AAC 2026

AACHEN ACOUSTICS COLLOQUIUM

PROGRAM

Development and Research in Automotive Acoustics

November 23 – 25, 2026

Aachen, Germany

FEV fka HEAD acoustics

Program support by

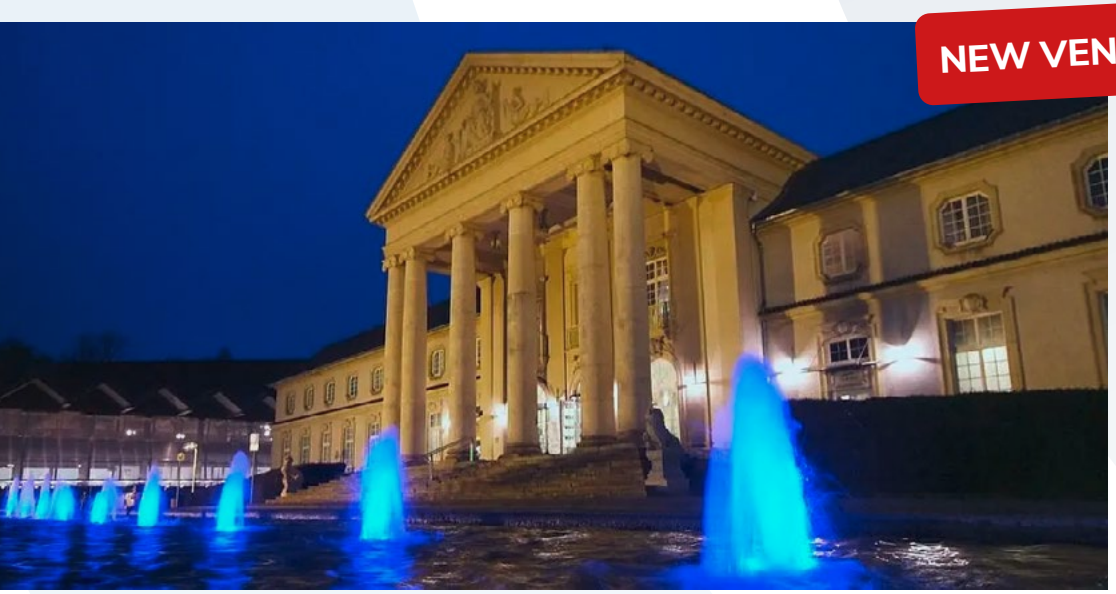
ika | RWTH AACHEN UNIVERSITY

Supported by

VDI Wissensforum

www.aachen-acoustics-colloquium.com

FOREWORD
17TH AACHEN ACOUSTICS COLLOQUIUM



Kurhaus Aachen, Germany

Are you looking for new ideas and methods to improve the acoustics and vibrations of vehicles and drives? The Aachen Acoustics Colloquium is the perfect opportunity for experts from both industry and research to exchange knowledge and ideas within the field of acoustics and vibrations of vehicles. With 18 technical presentations, two plenary speeches and a poster session, you can stay up-to-date in this ever-evolving field. Attend the Aachen Acoustics Colloquium to get the competitive edge that you need and to get familiar with the latest innovations and insights around acoustics and vibrations of vehicles and drives.

Aachen is one of the most important centers for development and research in automotive acoustics. This year, the Aachen Acoustics Colloquium takes place for the 17th time under the aegis of Prof. S. Pischinger, FEV Group GmbH and Prof. K. Genuit, HEAD acoustics GmbH with program support by Prof. L. Eckstein, Institute for Automotive Engineering (ika), RWTH Aachen University.

MEETING VENUE

Kurhaus Aachen
Monheimsallee 44
52062 Aachen, Germany
+49 241 91320
info@aachen-event.com
www.aachen-event.com/kurhaus

Organizers

FEV Europe GmbH, fka GmbH, HEAD acoustics GmbH

ORGANIZATIONAL
AND LOCATIONS OF INTEREST

REGISTRATION
Please register for the Aachen Acoustics Colloquium at:
www.aachen-acoustics-colloquium.com

Register now!

HOTEL RESERVATION
Please book your hotel room via aachen tourist service by using the following link:
www.aachen-acoustics-colloquium.com/accommodation

LOCATIONS OF INTEREST

1 Kurhaus Aachen
Monheimsallee 44
52062 Aachen

2 Rathaus Aachen
Markt
52062 Aachen

PAYMENT
The registration fee of € 1.180 (plus 19 % VAT) also includes a welcome reception as well as a banquet dinner.

