

Automotive Acoustics Conference 2023

Shaping the soundscape of new mobility

11 – 12 July 2023

Zurich/Rueschlikon | Switzerland
or virtually via live stream

Hybrid event

Your choice:

Participate on site
or virtually via
live stream



KEYNOTE LECTURES

Dr. Léon Gavric, Stellantis, France

Dr. Charles Zhang, BYD, China

Michael Hog, FEV, Germany

Shaping the soundscape of new mobility

/ NVH DEVELOPMENT OF BEVS

Target setting, sound package design, sustainability

/ COUNTERMEASURES FOR TIRE, POWERTRAIN AND WIND NOISE

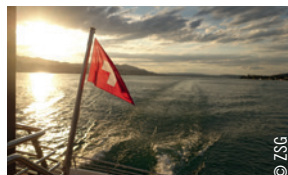
Novel materials and design solutions

/ ADVANCED SIMULATION AND HYBRID METHODS

Machine learning and data handling

HIGHLIGHT

Evening event with panorama boat cruise on Lake Zurich



Dr. Davide Caprioli
Head of Acoustic and Thermal Management, Autoneum Management AG



Dr. Alexander Heintzel
Editor-in-Chief ATZ | MTZ Group, Springer Nature

Welcome

High standards of noise, vibration, and harshness (NVH) performance are of major significance to the value of an automobile. They reflect the quality and refinement of a vehicle in an audible and tangible way, especially for electrified vehicles where the absence of the engine combustion noise is changing the paradigm of the sources contributing to interior and exterior NVH.

The 7th Automotive Acoustics Conference will cover its customary broad spectrum of themes, giving participants a comprehensive, biennial snapshot of the state of the art in acoustics and NVH from a global perspective. This year's conference program features 22 presentations from leading industry executives, including keynote lectures by BYD, Stellantis and FEV.

The 2023 edition of this leading global conference in the field of automotive acoustics will again take place at the renowned Swiss think tank Gottlieb Duttweiler Institute, located in Zurich/Rueschlikon. The conference will be run in hybrid mode, allowing participants to participate either on site or remotely through an online platform.

We look forward to meeting you in Zurich or virtually!

On behalf of the Scientific Advisory Board

Stay at the cutting edge!

- ✓ Highly relevant technical papers presented by renowned speakers
- ✓ Networking in the international expert community
- ✓ Innovative products and services

Automotive Acoustics Conference

The international Automotive Acoustics Conference is a biennial global forum for the exchange of information and networking among engineers engaged in further improving the NVH characteristics of passenger cars and commercial vehicles. The principal themes of the conference explore the technological innovations as well as the market and regulatory demands that are driving the state of the art in the automotive industry. Furthermore, the conference caters to the needs of researchers and developers alike by addressing growing expectations with regard to vehicle performance and sustainability. It also touches upon the particular challenge that developments in one area of the car often also affect its acoustic characteristics – especially as perceived by the end user.



The choice is yours: attend on site or virtually via live stream

The digital event platform offers you

- access to all features from one week before until one week after the conference
- Q&A feature in the live stream
- participation on all common devices (smartphone, tablet and laptop)
- 1:1 video chats with attendees, exhibitors and speakers
- live polls
- your personal program overview
- a virtual exhibition
- all available conference documents in one place for download
- as well as other useful functions

Scientific Advisory Board

Our Scientific Advisory Board, which is made up of prominent experts in their respective fields, provides support during the planning phase of the conference and helps to identify suitable topics.

With its expertise the board has made a valuable contribution to the choice of themes for the lecture program.



Dr. Davide Caprioli
Autoneum
Management AG

Scientific Director of the Conference



Prof. Dr. Paolo Ermanni
ETH Zurich

Patron of the Conference

Thomas Antoine
Renault S.A.

Claudio Bertolini
Autoneum Management AG

Dr. Léon Gavric
Stellantis

Dr. Christine Hascoët
HEAD acoustics GmbH

Dr. Alexander Heintzel
Editor-in-Chief ATZ | MTZ Group,
Springer Nature

Dr. Piercarlo Miglietta
Stellantis

Prof. Dr. Hermann Rottengruber
Otto von Guericke University Magdeburg

Dr. Christian Schuster
Ford-Werke GmbH

Dr. Hendrik Sell
Vibracoustic SE & Co. KG

Johan Stenson
Volvo Car Corporation

Dr. Makram Zebian
Continental Reifen Deutschland GmbH

09:15 Welcome and opening

Eelco Spoelder, CEO, Autoneum Management AG, Switzerland;
 Marc Ziegler, Deputy Editor-in-Chief MTZ, Springer Nature, Germany;
 Dr. Davide Caprioli, Head of Acoustic and Thermal Management,
 Autoneum Management AG, Switzerland

09:30 – 10:30

KEYNOTE LECTURES

Moderation: Dr. Davide Caprioli, Head of Acoustic and Thermal Management,
 Autoneum Management AG, Switzerland

KEYNOTE**09:30 Exterior noise model for BEVs**

Dr. Léon Gavric, Senior Fellow, Engineering, Stellantis
 [in cooperation with UTAC], France

