



**CHS<sup>2</sup> – 2024**

**9<sup>th</sup> International Conference on  
HOT SHEET METAL FORMING OF  
HIGH-PERFORMANCE STEEL**

**27 – 29 May 2024, NASHVILLE, TN., USA**

**1<sup>st</sup> ANNOUNCEMENT – CALL FOR PAPERS**



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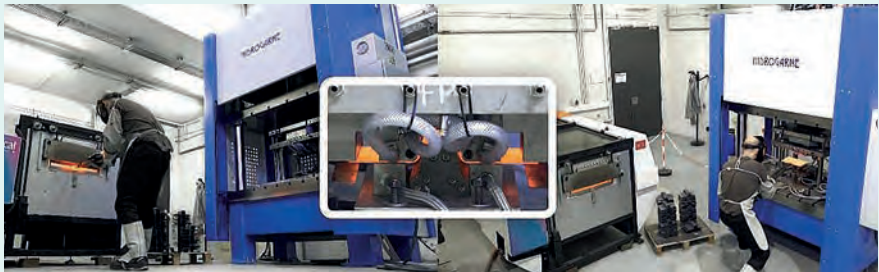


# HOT FORMING OF HIGH-PERFORMANCE MATERIALS – A KEY TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT

The utilization of high-performance materials to push the boundaries for product performance and simultaneously meet increasing environmental demands is a well-known strategy. The automotive industry is a good example where implementation of high-strength steels has significantly contributed to enhanced crashworthiness and reduced greenhouse gas emissions. Producing components from high-performance materials is a challenge where thermo-mechanical forming processes offers a solution. Hot forming is a key technology to realize components with complex shapes and high strength. Besides well-established processes such as press hardening of boron steels, advanced derivatives including light alloys forming, tailoring of mechanical properties in the same components or forming of hybrid metal-composite materials are also on the market. Automotive is still leading the innovation, now addressing the challenges of electro-

mobility, but the technology is penetrating in other sectors.

The ongoing global transition to sustainable use of resources and development of energy efficient production processes is also affecting the hot forming industry. While being the solution to these challenges for some industries, the hot forming industry will also face its own challenges to meet and contribute to the global sustainability goals. Improving efficiency in heating technology and minimizing scrap are examples of such challenges that need to be addressed. The introduction of fossil-free steels will also present new technological challenges. In order to shift to a higher degree of circularity, producing components with extended use-phase is an important direction as well as increasing the recyclability of materials with traceability to ensure that the novel and fossil-free materials remains in the loop.



Eurecat's hot stamping pilot plant



## CONFERENCE SERIES AND SCOPE

The biannual CHS<sup>2</sup> conference series has after eight very successful conferences since 2008 grown into the number one platform for scientific exchange in hot forming technologies. The first conference was held in 2008 in Kassel (Germany) and has been hosted in Luleå (Sweden), Toronto (Canada), Atlanta, Georgia (USA) and the 8<sup>th</sup> edition in 2022 in Barcelona (Spain).

The 9<sup>th</sup> CHS<sup>2</sup> edition will be held in Nashville, Tennessee, USA. New topics have continuously been added to the scope for every conference edition.



Skyline Nashville, Tennessee, USA | istock.com/SeanPavone

## VENUE 2024



Nashville, the capital of the US state of Tennessee | [istock.com/yorkfoto](https://istock.com/yorkfoto)

For the third time, the CHS<sup>2</sup> conference will be held in North America, where the press-hardening technology is expanding concerning research, industrial development, and implementation. CHS<sup>2</sup> 2024 will be held in Nashville, TN., USA, 27–29 May 2024. The venue is the Hilton Garden Inn.

As in Toronto 2015 and Atlanta 2017, CHS<sup>2</sup> 2024 will be organized in cooperation with AIST, a not-for-profit entity with 18,000 members worldwide. AIST is recognized as a global leader in networking, education and sustainability programs for advancing iron and steel technology.

**Hilton Garden Inn Nashville Downtown  
NASHVILLE, TN., USA**

**26 May 2024:** Reception and pre-registration

**27–29 May 2024:** Conference



8<sup>th</sup> Edition of CHS<sup>2</sup> at Barcelona, 2022

## CONFERENCE TOPICS

### Material

- High-performance steels
- Tool steels
- Microstructural properties
- Surface design and coatings
- Light alloys
- Hybrid metal-composites

### Products

- Product innovations and optimization
- Tailored material properties
- Cutting and joining technologies
- Applications and performance
- Design and tests

### Modeling and Simulation

- Process modeling
- Microstructure
- Heat transfer
- Thermomechanical properties
- Friction and wear
- Component properties
- Deformation, fracture and fatigue

### Process Design

- Tool systems
- Heating and cooling strategies
- Automation and control
- Process monitoring

## CALL FOR PAPERS

All contributions on the theme of the conference are welcome. Prospective authors are invited to submit their abstracts via the conference paper submission system (see instructions below). The full papers will be reviewed by the members of the scientific advisory board and, if accepted, will be published in the conference proceedings. The organizing committee will encourage high-quality scientific conference papers to be published in international journals after the conference.

## IMPORTANT DATES

**Abstract submission deadline:**  
16 October 2023

**Full paper submission deadline:**  
7 February 2024

**Revised paper submission deadline:**  
4 April 2024

**Conference:**  
27–29 May 2024

## ABSTRACT SUBMISSION GUIDELINES

For submission of abstracts, please register in the conference paper submission system and upload your abstract in accordance with the abstract submission guidelines:

[www.chs2.eu](http://www.chs2.eu)

- Abstract text: maximum 400 words
- Language: English
- The abstract submission must include:
  - > Title of paper
  - > Presenting author
  - > Co-authors
  - > Affiliations
  - > Abstract including keywords and references



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**Updated information can be  
found on the conference homepage**  
[www.chs2.eu](http://www.chs2.eu)

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