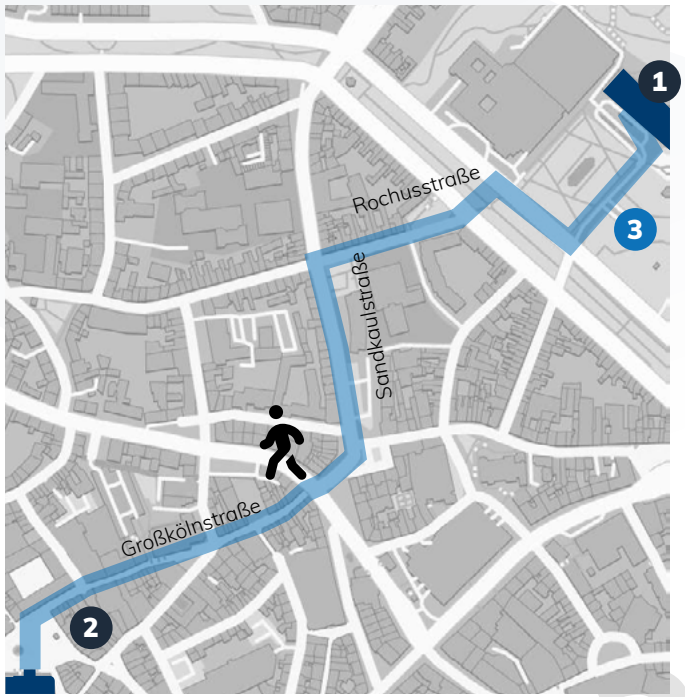
Registration fee for university staff is € 590 (plus 19 % VAT).

Discounts
You will receive a 10 % early-bird discount if you register by August 30. In addition volume discounts apply when registering multiple participants.

PARKING INFORMATION
You can park in the APAG Eurogress parking garage in the immediate vicinity of the event.
The parking fee is not included in the ticket price.

CAR PARKS

3 Parkhaus Eurogress
Monheimsallee 40
52062 Aachen



PLENARY SPEAKER
17TH AACHEN ACOUSTICS COLLOQUIUM

Dr. Stephan C. Gsell
AUDI AG

Vehicle Sound Devlopment at Audi

Vehicle sound has evolved from a mechanical byproduct into a key element of brand identity and customer experience. At Audi, sound development combines engineering, psychoacoustics, and design to create distinctive acoustic signatures for conventional and electrified vehicles. Sound supports brand values such as sportiness, refinement, and technological progress. While combustion engines remain important, downsizing and efficiency measures often reduce their emotional character, increasing the need for targeted acoustic design. Electric vehicles require new sound concepts, including regulatory functions such as AVAS. Audi therefore develops both refined combustion-engine soundscapes and synthetic electric sounds to ensure a consistent brand experience. Supported by an in-house software tool, engineers and designers can prototype, evaluate, and refine vehicle sounds, enabling efficient development of acoustic experiences.

Prof. Steffen Marburg
Technical University of Munich

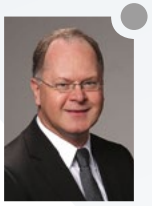
Design and Characterization of Vibro-acoustic (Meta-)Materials for Passive Noise Control

Design of acoustic and vibroacoustic metamaterials has become a fashionable trend in research over the recent two decades. There have been a number of applications of these metamaterials for industrial applications at the Chair of Vibroacoustics of Vehicles and Machines at the Technical University of Munich. The talk will revisit a number of these applications and further discuss new methodologies to identify and characterize acoustic and vibroacoustic materials in both, controlled laboratory environments and in situ.

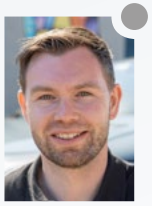
SCIENTIFIC COMMITEE
17TH AACHEN ACOUSTICS COLLOQUIUM

Prof. Jan-Welm Biermann
fmr. Vice Director and Head Vehicle NVH
Institute for Automotive Engineering (ika), RWTH Aachen University

Prof. Otto von Estorff
Head of the Institute of Modelling and Computation
Hamburg University of Technology



Dr. Michael Fischer
Chief Expert and Head Center of Competence NVH
Robert Bosch GmbH



Dr. Stephan C. Gsell
Sound Development
AUDI AG

Dr. Christian Schuster
Manager Vehicle NVH
Ford-Werke GmbH

Dr. Per-Olof Sturesson
Consultant and Postdoctoral Researcher
Cum Scientia Engineering, KTH Royal Institute of Technology, Sweden

PROGRAM
23TH & 24TH NOVEMBER

Register now!