KEYNOTE**10:00 Sound quality improvement of electric vehicles**

Dr. Charles Zhang, Chief Expert in NVH,
 BYD Automotive Industry Ltd., China

10:30 Refreshment break with coffee and tea in the exhibition area

11:00 – 12:30

TIRE/ROAD NOISE I

Moderation: Dr. Christine Hascoët, Support Engineer/Technical Support,
 Sound, Vibration and Perception, HEAD acoustics GmbH, Germany

11:00 Application of sound absorbing near field bodies to reduce tire/road noise

Dr. Klaus Pfaffelhuber, Head Advanced Engineering,
 Autoneum Switzerland AG, Switzerland [in cooperation with
 Mercedes-Benz AG, Germany; Autoneum Management AG,
 Switzerland; Autoneum Germany GmbH, Germany]

11:30 Implementing a process for virtual road noise prediction using virtual vehicle assemblies

Eric Sorber, Business Developer Automotive NVH Testing,
 Siemens Digital Industries Software, Belgium

12:00 Passenger car tire noise improvement by body panel damping using resonant structural metamaterials

Dr. Saverio Tufano, NVH Engineer, Vehicle Performance Planning,
 Nissan Technical Centre Europe, UK [in cooperation with
 Phononic Vibes Srl, Italy]

12:30 Lunch in the exhibition area

14:00 – 15:30

POWERTRAIN NVH METHODS

Moderation: Prof. Dr. Hermann Rottengruber,
 Head of IMS, Otto von Guericke University Magdeburg, Germany

14:00 Requirement definition for a vibration source using transfer path analysis and solution spaces

Duo Xu, formerly Research Assistant, Laboratory for Product
 Development and Lightweight Design, Technical University of
 Munich, Germany; Dr. Michael Häußler, VIBES.technology, Germany

14:30 NVH-optimal design of electric drive units using a digital twin

Mehdi Mehrgou, Manager Multibody Dynamics, NVH &
 Electromagnetism, AVL List GmbH, Austria [in cooperation
 with AVL Deutschland GmbH, Germany]

15:00 Interior noise optimization of electric powertrain-induced vibrations using machine learning methods

Uwe Fiedler, Team Leader Vibration Comfort, CDH AG
 [in cooperation with Mercedes-Benz Group AG], Germany

15:30 Refreshment break with coffee and tea in the exhibition area

16:00 – 17:30

BROADBAND ACOUSTICS

Moderation: Johan Stenson, Head of Personal Centre,
 Volvo Car Corporation, Sweden

16:00 The state of aeroacoustics modeling: challenges and trends

Viswesh Sujjar Balamraja, Senior Application Engineer,
 Hexagon Manufacturing Intelligence, Belgium

16:30 Evaluation of the PVB interlayer type on the interior noise level through aeroacoustic modeling

Dr. Pol D'Haene, Engineer Sr. Associate, Technology,
 Eastman Chemical Company, Belgium

17:00 Novel sound imaging method for the localization of leakages in automotive components and structures

Dr. Thomas Rittenschöber, CEO | CTO, Seven Bel GmbH, Austria

17:30 End of the 1st day of the conference

19:00 Panorama boat cruise on Lake Zurich with dinner

Enjoy a pleasant evening and interesting conversations over dinner
 with colleagues and speakers.

08:30 – 10:00

EV PLATFORM DEVELOPMENT

Moderation: Claudio Bertolini, Principal Engineer,
Autoneum Management AG, Switzerland

KEYNOTE

- 08:30** **Silence is golden – new challenges for BEV development**
Michael Hog, Group Vice President Vehicle, FEV Vehicle, Germany
- 09:00** **New Lexus RX acoustic package development for carbon neutrality**
Hidenori Morita, Assistant General Manager Dynamic Performance Development Dpt., Toyota Motor Kyushu Corporation [in cooperation with Toyota Motor Corporation; Nihon Tokushu Toryo Co., Ltd.], Japan
- 09:30** **Development of a quiet vehicle for the new Nissan EV platform**
Kazuhiisa Okada, Noise and Vibration Performance Planning Group, Nissan Motor Co., Ltd, Japan

10:00 Refreshment break with coffee and tea in the exhibition area

10:30 – 12:00

FULL VEHICLE NVH METHODS

Moderation: Prof. Dr. Paolo Ermanni, Director, Composite Materials and Adaptive Structures Lab (CMASLab), ETH Zurich, Switzerland

- 10:30** **Automated squeak & rattle detection for quality assurance during production**
Dr. Alexander Roy, Senior Consultant, IAV GmbH, Germany;
Jürgen Ochs, Senior Manager Verification Full Vehicle – NVH,
Dr. Ing. h.c. F. Porsche AG, Germany
- 11:00** **Development of a sound insulation index for interior trim using panel contribution analysis**
Ki Chang Jo, Senior Research Engineer, NVH Base Technology Team, Hyundai Motor Company, South Korea
- 11:30** **NVH simulator – advantages and ways of experiencing the new age of prototyping**
Marius Dute, Application Expert NVH Simulator and TPA, HEAD acoustics GmbH, Germany

