

JOINING IN CAR BODY ENGINEERING 2024

MODULE 1: ADHESIVE BONDING AND HYBRID BONDING

MODULE 2: THERMAL AND MECHANICAL JOINING

APRIL 16-18, 2024 | BAD NAUHEIM, GERMANY



**CALL FOR
SPEAKERS**

EFFECTIVE JOINING – AND DE-JOINING

Optimising second-generation BEV and PHEV car body structures and moving towards a sustainable, carbon-neutral, yet cost-effective production probably are the two main goals in modern car body engineering, and both have much to do with optimised joining technologies and joining concepts. For instance:

- ▶ Modern battery case structures are becoming further integrated into crash load paths: How do joining concepts best reflect that?
- ▶ Megacastings are intensely discussed: When realised, how are they best joined to the rest of the structure?
- ▶ Carbon-neutral vehicle production scenarios need to include intelligent recycling concepts: Joints may need to be easily de-joinable at a vehicle's end-of-life.

Thus, to discuss latest suggestions for optimal joining solutions, Automotive Circle's international conference on **Joining in Car Body Engineering** will again discuss latest progress in all industrially relevant body shop processes with its network of experts, on **April 16-18, 2024, in Bad Nauheim, Germany**.

We cordially invite you to submit your proposal for a half-hour technical presentation for the conference program, reporting on your latest advances, developments and findings relevant to the conference theme.

In particular, the conference aims to present progress in the following areas:

▶ **NEW/IMPROVED JOINING SOLUTIONS FOR ...**

- ... new **materials and material combinations**
- ... automotive **castings**
- ... **battery cases** and other e-mobility-related car body joining tasks with special performance requirements
- ... **ultra-high-strength** materials
- ... additively manufactured components

▶ **NOVEL, INDUSTRY-READY JOINING TECHNOLOGIES, FOR INSTANCE ...**

- ... new, **non-melting welding** processes
- ... innovative **mechanical** joining processes

▶ **ADHESIVE BONDING INNOVATIONS, CONCERNING ...**

- ... new with structural, supporting or sealing **adhesive** bonding applications, also in hybrid combination with other joining technologies
- ... more precise and efficient **adhesive application** processes
- ... advances in **adhesives** development

▶ MORE EFFICIENT PRODUCTION AND DEVELOPMENT, VIA ...

- ... improvements in **throughput, stability, robustness, reproducibility**, as well as maintenance or upstream process requirements
- ... **reduction of heat** input during joining, avoidance of distortions and material damage
- ... Smart Production / **digitalization** solutions in the body shop; efficient process and machinery data management and data analyses
- ... reliable and efficient **simulations** of joining processes and their integration into the virtual development environment
- ... new techniques for effective **quality and process control**

▶ INCREASED FLEXIBILITY AND REDUCED COMPLEXITY IN THE BODY SHOP, BY MEANS OF ...

- ... larger **process windows** and extended applicability of joining processes
- ... new possibilities for joining **one-sided** or **difficult-to-access joints**
- ... optimised **body shop layouts**

▶ SUSTAINABILITY AND CIRCULAR ECONOMY CONCEPTS, E.G. ...

- ... comparative **CO₂-footprint analyses** of industrial joining processes
- ... **scope-3-sustainability**: CO₂ footprint of joining elements/adhesives across the entire supply chain
- ... joinability of recycled, **secondary materials** (steel, aluminium, plastics)
- ... **recycling-friendly** joining technologies and joining concepts
- ... concepts and solutions for effective **de-joining** and **debonding-on-command**
- ... **reduced energy** consumption in the body shop

The three conference days will again be structured into two separate, yet overlapping modules:

ADHESIVE BONDING AND HYBRID BONDING

APRIL 16-17, 2024

MODULE 1

THERMAL AND MECHANICAL JOINING

APRIL 17-18, 2024

MODULE 2

PROGRAM COMMITTEE:



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For your submission, we kindly ask you to send us a concise, non-promotional, English-language abstract outlining your results

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via our [online submission form](#) or via e-mail to one of the above addresses.

The members of the Program Committee will be happy to answer any questions you may have about your submission.

Based on your abstract, in collaboration with the **OEM Advisory Board** of the conference, we will evaluate your proposal. In that process, the novelty of your results, their industrial relevance and the engineering-oriented, technical character of your proposal will be of particular importance.

For your guidance, please [find here](#) the Program Committee's recommendations on how to best write your abstract.

FURTHER KEY DATES

Notification of acceptance of your proposal:
mid-December 2023

Publication of the conference program:
early January 2024

Submission of your (English-language) presentation documents as a pdf for the conference proceedings:
March 16, 2024

If your contribution is accepted, we are pleased to invite one speaker from your company to take part in the corresponding conference module, i.e. exempt of the conference fees and including hotel accommodation.

