



**AUTOMOTIVE CIRCLE**  
CONFERENCE

# JOINING IN CAR BODY ENGINEERING 2018

**FEBRUARY 21-22, 2018**  
**DETROIT, MICHIGAN, USA**

CAR BODY ENGINEERING



In cooperation with

**OAK RIDGE**  
National Laboratory

# THE RIGHT JOINING TECHNOLOGY

Body shop joining technologies clearly are the key enablers in managing and realizing modern lightweight design car body concepts, which increasingly feature advanced mixed material concepts. The oft-repeated claim “The right material in the right place ...” is in fact incomplete without having its proper continuation in mind: “... with the right joining technologies!” When choosing the “right” joining technology, however, the basic constraint is to ensure the economically sound producibility of car body designs, to keep a focus on engineering solutions that put cost efficiency and flexibility aspects at the center of attention.

Finding and developing such technologies is what the **NEW US-BASED AUTOMOTIVE CIRCLE CONFERENCE JOINING IN CAR BODY ENGINEERING** is focusing on. The conference aims to bring about an intensive exchange of information and networking among expert automotive engineers from OEM as well as their suppliers, providing valuable contacts and ideas to develop modern car body joining solutions tailored to the American market requirements. The 2-day conference is organized by the Automotive Circle, the foremost communication network of automotive engineers and organizer of the EuroCarBody conference. The platform will focus on application-oriented technical progress concerning all relevant joining technologies for series car body production. A particular emphasis will be placed on opportunities to improve throughput and flexibility for vehicles produced for the American markets. A guided tour at the LIFT and IACMI institutes as well as interactive elements will round up the program.

## PROGRAM COORDINATION:



**Andrea Huber**  
Presidium, Automotive Circle

## IN COOPERATION WITH:



**Dr. Claus Daniel**  
Director, Sustainable Transportation Program,  
Oak Ridge National Laboratory



# YOUR BENEFIT

## GUIDED TOUR THROUGH THE NEWLY RENOVATED LIFT AND IACMI INSTITUTES, DETROIT

Participants will tour the **LIFT** and **IACMI** Lightweighting Facility in Detroit. The new facility operates as an applied research & development, workforce training, and prototyping center for innovations in metalworking and composite materials. Here, industry, academia and government partners collaborate to further develop those innovations and find strategies to deliver them to the market.

As part of the tour, participants will be able to meet with and ask questions of on-site engineers about the work that can be done on each piece of machinery and institute leadership about the missions at both LIFT and IACMI.

### STATIONS:

- ✔ Preforming Cell
- ✔ Compression Molding Press
- ✔ Injection Molding Press
- ✔ Linear Friction Welder
- ✔ Flexible Robotic Welding
- ✔ Forming and Hydroforming Press
- ✔ Extrusion Press