12:00 Lunch in the exhibition area

13:00 – 14:30

TIRE/ROAD NOISE II

Moderation: Dr. Makram Zebian, Head of NVH Testing,
Continental Reifen Deutschland GmbH, Germany

- 13:00** **The advantages of full-spectrum multi-attribute simulation in tire and road NVH assessment**
Dr. Giorgio Adriano, NVH Simulator Account Manager EMEA, VI-grade, Italy
- 13:30** **Metamaterials for low frequency tonal (tire) noise mitigation in vehicles**
Dr. Claus Claeys, Research Manager, Mecha(tro)nic System Dynamics, KU Leuven, Belgium [in cooperation with Ford Research & Innovation Center (RIC), Germany]
- 14:00** **NVH trim components integrating particle dampers: damping, absorption, and insulation all in one part**
Claudio Bertolini, Principal Engineer, Autoneum Management AG, Switzerland; Sylvain Simonnin, Vehicle NVH Expert Airborne Noise, Renault, France

14:30 Refreshment break with coffee and tea in the exhibition area

15:00 – 16:00

EV DEVELOPMENT CHALLENGES

Moderation: Dr. Piercarlo Miglietta, NVH Technical Fellow, Stellantis, Italy

- 15:00** **Defining interior noise targets for EV whines that occur in the presence of road and wind noise**
Dr. Mark Burnett, Chief Engineer – NVH, Horiba Mira Ltd., UK
- 15:30** **The positive network effect on NVH testing – a case study for electric motors**
Dr. Dejan Arsić, Business Development Network and Cloud Solutions in Testing, Müller-BBM VibroAkustik Systeme GmbH [in cooperation with Hochschule München University of Applied Sciences], Germany
- 16:00** **Summary of the conference and closing remarks**
Dr. Davide Caprioli, Head of Acoustic and Thermal Management, Autoneum Management AG, Switzerland;
Marc Ziegler, Deputy Editor-in-Chief MTZ, Springer Nature, Germany



Autoneum Management AG

Autoneum is globally leading in acoustic and thermal management for vehicles. The Company develops and produces multi-functional and lightweight components and systems for the interior floor and engine bay as well as the underbody. The innovative products and technologies are suitable for all drive types and contribute significantly to the reduction of interior and exterior noise of internal combustion, hybrid or pure electric vehicles, thereby enhancing driving comfort.

Autoneum's individually adaptable technologies and product packages also make vehicles considerably lighter, which leads to improved fuel and energy efficiency and, consequently, to lower CO₂ emissions and an increased driving range. In addition, the Company provides specialized benchmark measurement systems for automotive acoustics that allow for the evaluation and optimization of the NVH performance of components and material properties.

Autoneum's long-standing expertise and comprehensive technological know-how is recognized by nearly all automobile manufacturers worldwide and is also proven by the continuous success of the Automotive Acoustics Conference, which was held for the first time more than 50 years ago. The Swiss-based Company operates 67 production facilities and employs around 16,100 people in 24 countries.

Cooperation partner

autoneum

www.autoneum.com

Your presentation platform

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For information on the various presentation options, please contact:

Mr. Alex Woidich
Phone +49 611 7878-206
alex.woidich@springernature.com

Media partners

ATZ MTZ

Registration fee**Participation on site:** € 1,445.– plus VAT

This includes the conference documentation, the accompanying trade exhibition, the use of the digital event platform as well as the catering during breaks and the evening event on 11-07-2023.

Participation virtually via live stream: € 995.– plus VAT

This includes the conference documentation as well as the use of the digital event platform with virtual exhibition.

In addition, all participants will have access to the video recordings of all released lectures a few days after the event.

Date

11 - 12 July 2023

Venue

GDI Gottlieb Duttweiler Institute
Langhaldenstrasse 21
8803 Rueschlikon/Zurich
Switzerland
or virtually via live stream

**Language used in the presentations**

English

Hotels

Some hotels have room blocks at reduced prices for the participants. You can find more information on the events page of our website.

**Further information
and online registration:**

www.atzlive.com/acoustics

**Participants**

The Automotive Acoustics Conference is aimed at professionals working in acoustics and NVH at OEMs, component and systems suppliers, engineering consultancy partners, and experts conducting research at academic institutions. They are active in different, but complementary, parts of the process chain, such as development, design, material and component characterization/validation, calculation and simulation, testing, and production.

**Further information
and online registration:**

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Your contact person

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ATZlive // Spotlight on Powertrain and Vehicle Engineering

Our events are firm fixtures in the diaries of automotive engineers and powertrain specialists. We offer a range of innovative conferences on the latest topics in the world of automotive engineering and powertrain technology, from the perspective of research, development, and applications.

Our close collaboration with the editorial teams of our specialist magazines ATZ and MTZ keeps us fully up-to-date on the latest topics and trends on the market.

Springer, with its automotive technology brands in the ATZ and MTZ Group, is part of Springer Nature, one of the world's leading publishing groups for scientific, educational and specialist literature.