

**Social Evening**

15.9.2021, 7:00 p.m. (included in registration fee)



Our evening event leads us to the TU Dresden campus. We invite you all to the „Alte Mensa“ which was opened as the first canteen of Germany in 1925 and still provides the students with food. This „Alte Mensa“ has

more to offer, let yourself be surprised. Enjoy an evening in a pleasant atmosphere with interesting talks, culinary delights and musical highlights.

**Meißen**

15.9.2021, 10:30 a.m. - 2:30 p.m. Price per person 55.00 €

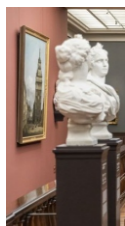


Meißen - a picturesque town on the Elbe offering a medieval townscape is regarded as the cradle of Saxony. The Albrechtsburg, the first castle building in the German-speaking area, and the cathedral dominate the skyline. During the guided tour through the city of Meißen a lot of interesting and useful information resulting from a thousand-year history will be given to you.

**"Welcome to the Sanctuary of Art"**

Guided tour through the reopened Semper Gallery

16.9.2021, 10:00 a.m. -12:30 p.m. Price per person 26.00 €



The reopening of the Gemäldegalerie Alte Meister (Old Masters Picture Gallery) in the Semper Building was eagerly awaited. It is a completely redesigned new permanent exhibition elevating the collection and building to what they had been originally designed for: a royal artistic pleasure within a palatial building. The rooms shine in a new magnificent light, technically as well as aesthetically. Never before

since Augustus the Strong had the pastels been staged more beautifully and never before could one experience the symbiosis between painting and sculpture more evidently. Both sister arts are exhibited directly next to one another to show their intensive interactions.

**Conference Venue**

Radisson Blu Park Hotel & Conference Centre  
Nizzastr. 55  
01445 Radebeul



Phone: +49 (0)351 8321-0

**Registration Fees**

Industry (presence participation)	1,100.00 €
Industry (online participation)	550.00 €

University/Academy/Authorities (presence participation)	600.00 €
University/Academy/Authorities (online participation)	275.00 €

Accompanying person at the social evening - 15.9.2021	60.00 €
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For a registration as a presence participant by July 30, 2021, we grant a discount of 50.00 €.

The registration fee includes food and refreshments during breaks, as well as lunch, proceedings and the social evening on September 15, 2021.

The registration form for the FAD-Conference you will find here:  
[www.fad-diesel.de](http://www.fad-diesel.de)

**ATTENTION!** The applicable distance rules in the conference hall mean that the seats are limited. Please secure your participation by registering early.

**Hotels**

**Radisson Blu Parkhotel** (Tagungshotel)  
Nizzastr. 55, 01445 Radebeul  
Phone: +49 351 8321-0

Single room	115,00 € (incl. Breakfast)
Double room	140,00 € (incl. Breakfast)

**City Hotel Radebeul**  
Nizzastr. 55, 01445 Radebeul  
Phone: +49 351 8321 700

Single room	85,00 € (incl. Breakfast)
Double room	110,00 € (incl. Breakfast)

**Organiser**

Research Association For Combustion Engines  
Emission Control Technologies (FAD)  
- registered association -  
Gutzkowstr. 30  
01069 Dresden/Germany



Prof. Dr.-Ing. Gennadi Zikoridse, Executive Director  
Ms. Berit Reuter, Assistant to Executive

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Web: [www.fad-diesel.de](http://www.fad-diesel.de)

**Program and Scientific Direction**

Prof. Dr.-Ing. G. Zikoridse FAD e.V. /HTW Dresden

**Conference Language**

The conference language is German.  
**ATTENTION!** We offer simultaneous translation German / English.

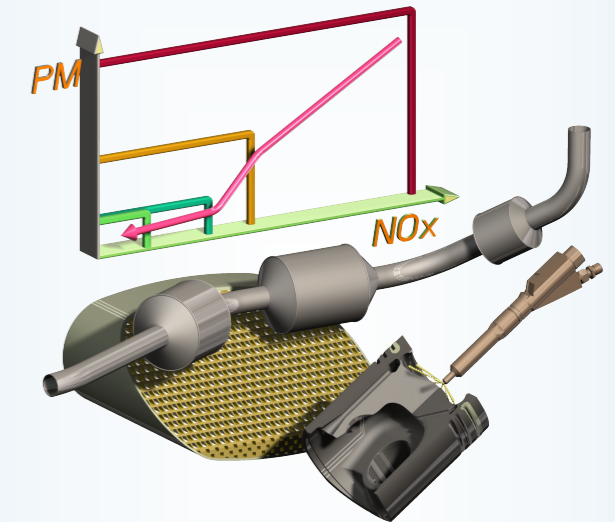
**Exhibition**

A technical exhibition will be organized at the conference venue. Besides the technical exhibition we offer various possibilities to present your company and products, e. g. advertisements in the conference book and as well as to add brochures and information material to the proceedings. If you are interested in exhibiting at the 18th FAD-Conference, please fill in the application form and send it to the FAD e.V. The application form as well as all relevant information are also available (as PDF for download) online: [www.fad-diesel.de](http://www.fad-diesel.de).

