AUTOMOTIVE CIRCLE

AGENDA

APR 16 – 18

JOINING IN CAR BODY ENGINEERING 2024

MONDAY | APRIL 15

6.00 – 8.00 pm **Welcome Get together Module 1**

TUESDAY | APRIL 16

MODULE 1: ADHESIVE AND HYBRID BONDING

8.30 am **Welcome and conference introduction Module 1**
Dr. Dirk Meine, Automotive Circle, DE

ADVANCING STRUCTURAL BODY SHOP ADHESIVES

8.45 am **Elementary adhesive bonding for car body construction – an interdisciplinary collaboration**
Güven Çelebi, Technische Universität Braunschweig, Institute of Joining and Welding, DE; Konstantin Meglin, GH Induction Deutschland GmbH, DE; David Guitton, Sika Technology AG, CH

9.15 am **New generation peroxide cure anti-flutter for automotive body shop application**
Dr. Alicja Schlange, Mercedes-Benz AG, DE; Florian Lindekugel, Henkel KgaA, DE

9.45 am **Structural bonding without curing time for direct further processing**
Philipp Hug, Collano AG, CH

10.15 am **New structural body shop adhesives offering superior fatigue durability**
Dr. Andreas Lutz, Specialty Electronics Materials Switzerland GmbH (DuPont), CH

10.45 am **Meet the speakers & Coffee and contacts**

NEW PROCESSES, NEW APPLICATIONS

11.30 am **Low temperature curing materials as enabler for carbon neutrality and electrification – challenges & solutions**
Gurkan Sonmez, Jaguar Land Rover Ltd., UK; Michael Klotz, Henkel KgaA, DE

12.00 pm **Bonding solutions for the battery case as an integrated part of the car body structure**
Antonio Voci, Sika Automotive AG, CH

12.30 pm **Local thermal conditioning of an adhesive composite to extend the temperature operation range of assembly adhesives**
Merlin O. Kapelar, Volkswagen AG, DE

1.00 pm **Meet the speakers & Lunch break**

IMPROVING ADHESION AND ADHESION MECHANISMS

2.15 pm **Next generation fast cure structural PU adhesives with improved adhesion spectrum to various substrates**
Dr. Felix Koch, Stefan Schmatloch, Specialty Electronics Materials Switzerland GmbH (DuPont), CH

2.45 pm **Molecular plasma – solving bonding challenges with solvent-free functional coatings**
Kevin Braun, Molecular Plasma Group S.A., LU

3.15 pm **Long-term stabilization of automotive adhesion and interfacial design**
Dr. Nao Terasaki, National Institute of Advanced Industrial Science and Technology (AIST), JP

3.45 pm **Meet the speakers & Coffee and contacts**

TOWARDS CIRCULAR ECONOMY (I)

4.30 pm **Circular economy – the importance of joining technologies**
Dr. Marko Gernuks, Volkswagen AG / Open Hybrid Lab Factory e.V., DE

5.00 pm **Debonding solutions for automotive applications**
Dr. Nicolai Kolb, Evonik Operations GmbH, DE

5.30 pm **Towards industrial implementation of on-demand debonding in the automotive industry**
Dr. Jeroen Jordens, Flanders Make, BE

6.00 pm **Meet the speakers & Get together**

7.00 pm **Networking Dinner Module 1**

JOINING IN CAR BODY ENGINEERING 2024

Conference venue: Hotel DOLCE Bad Nauheim
Elvis-Presley-Platz 1 | 61231 Bad Nauheim | Germany
www.dolcebadnauheim.com

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JOINING IN CAR BODY ENGINEERING 2024

WEDNESDAY | APRIL 17

MODULE 1: ADHESIVE AND HYBRID BONDING

MODULE 2: THERMAL AND MECHANICAL JOINING

– Joint sessions of both modules –

8.40 am **Welcome and conference introduction Module 2**
Dr. Dirk Meine, Automotive Circle, DE

OEM JOINING SOLUTIONS AND STRATEGIES

9.00 am **Compressed air free body shop**
Michael Lang, Audi AG, DE

9.30 am **Leak tight resistance spot welding of steel battery trays**
Maurice Kohls, Johannes Kaptain, Ford-Werke GmbH, DE

10.00 am **Joining technology in the new Volvo EX 90**
+++ incl. BIW exhibition on site +++
Dr. Marcus Schmidt, Dr. Per Lindahl, Volvo Car Corporation, SE
– Subsequent discussion at the BIW exhibit on site –

10.45 am **Meet the speakers & Coffee and contacts**

CHALLENGING JOINTS

11.30 am **Impregnation and bonding of hybrid wood-based materials in automotive body shell construction**
Dr. Moira Burnett, Fraunhofer Institute for Wood Research (Wilhelm-Klauditz-Institut, WKI), DE

