

FOCUS OF THE CONFERENCE

The 29th SUPERCHARGING CONFERENCE on September 23rd / 24th, 2024 in Dresden provides a forum to experts from all over the world. The latest developments in supercharger technologies will be presented by OEMs and suppliers. The conference will be held in German and English supported by simultaneous translation. The conference will also be held as a hybrid event.

Supercharging is one essential key technology in future powertrain systems. It is imperative for high-efficiency combustion engines, including engines run on eFuels like hydrogen, ammonia and methanol. Also, fuel cells rely on optimised supercharging for $\dot{m}_a^* \dot{m}_f$. Supercharging not only facilitates high power densities from these power plants, but also helps to reduce emissions. One challenge is the transient operation of turbochargers. In order to improve the delay in boosting upon sudden load demands, new solutions are being developed. In particular downsized, friction reduced engines with low exhaust gas mass flows pose a challenge which is approached by smaller turbochargers, the variable turbine and compressor geometries as well as sequential or multi-stage charging. These technologies are also important for fuel cells! Apart from exhaust gas other sources of energy are being used in order to facilitate extremely short response times i.e. with mechanically or electrically driven chargers. With respect to the power plant emissions exhaust gas recirculation poses an additional challenge to boosting as well as the potential necessity for oil free operation. Particular operating regimes, e.g. the early or late intake valve closing or the increased air demand for particular fuels as well as lean burn systems put additional burdens on the charging system. The introduction of emissions testing under realistic operating conditions (RDE) requires additional solutions for optimum operation of the powertrain and its charging system.

The optimization of supercharging systems requires a thorough knowledge of the overall powertrain system. Simulation models in 0D, 1D and 3D help to predict the operational behavior very well. The 3D calculation is an important tool for the optimization of the intake, reaction and exhaust paths. Today the control of the corresponding systems is also done by real-time and physical models. These must be tested, validated and improved on highly dynamic test benches.

This requires a enormous effort of all members in the supercharging community as well as learning and networking, but also fruitful competition !

With respect to this, the SUPERCHARGING CONFERENCE in Dresden focuses on recent developments, results and methods. Speakers will be development and research engineers, research institutes and manufacturers of supercharging systems and components. A wide range of powertrains will be discussed at the conference, ranging from motorcycle and car engines up to the largest slow-speed two-stroke marine engine.

This conference offers an excellent exchange of knowledge and experience, as well as the networking opportunities for our community!

MAIN SUBJECTS & ORGANIZATION

MAIN FOCUS SUBJECTS

- New supercharged diesel-, gasoline- and gas engines
- Hydrogen engines
- Methanol and Ammonia engine
- **Innovative (electric) supercharging conceptions and components**
- Charging systems for fuel cells
- Numerical simulation methods
- Charging to reduce exhaust emissions
- Complete system performance; control strategies
- Development methods and tools for components and for complete engines

EXHIBITION

The conference includes an exhibition, where products, processes and services can be presented to the conference attendees and there is the opportunity for personal consulting with potential customers.

For more information refer to the website of contact us.

CONFERENCE CHAIRMAN

Prof. Dr.-Ing. Frank Atzler
Technische Universität Dresden

Phone: +49 351 463 37618

Homepage: <https://www.aufladetechnische-konferenz.de>

CONFERENCE LOCATION:

Hilton Dresden

An der Frauenkirche 5, 01067 Dresden, Germany

HOTEL RESERVATION:

Please check the conference website for information on reserved rooms or other hotels. A room contingency is available at the conference hotel under the keyword »ATK«.

OFFERS FOR EXHIBITORS AND SPONSORS

ASSOCIATED EXHIBITION

Interested companies are welcome to present their products, methods and other related services in an as-associated exhibition, which runs alongside the conference.

Place of exhibition : **Hilton Dresden**

An der Frauenkirche 5, 01067 Dresden, Germany
Foyer next to the conference room
The coffee breaks will take place in the exhibition area.

Time for set-up / dismantling Set-up time is from 4pm on 25 September.
Dismantling is possible on 27 September after the last session. Detailed information on delivery, assembly and dismantling will be provided.

Exhibition price: € 440,- per m²
Minimum of space: 6 m²

Please specify on the registration your electricity requirements and, if necessary, additional requests regarding the furniture. You will receive a separate offer for this.

Conference fee: 700,- €
Special fee for one person per exhibitor.
Please indicate the name of the of the exhibition attendee on the registration form.
The conference fees include: participation in the conference, evening event and proceedings.
Additional participants are to be registered at the regular conference fee.

As an exhibitor, we offer you free of charge the **presentation of your company logo** on the conference website as well as the **company profile** in the conference documents.

SPONSORING

Additionally we offer: **- Advertisement in the proceedings 1.800,- €**
 - Advertisement material in the conference bags 1000,- €

All prices are excluding 19 % VAT.

All payment transactions are handled by our service partner IMAS GmbH.

SUPERCARGING CONFERENCE EXHIBITION

REGISTRATION FOR THE EXHIBITION

CONTACT

Phone: +49 351 463 34352

Mail: info@aufladetechnische-konferenz.de

Please return this **registration form** to info@aufladetechnische-konferenz.de by e-mail as pdf with VAT number and electronic signature or scan with original signature.

Yes, we would like to participate in the exhibition: ☐

We book the following exhibition space: _____ m² per 440,- € = _____
(minimum 6 m² including 1 table, 2 chairs)

Additional equipment (chairs / high cocktail chairs / tables / high cocktail tables)*

Electrical connection: _____

Company/Street/Country,
Zip-Code, City: _____

Name, first name of the person covering the booth, registration fee 700,- €:

Mobile phone / E-Mail: _____

Company VAT identification number: _____

The placing of exhibition will be done by the CONFERENCE CHAIRMAN.
Special requests and additional equipment will be taken into account as far as possible.

We order:

- | | | | |
|-----------------------|---|-----------|--|
| <input type="radio"/> | - Advertisement in the proceedings | 1.800,- € | <u>Cancellation deadlines:</u>
<u>- by 30th of June, 2025 free of charge</u>
<u>- by 30th of August, 2025, 50 % of the fee are retained</u>
<u>- after that, the full fee is retained</u> |
| <input type="radio"/> | - Extra material in the conference bags | 1.000,- € | |

All prices are valid plus 19 % VAT.

* This may result in additional costs.

Place, Date

Signature, Stamp

For questions and requests,
we are here for you!

CONFERENCE CHAIRMAN / EXHIBITION

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