**Application deadline for exhibition 31.08.2020****Information on photographing**

During the event we take pictures for the purpose of publication on the conference CD, in information leaflets of FAD e.V., in trade journals and on our website [www.fad-diesel.de](http://www.fad-diesel.de). By your participation in the conference you also consent to the publication of photos showing you. If you do not wish this, please, inform our photographer or our assistants.

Research Association  
For Emission Control Technologies  
For Combustion Engines (FAD)  
-registered association-

**18. FAD-Conference**

„The Challenge -  
Exhaust Aftertreatment“

**INVITATION**

ONLINE OR PRESENCE PARTICIPATION

**15.9 - 16.9.2021 in Radebeul**

9th FAD-Conference - winner of the "dresden congress award" 2012

## PREAMBLE

Ladies and gentlemen,

The 18th FAD-Conference "Challenge - Exhaust Aftertreatment" takes place on 15./16. September 2021 as a hybrid event in Radebeul near Dresden. If the past few months have been characterized by postponed or canceled conferences and home office, I am all the more pleased to be able to invite you to attend the professional discourse again.

Since our association was founded 21 years ago, there have been great technical advances in exhaust, including enforced by the constant updating of emissions legislation. Today there is a broad consensus in society that health, environmental and climate protection are important and that every economic sector must make its contribution to reducing emissions. However, there is a wide range of ideas and opinions about the implementation of the protection goals. Inner-city air quality, CO<sub>2</sub> emissions, nitrogen oxide limits, mobility change, new drive concepts, alternative fuels, suitability for the future - all buzz words that have dominated the discussions lately. In recent years, the internal combustion engine has increasingly been viewed by politicians and society as an outdated drive. Now, however, the realization is gaining ground that it must be part of the future portfolio of drives in order to ensure environmentally friendly mobility that meets economic and social requirements.

The contributions of the 18th FAD-conference give an insight into the innovative concepts, new solutions and further developments in the field of exhaust gas aftertreatment technologies to ensure the efficiency and environmental compatibility of internal combustion engines under all application-specific conditions.

The accompanying trade exhibition, as an integral part of our FAD-conference, will once again offer a platform this year to present the performance and innovation potential of the exhibiting companies, universities, colleges and institutes.

I hope you are interested in the conference program. Despite the current difficult situation, I would be happy to see you on site or as an online participant in September.



Prof. Dr.-Ing. Gennadi Zikoridse  
Executive Director FAD e.V.



## PROGRAM

Wednesday, 15th September 2021

09:00 **Welcom and Opening**  
Prof. Dr.- Ing. G. Zikoridse, FAD e.V./ HTW Dresden, D

09:15 **Welcom Address**  
Prof. Dr. rer. nat. K. Salchert, Rektorin HTW Dresden, D

**Session I: Exhaust aftertreatment for future internal combustion engines**  
Chairman: Prof. Dr.-Ing. U. Gärtner, HTW Dresden, D

09:30 **20 Years FAD e.V.: A perfect occasion for a review and outlook to future emission control technologies for internal combustion engines**  
Dr.-Ing. C. Görschmann, Dr. Ch. Morgan, Dr. A. Walker, Johnson Matthey Plc, UK

10:00 **Next Generation for efficient EAT Heating - Catvap®**  
Robert Szolak, Dr. A. Susdorf, P. Beutel, Fraunhofer Gesellschaft/ ISE, D; B. Danckert, ICCL Ltd, CY

10:30 *Coffee break*

**Session II: Exhaust aftertreatment solutions for EU-Stage V diesel engines**  
Chairman: Prof. Dr.-Ing. U. Gärtner, HTW Dresden, D

11:00 **Modern system design for diesel exhaust gas aftertreatment of non-road mobile machinery on the basis of DEUTZ TCD 5.2**  
Sebastian Heinecke, Deutz AG, D

11:30 **New exhaust gas treatment concepts for off-highway applications**  
Thorben Philipp, Liebherr Machines Bulle SA, CH

12:00 **EU Stage V - Mobile machines without restrictions**  
Ulf Spod, Berufgenossenschaft der Bauwirtschaft, D

12:30 *Lunch*

**Session III: Contributions from research and development**  
Chairman: Prof. Dr. S. Kureti, TU Bergakademie Freiberg/ IEC, D

13:30 **20 years of air pollution control - new challenge**  
Prof. Dr.-Ing. habil. A. Dittler, KIT/ MVM, D

14:00 **Feasibility study for exhaust gas aftertreatment for diesel engines <19 kW**  
Dr. U. Petasch, L. F. Köhl, Fraunhofer Gesellschaft/ IKTS, D; Dr. U. Hofmann, Prof. Dr.-Ing. G. Zikoridse, Argomotive GmbH, D; J. Schröder, DBFZ gGmbH, D