November 23th

19:00 **Welcome Reception for Colloquium Attendees**

The welcome reception will take place at the exhibition, Kurhaus Aachen, with drinks and food. The reception is free of charge for our participants.

November 24th

08:30 **Welcome and Opening**
Dr. Norbert Alt
FEV
Prof. Klaus Genuit
HEAD acoustics GmbH

SOUND DESIGN, SOUND QUALITY AND HUMAN PERCEPTION IN (AUTONOMOUS) VEHICLES I

Session Chair:
Prof. Klaus Genuit
HEAD acoustics GmbH

08:45 **Vehicle Sound Devlopment at Audi**
Dr. Stephan Gsell
Audi AG

09:30 **Towards Automated Psychoacoustic Assessment of Industrial Sounds: An Expert Benchmark Study**
Dr. Andreas Herweg
HEAD acoustics GmbH

10:00 **Effects of Headphone Use on auditory Perception among Pedestrians and Cyclists in urban Traffic Settings**
Prof. Martin Hildebrandt
AKAD University

10:30 **Coffee Break & Snacks**

SOUND DESIGN, SOUND QUALITY AND HUMAN PERCEPTION IN (AUTONOMOUS) VEHICLES II

Session Chair:
Prof. Roland Sottek
HEAD acoustics GmbH

11:00 **Sound Quality Evaluation by SD Method for Passenger HVAC Noise**
Dr. Hideo Takao
Sekiso Corporation

11:30 **RPM and Torque Estimation from Audio: Recovering Engine Operating Parameters from Harmonic Structure and Rotational Dynamics**
Robin Doerfler
Impulse Audio Lab GmbH

12:00 **Physical Engine Model for Active Sound Design**
Dr. Markus Bodden
neosonic GmbH

12:30 **Lunch**

PROGRAM
24TH NOVEMBER

Register now!

November 24th

POSTER SESSION

Session Chair:
Prof. Biermann
Institute for Automotive Engineering (ika), RWTH Aachen University

13:45 **Poster Pitch**
Short pitches of 2 – 3 minutes each, followed by discussions in the poster exhibition area

14:15 **Poster Session**

15:15 **Coffee Break**

HYBRID METHODS

Session Chair:
Dr. Christoph Steffens
FEV

15:45 **Hybrid Substructuring and Blocked-Force Characterization of Complex Automotive Subsystems**
Ahmed el Mahmoudi
FEV

16:15 **Addressing Preload Effects in Vibration-Isolator Models for Virtual Acoustic Prototypes: 12-DoF Identification via MIMO Interface Force Sensing**
Dr. Michael Häußler
Technical University of Munich (TUM)

16:45 **Coffee Break & Snacks**

17:15 **Hybrid Modular Engineering for Front-Loaded Vehicle Development**
Ron Reichart
VIBES.technology

17:45 **Vibroacoustic Analysis of an Automotive HVAC Unit Based on a Validated Finite Element Model**
Dr. Daniele Fabbri
Politecnico di Torino

19:30 **Champagne Reception**

20:00 **Banquet**
Prof. Stefan Pischinger
FEV

The banquet will take place at the historical city hall of Aachen and is free of charge for attendees.

The fee for accompanying persons is € 50.

PROGRAM
25TH NOVEMBER

Register now!

November 25th

VEHICLE NVH

Session Chair:
Prof. Lutz Eckstein
Institute for Automotive Engineering (ika), RWTH Aachen University

09:00 **Investigation and Mitigation of High-Frequency Noise from the High-Voltage Battery System in Electric Vehicles**
Jaemin Jin
Hyundai Motor Company

09:30 **Vibroacoustic attenuation in automotive vehicle body panels with locally resonant acoustic metamaterials**
Alvin Chung
Loughborough University

10:00 Coffee Break & Snacks

NUMERICAL SIMULATION AND MODELLING

Session Chair:
Dr. Matthias Wegerhoff
HEAD acoustics GmbH

10:30 **Design and Characterization of Vibroacoustic (Meta-)Materials for Passive Noise Control**
Prof. Steffen Marburg
Technical University of Munich (TUM)

11:15 **High Frequency Noise Transfer Function Calculations with EFEM**
Sungyoon Im
Institute for Automotive Engineering (ika), RWTH Aachen University

11:45 **Numerical Investigation of Acoustic Transfer Paths for Vehicle-Specific AVAS Development**
Dr. Sören Keuchel
Novicos GmbH

12:15 Lunch

DRIVE TRAIN - VIBRATION AND ACOUSTICS

Session Chair:
Prof. Stefan Pischinger
FEV

13:30 **Comparative Evaluation of Encapsulation Technologies Based on Acoustic Performance**
Waldemar Filbert
Carcoustics TechConsult GmbH

14:00 **Wheel Side EDU E-Axle NVH Optimization**
Sichao Zhang
FEV China

PROGRAM
25TH NOVEMBER

Register now!

