

ATZ live

Automotive Acoustics Conference

4th International ATZ Conference on Vehicle Acoustics

11 and 12 July 2017 | Zurich/Ruschlikon | Switzerland



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**NEW: Two Parallel
Workshop Sessions**

**LIGHTWEIGHT
STRUCTURES AND NVH**
Design & Material
Technologies

NVH OF HEVs & BEVs
Challenges and
Characterization
of E-Sources

VEHICLE EXTERIOR NOISE
Legislation,
NVH Solutions, Tools
and Diagnostic Methods

/// KEYNOTE LECTURES

Masashi Komada, Toyota Motor Corporation

Dr. Léon Gavric, PSA Peugeot Citroën Automobiles

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Automotive Acoustics Conference

WELCOME

Tightening regulations on fuel consumption, CO₂ emissions, and pass-by noise are pressing toward more environmentally-friendly and energy-efficient vehicles. Accordingly, the environmental impact generated by vehicles and their NVH performance is in the spotlight more than ever. Furthermore, megatrends like powertrain electrification, autonomous driving, and connected vehicles are becoming increasingly important and are posing engineering challenges that will have to be addressed in order to ensure the necessary NVH comfort in the future.

With the Automotive Acoustics Conference, Autoneum and ATZlive provide an essential global forum for debating these trends and technological challenges that are moving the industry. Also, the two-day conference provides opportunities for personal interaction and networking within an international community of experts.

Starting with keynote lectures made by leading industry executives, the 4th Automotive Acoustics Conference will cover its customary broad spectrum of themes, giving participants a comprehensive, bi-annual snapshot of the state of the art in acoustics and NVH. In addition to 20 presentations, the 2017 program also features two parallel workshops aiming at the latest trends in the automotive industry: NVH Development of xEV vehicles, Trends and Opportunities in High Performance Composites for Automotive Applications.

The 2017 edition will take place at the renowned Swiss thinktank Gottlieb Duttweiler Institute (GDI) in Zurich/Ruschlikon and remains under the patronage of Professor Dr. Paolo Ermanni of ETH. We look forward to meeting you in Zurich in July 2017!

On behalf of the Scientific Advisory Board

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

Wolfgang Siebenpfeiffer
Editor-in-Charge
ATZ | MTZ | ATZelektronik



PARTICIPANTS

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

PROGRAM

TUESDAY 11 JULY 2017

Moderator: Dr. Davide Caprioli, Autoneum Management AG, Switzerland

- 9:15 **Welcome and opening of the conference**
Wolfgang Siebenpfeiffer, Editor-in-Charge
ATZ | MTZ | ATZelektronik, Germany;
Martin Hirzel, CEO, Autoneum Holding AG, Switzerland

KEYNOTE LECTURE


- 9:30 **An overview of the challenges of making ever-quieter environmental vehicles**
Masashi Komada, Project General Manager,
Toyota Motor Corporation, Japan

VEHICLE NVH I

- 10:00 **Challenges of achieving better NVH performance for Chinese domestic brands**
Perry Gu, Senior Chief Engineer, F. Xiong, H. Zhao,
K. Xie, Geely Automobile Research Institute, China
- 10:30 Refreshment break with coffee and tea in the exhibition area

VEHICLE NVH II

- 11:00 **Low- and high-frequency NVH CAE simulations for the development of a lightweight sedan design**
Dr. Yuksel Gur, Senior Technical Specialist, D. A. Wagner,
Ford Motor Company, USA; J. Pan, Autoneum North America,
Inc., USA
- 11:30 **Vibration reduction based on the combination of particle dampers and honeycomb structures in automotive applications**
Sebastian Koch, Scientific Associate, F. Duvigneau, R. Orszulik,
Prof. Dr. Dr. U. Gabbert, E. Woschke, Institute of Mechanics
(IFME), Otto von Guericke University Magdeburg, Germany
- 12:00 **State-of-the-art digital road noise cancellation by Harman**
Dr. Nikos Zafeiropoulos, Engineer, J. Zollner, V. K. Rajan,
R. Augustine, Harman Becker Automotive Systems GmbH,
Germany
- 12:30 Lunch in the exhibition area



Moderator: Dr. Léon Gavric, Vice President, NVH Expert Leader,
PSA Peugeot Citroën Automobiles, France

