, in their sole discretion, may determine. The address data are processed for customer service and information purposes in compliance with the German Federal Data Protection Law. Company's name, city and country might be published on the Internet as reference for the upcoming conferences of Automotive Circle.

## PICTURES

Vincentz Network

## YOUR CONTACT

### Kristin Skandera

Event Manager  
Automotive Circle  
T +49 511 9910-376  
kristin.skandera@vincentz.net



## REGISTRATION

# MATERIALS IN CAR BODY ENGINEERING 2016

### I hereby register for

(For prices see terms & conditions)

#### CONFERENCE

9 – 11 May 2016

Module 1 + Module 2

Module 1

Module 2

#### TUTORIALS

9 May 2016

Tutorial Steel

Tutorial Aluminium

.....  
Title First Name

.....  
Name

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E-Mail

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Phone

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Company

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Department Function

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Street

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Zip Code/City

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Country

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Order No.

## METHOD OF PAYMENT

### Credit Card

American Express  Eurocard/Mastercard  Visa

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Cardholder Expiry Date

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Card Number Verification Code

**Yes, I want to be informed about future Vincentz Network events  
and products via e-mail.**

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