November 25th

14:30 **Effect of Lubricant Viscosity on the Dynamic Noise Characteristics and Friction Losses of an Electrified Passenger Car Transmission at Higher Drive Speeds**
Laurenz Roth
Laboratory for Machine Tools and Production Engineering (WZL),
RWTH Aachen University

15:00 **Coffee Break & Snacks**

MEASUREMENT TECHNOLOGY

Session Chair:
Prof. Eckstein
Institute for Automotive Engineering (ika), RWTH Aachen University

15:30 **Automatic Camera-based Methodology for precise sensors and excitations pose estimation**
Domenico Minervini
Siemens Digital Industries Software

16:00 **Efficient data management of Tyre Road Noise measurements using ASAM Open Data Services**
Thomas Kotschenreuther
RA Consulting GmbH

16:30 **Final Remarks**
Prof. Stefan Pischinger
FEV
Prof. Lutz Eckstein
Institute for Automotive Engineering (ika), RWTH Aachen University
Prof. Klaus Genuit
HEAD acoustics GmbH

POSTER SESSION
17TH AACHEN ACOUSTICS COLLOQUIUM

For the third time, AAC 2026 will also include the presentation of scientific posters. These posters will be displayed in the poster exhibitation area during the conference. On Tuesday from 1.45 pm to 3.15 pm, a time slot is dedicated to the posters. This session will start with short pitches of 2 – 3 minutes each, followed by open presentations and discussions in the poster exhibition area.

Predictive NVH Optimization in Electric Vehicles: An Integrated MBD-NTF Simulation Approach for Ride Comfort
Dr. Marco Occhineri
Siemens Industry Software

Prediction of Airborne Radiated Drivetrain Rattle Noise
Seyed Kiarash Mirzaghafoor
Loughborough University

Psychoacoustic Assessment of Buzz, Squeak and Rattle Noise in Electric Vehicles
Mehmet Yalcin Yagci
Lunumis Engineering Ltd.

Pitch and azimuth influence for acoustic localization
Soroor Sabbaghi
Bielefeld University

Practical approach for TPA Model Validation
Denis Beljan
HEAD acoustics GmbH

CONTACT
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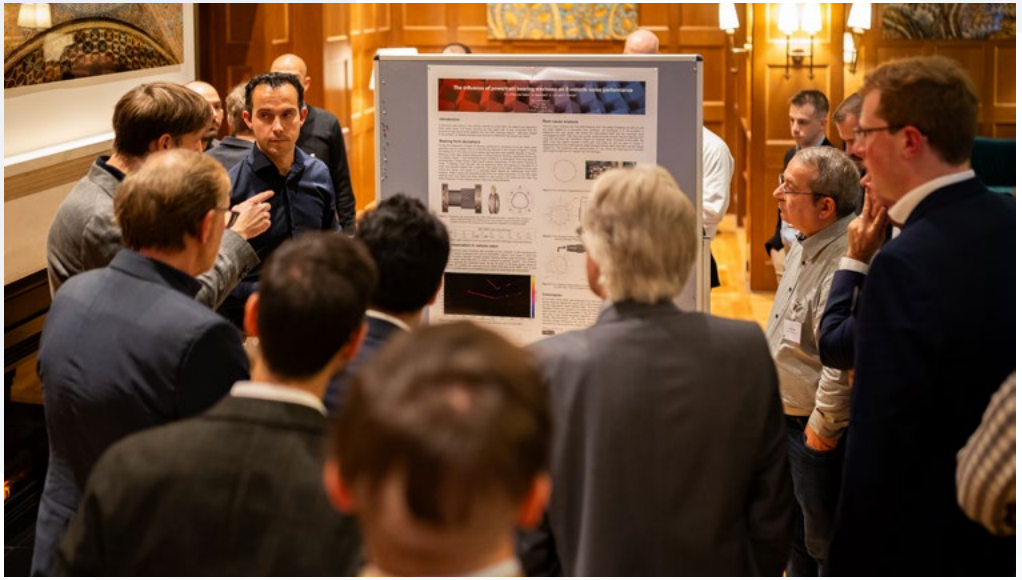

CONTACT

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