**OAK RIDGE**  
National Laboratory



# AGENDA

WEDNESDAY, FEBRUARY 21, 2018

**8:00 am** Registration and handover of the conference documents

☕ Coffee & breakfast snack, Exhibition forum

**8:45 am** Welcome and conference introduction

*Andrea Huber, Automotive Circle, DE*

**9:00 am** Key-note

*Zhili Feng, Oak Ridge National Laboratory, US*

## OEM PRESENTATIONS

**9:30 am** Body and joining concept of the all new BMW X3

*Dr. Stefan M. Baginski, BMW Manufacturing Co., LLC, US*

**10:00 am** Adhesive use at Ford

*Thomas Norton, Ford Motor Company, US*

**10:30 am** ☕ Coffee break, Exhibition forum

**11:00 am** Use of DFSS tools and methodology for SPR joints development in BIW applications

*Krzysztof Michalowski, Bryan Macek, FCA US LLC, US*

*Matthew Smith, Stanley Engineered Fastening, US*

**11:30 am** Title tbd

*N.N., Volkswagen AG, DE*

**12:00 pm** Joining technologies for lightweight electric vehicle body

*Daniel Saltzmann, Nio, US*

**12:30 pm** 🗨️ Live poll session: Challenges for joining technologies

INTER-  
ACTIVE

**12:45 pm** 🍴 Lunch, Exhibition Forum

**1:45 pm** Shuttle service to the IACMI/LIFT premises

## EXPERT GUIDED TOUR

GUIDED  
TOUR


**2:00 pm** Expert guided tour through the IACMI/LIFT institutes



*Robotic welding cell*

**3:30 pm** Shuttle service back to the hotel

## SUPPLIER SESSION

- 4:00 pm** **Preliminary investigation on developing a design tool for hybrid joining methods**  
*Payam Haghghi, The Ohio State University, US*
- 4:20 pm** **Resistance spot riveting meets the challenge of joining both conventional and multi-material structures**  
*Donald Spinella, Arconic Technology Center, US*
- 4:40 pm** **Future joining solutions for joint applications with advanced high strength steel and thicker aluminum stacks**  
*Dominik Fröhlich, Arnold Fastening, US*
- 5:00 pm** **An overview of fastening solutions for lightweighting challenges**  
*Laurence Claus, Ejot Fastening Systems, US*
- 5:20 pm**  **Get together & Meet the suppliers, Exhibition Forum**
- 6:30 pm** **Networking Night**  
**Venetian Ballroom 4th floor, Westin Book Cadillac Hotel**


## **THURSDAY, FEBRUARY 22, 2018**

- 8:00 am** **Joining technology in 2020 - where does the track lead to?**  
*Prof. Dr. Klaus Dilger, Institute of Joining and Welding Technology (ifs), Technical University Braunschweig, DE*
- 8:30 am** **Prepared for the future: Joining of hybrid assemblies (metal and TP-FRPC)**  
*Dr. Frank Breitenbach, Edag Production Solutions GmbH & Co. KG, DE*

## INTERACTIVE WORKSHOP

- 9:00 am** **Interactive workshop on "New solutions for joining technologies"**

**INTER-  
ACTIVE**

- 10:00 am** **Group presentations on workshop results**
- 10:30 am**  **Coffee break, Exhibition forum**

## SUPPLIER SESSION

- 11:00 am** **Automated multipot modules for class a outer skin joints and welding of structure welds without filler wire**  
*Dr. Axel Luft, Laserline GmbH, DE*

**11:20 am High volume resistance spot welding solutions for aluminium to aluminium and aluminium to steel joining, using standard spot welding equipment**

*Sullivan Smith, TWI Ltd., UK*

**11:40 am Application of refill friction stir spot welding on dissimilar metal and metal/composite parts**

*Jorge F. dos Santos, Helmholtz-Zentrum Geesthacht, Soldi-State Joining Processes, DE*

**12:00 pm Automated inspection and rework of weld seams**

*Chris Vola, Vitronic Ltd, US*

**12:20 pm Energy savings with resistance projection welding (RPW)**

*Marc Auger, Arplas USA LLC, US*

**12:40 pm Impact welding of advanced high strength and dissimilar automotive materials**

*Prof. Glenn S. Daehn, Ohio State University, Department of Materials Science and Engineering, US*

**1:00 pm Meet the suppliers**

**1:15 pm 🍴 Lunch, Exhibition forum**

### OEM PRESENTATIONS

**2:00 pm Vaporizing foil actuated welding**

*Tim Abke, Honda R&D Americas Inc., US*

**2:30 pm A new dimensional launch and control strategy for the BMW X3 based on the laser radar technology**

*Warren Hamrick, BMW Manufacturing Co., LLC, US*

**Followed by further OEM presentations. Invited are GM, Hyundai, Toyota.**

**4:30 pm Closing remarks and end of the conference**

*Subject to change (status as of December 5, 2017)*

**ONLINE REGISTRATION AND PROGRAM UPDATES AT  
[WWW.AUTOMOTIVE-CIRCLE.COM](http://WWW.AUTOMOTIVE-CIRCLE.COM)**

## EXHIBITION AND SPONSORING

# NETWORKING FOR YOUR SUCCESS

- ✓ increase clearly the visibility of your company
- ✓ expand your contacts with decision makers
- ✓ boost your brand awareness with the OEMs

The accompanying exhibition as well as the attractive sponsorship opportunities provide the ideal platform for your presence.