## PROGRAM

14:30 **Development of a H<sub>2</sub>-deNO<sub>x</sub> catalyst for lean H<sub>2</sub> combustion engines**  
Enno Eßer, Prof. Dr. S. Kureti, TU Bergakademie Freiberg/ IEC, D; D. Koch, Keyou GmbH, D

15:00 **Holistic engine and exhaust after-treatment system development for hydrogen combustion concepts**  
Priv.-Doz. Dr.-Ing. habil. R. Rezaei, M. Mennig, Ch. Hayduk, Dr. Ch. Bertram, IAV GmbH, D; Ch. Hahn, Prof. Dr. S. Kureti, TU Bergakademie Freiberg/ IEC, D

15:30 *Coffee break*

**Session IV: Exhaust aftertreatment for hybrid concepts**  
Chairman: Prof. Dr. S. Kureti, TU Bergakademie Freiberg/ IEC, D

16:00 **Is the plug-in hybrid the right concept to meet future CO<sub>2</sub>, NO<sub>x</sub> and particulate emissions legislation?**  
Dr.-Ing. G. Eifler, Elring Klinger Motortechnik GmbH, D

16:30 **Exhaust aftertreatment system for a high-performance hybrid commercial vehicle**  
Jan Philipp Neef, D. Lamotte, K. Schrewe, HJS Emission Technology GmbH & Co. KG, D

17:00 **Hot ideas for cold applications in the on-road and off-road sector**  
K. Müller-Haas, D. Odenthal, Vitesco Technologies Emitec GmbH, D

18:30 *Transfer to the social evening*

Thursday, 16th September 2021

**Session V: New fuels for future mobility**  
Chairman: Prof. Dr.-Ing. H. Harndorf, Universität Rostock, D

9:00 **Future mobility requirements - a holistic view**  
Prof. Dr. sc. techn. T. Koch, O. Toedter, P. Weber, M. Andresh, KIT/ IFKM, D

9:30 **Key factors for the success of climate fuels: availability, sustainability, costs and quality**  
Prof. Dr. T. Garbe, Volkswagen AG, D

10:00 **Challenges of future fuels: OME<sub>x</sub> as an example alternative to diesel fuel**  
Dr. S. Crusius, M. Müller, H. Stein, ERC Additiv GmbH, D

10:30 *Coffee break*

## PROGRAM

**Sektion VI: New fuels for future mobility**  
Leitung: Prof. Dr.-Ing. H. Harndorf, Universität Rostock, D

11:00 **Challenges in testing fuel-carrying components when using modern alternative fuels**  
Dr.-Ing. K. Lucka, S. Eiden, Dr. H. Hoffmann, TEC4FUELS GmbH, D

11:30 **Perspective for gasoline regenerative**  
Dr. P. Seifert, Dr. Roh Pin Lee, Prof. B. Meyer, TU Bergakademie Freiberg/IEC, D; Dr. M. Kuschel, J. Engelmann, Chemieranlagenbau Chemnitz GmbH, D

12:00 **Use of OME pure fuel on the series engine: Analysis of exhaust emissions in different application strategies**  
Tim Steinhaus, A. Mokros, Prof. Dr. techn. Ch. Beidl, TU Darmstadt/ vkm, D

12:30 *Lunch*

**Sektion VII: Emission measurement technology and exhaust gas sensors**  
Chairman: Prof. Dr. T. Garbe, Volkswagen AG, D

13:30 **Methods for measuring and predicting particle emissions from brakes and tires**  
Prof. Dr.-Ing. K. Augsburg, D. Hesse, V. Ricciardi, T. Feißel, TU Ilmenau, D

14:00 **The new European challenge: Post Euro-6/VI emission testing**  
Kurt Engeljehring, AVL List GmbH, A

14:30 **Impedance-based NO<sub>x</sub>-Sensor for exhaust applications**  
Dirk Bleickert, F. Noack, CPK Automotive GmbH & Co. KG, D Prof. Dr.-Ing. R. Moos, Dr. G. Hagen, Dr. J. Kita, Universität Bayreuth/ BERC, D

15:00 *Coffee break*

**Session VIII: New technologies for reducing emissions**  
Chairman: Prof. Dr. T. Garbe, Volkswagen AG, D

15:30 **High-temperature stable SCR catalysts for large engines**  
Dr. J. Spengler, Dr. S. Iretskaya, Interkat Catalyst GmbH, D; Dr. M. Presti, E. Bjerregaard, Vitesco Technologies Emitec GmbH, D

16:00 **High Temperature Desulphurisation with Sodium Hydrogen Carbonate for Large Engine Power Plants**  
Christian Pfahler, M. Franke, MAN Energy Solutions SE, D; Dr.-Ing. R. Bank, FVRT GmbH, D; Prof. Dr.-Ing. B. Buchholz, Universität Rostock, D

16:30 **Physical Exhaust Gas Simulation for Aftertreatment System Development Using a Burner-Based Technology**  
Volker Hensel, S. Eakle, B. Zavala, Southwest Research Institute, USA

16:30 **Summary and conclusion**  
Prof. Dr.-Ing. G. Zikoridse, FAD e.V./ HTW Dresden, D