12.00 pm **Joining of aluminum UHSS dissimilar combinations by vaporizing foil actuator welding**
Prof. Taeseon Lee, Incheon National University, Department of Mechanical Engineering, KR

12.30 pm **Joining solutions for a steel-based battery box cooling unit**
Laurent Cretteur, Tarek Krim, ArcelorMittal Global Research and Development, FR

1.00 pm **Meet the speakers & Lunch break**

PROGRESS IN QUALITY CONTROL

2.15 pm **New non-destructive measurement approach for the in-line quality assurance of structural bonded joints in car bodies**
Christian Gundlach, Technische Universität Braunschweig, Institute of Joining and Welding (ifs), DE

2.45 pm **Seamless inspection of surface cleanliness using high-speed laser scanners**
Vivien Behrendt, Fraunhofer Institute for Physical Measurement Techniques IPM, DE

TOWARDS CIRCULAR ECONOMY (II)

3.15 pm **Possible future strategy of automobile production – potential of reusing automotive components**
Dr. Frank Riedel, Fraunhofer Institute for Machine Tools and Forming Technology (IWU), DE

3.45 pm **Meet the speakers & Coffee and contacts**

– End of Module 1 –

MODULE 2 CONTINUED

ADVANCED THERMAL JOINING

4.30 pm **Predicting and improving the quality of drawn arc welded studs in the car body shop**
Daniel Els, Dr. Shahan Tutunjian, BMW AG, DE

5.00 pm **Enhancements and process optimization for drawn arc stud welding**
Dr. Christian Reis, Maximilian Braun, Tucker GmbH, DE

5.30 pm **Quality and process improvements by implementing pneumatic equalization and applied integrated actuator in KIA 7th axis welding guns**
Johannes Berwanger, Festo SE & Co. KG, DE; Seungho Lee, Kia Motors Corporation, KR

6.00 pm **Meet the speakers & Get together**

7.00 pm **Networking Dinner Module 2**

JOINING IN CAR BODY ENGINEERING 2024

Conference fees:
Module 1 (Standard single fee): 1.995 €*
Module 2 (Standard single fee): 1.995 €*
Module 1 & 2 (Early-bird fee): 2.845 €* (until March 15, 2024)
Module 1 & 2 (Standard fee): 2.945 €* (after March 15, 2024)
* All prices plus 19% German VAT

Registration and Terms & Conditions at **www.automotive-circle.com**

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THURSDAY | APRIL 18

MODULE 2: THERMAL AND MECHANICAL JOINING

RESISTANCE SPOT WELDING DEVELOPMENT

8.30 am **Resistance element welding in serial application – challenges, process advantages and examples**
Vitalij Janzen, Arnold Umformtechnik GmbH & Co. KG, DE

9.00 am **Use of multi-pulse welding to increase the weldability of ultra-high-strength hot-forming steels**
Daniel Kiesow, Volkswagen AG, DE

9.30 am **Robots data monitoring for spot welding performance**
Mihai Radu, Group Renault, FR

10.00 am **Thermally decoupled welding insert for multi-material combinations – validation and application at Stellantis**
Alain Régis, Gaming Engineering, FR; Michele Maria Tedesco, Stellantis NV, IT

10.30 am **Meet the speakers & Coffee and contacts**

ADVANCED MECHANICAL JOINING

11.15 am **The next level of efficiency for mechanical joining systems**
Dr. Marcus Matzke, Tox Pressotechnik GmbH & Co. KG, DE

11.45 am **New self-piercing riveting bolt for high performance mechanical joints in thin car body parts**
Dr. Markus Hirschmann, Richard Bergner Verbindungstechnik GmbH & Co. KG, DE

12.15 pm **New fastener invention for structural aluminium joining**
Dr. Paul Briskham, Lewis Jepps, Atlas Copco IAS UK Ltd, UK

12.45 pm **Meet the speakers & Lunch break**

LASER INNOVATIONS

2.00 pm **Machine-learning-assisted 3D laser vision for quality inspection of resistance spot welds, resistance element welds, and self-pierce riveting**
Prof. Dr. Yeongdo Park, Dong-Eui University, Advanced Materials Engineering Department, KR

2.30 pm **Laser beam welding of AlSi-coated high-strength steels with ultrasonic superimposition**
Christian Wolf, University of Kassel, Institute of Production Technology and Logistics, Department for Cutting and Joining Manufacturing Processes, DE

3.00 pm **Achieving cost and weight savings for battery structures through laser welding without filler**
Lutz König, Precitec GmbH & Co. KG, DE

3.30 pm **OEM CONCLUSIONS**
OEM Advisory Board experts on current challenges in car body joining technology

3.45 pm **Farewell Address and end of the conference**
Dr. Dirk Meine, Automotive Circle, DE

* All times in CEST (UTC+2)
Conference program is subject to change
Status as of: February 12, 2024

REGISTER **NOW!**
www.automotive-circle.com

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