Decide for an exhibition package, including a full conference ticket, or for sponsorship of lanyards, conference booklets, USB cards or pens & pads.

### YOUR CONTACT

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## INFORMATION

### REGISTER ONLINE AT

[www.automotive-circle.com](http://www.automotive-circle.com)

### CONFERENCE FEES

Standard: **1,599.00 USD\***

(For registrations received by February 5, 2018)

Last Chance: **1,799.00 USD\***

(For registrations received from February 6, 2018)

Junior Participation: **899.50 USD\***

(Students will get 50 % discount on standard prices on presentation of a valid student ID.)

\* All prices net.

### CONFERENCE FEES INCLUDE

Fees including full conference participation: Authority for downloading the presentations on the internet, list of delegates, participation in the Guided Tour through the LIFT and IACMI institutes, workshops, luncheons, coffee breaks and the participation in the Networking Night.

### CONFERENCE VENUE / HOTEL

The Westin Book Cadillac Detroit  
1114 Washington Boulevard  
Detroit, MI, 48226, United States

The price for accommodation is 154.00 USD, plus applicable state and local taxes. We kindly ask you to make your own hotel reservation at The Westin Book Cadillac Detroit Hotel. For booking with special conditions, please visit our website.

### PICTURES

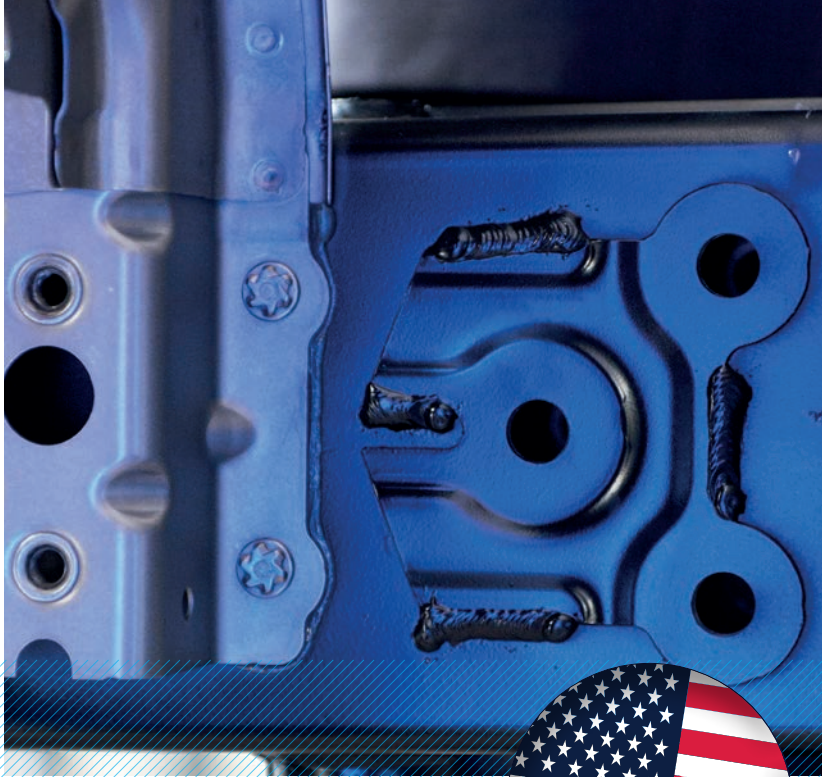
Vincentz Network, LIFT Institute, IACMI Institute

### YOUR CONTACT

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## DON'T MISS

the American network for joining experts and discuss latest developments and trends with your peers.

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