NVH OF xEV

- 14:00 **Acura NSX – Hybrid Acoustics, a new carpet concept for meeting stringent performance and weight targets**
Jared Cox, Principal Engineer, Honda R&D Americas Inc., USA; Rolf Balte, NVH Manager, UGN, Inc., USA
- 14:30 **Powertrain mounting systems for electric vehicles**
David Roth, System Simulation Specialist, Dr. T. Ehrh, C. Bultel, H. Kardoes, Vibracoustic GmbH & Co. KG, Germany
- 15:00 **Noise radiated by electric motors – simulation process and overview of the optimization approaches**
Dr. Jean-Baptiste Dupont, Head of Simulation Team, H. Saucy, VibraTec, France
- 15:30 Refreshment break with coffee and tea in the exhibition area

WORKSHOPS

- 16:00 **Two parallel Workshops I** Please choose one of the two workshops and discuss your favorite topic with colleagues and other experts:

A “Trends and Opportunities in High Performance Composites for Automotive Applications”

Moderator: Prof. Dr. Paolo Ermanni, Centre of Structure Technologies, ETH Zurich, Switzerland

Invited Speakers:

Dr. Markus Zogg, inspire AG, Switzerland

Dr. Théophane Courtois, Autoneum Management AG

Prof. Dr. Dan Zenkert, KTH Stockholm, Sweden

Prof. Dr. Frank Henning, Fraunhofer ICT, Germany

B “NVH Development of EVs/HEVs”

Moderator: Claudio Bertolini, Head of NVH Tools and Methodologies, Autoneum Management AG, Switzerland

Invited Speakers:

Dr. Laurent Gagliardini, PSA Groupe, France

Andrew Jackson, Bentley Motors Limited, United Kingdom

Steffen Koch, Hanon Systems Deutschland GmbH, Germany

Christoph Meier, Daimler AG, Germany

-
- 18:45 **Panorama boat cruise on Lake Zurich with dinner**
Enjoy a delightful evening and interesting conversations over dinner with colleagues and speakers.

PROGRAM

WEDNESDAY 12 JULY 2017

Moderator: Christoph Meier, Senior Manager NVH-Powertrain,
Daimler AG, Germany

POWERTRAIN NVH

8:30 **Keynote lecture I New fuel-saving technologies and NVH refinement for powertrains**

Dr. Léon Gavric, Vice President, Senior Expert NVH,
PSA Peugeot Citroën Automobiles, France

9:00 **Structure-borne noise based diesel engine control**

Sebastian Schneider, Research Assistant,
Prof. Dr. H. Rottengruber, IMS, Otto von Guericke
University Magdeburg, Germany; Dr. J. H. Carstens,
Prof. Dr. C. Gühmann, MDT, Technical University of Berlin,
Germany; J. Nobis, E. Neumann, IAV GmbH, Germany;
M. Joerres, Ford-Werke GmbH, Germany

9:30 **Combustion mechanical noise breakdown – turbocharger noise identification on a V8 engine**

Patrick Corbeels, Product Manager, K. Janssens, F. Bianciardi,
S. Delvecchio, Siemens Industry Software NV, Belgium;
K. Gryllias, K. U. Leuven, Belgium; C. Manna, Ferrari spa, Italy

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

ADVANCED SIMULATION METHODS

10:30 **Simulation of exterior noise propagation for the acoustic load estimation of airborne models**

Marco Danti, Senior Researcher, M. Meneguzzo, G. Bartolozzi,
Centro Ricerche Fiat S.C.p.A, Italy

11:00 **On the role of simulation in accounting for the design complexity of engine encapsulation**

Dr. Roberto D'Amico, CAE Engineer Products and Systems
Simulation, R. Stelzer, J. Grebert, Autoneum Management AG,
Switzerland; P. Chandler, G. Fossaert, Jaguar Land Rover Ltd.,
United Kingdom

11:30 **Pass-by noise synthesis from frequency domain exterior acoustic simulations**

Alexis Talbot, Senior Application Engineer, G. Lielens,
Free Field Technologies, MSC Software Belgium

12:00 Lunch in the exhibition area

Moderator: Prof. Dr. Hermann Rottengruber, Head of the Institute of Mobile Systems (IMS), Otto von Guericke University Magdeburg, Germany

MATERIALS

- 13:00 **An exploration framework for automotive trim performance in the mid-frequency range**
Bart Bergen, Senior Engineer, N. Schaefer, T. Keppens, Toyota Motor Europe, Belgium; Prof. W. Desmet, Department of Mechanical Engineering, K. U. Leuven, Belgium
- 13:30 **The noise reduction potential of lightweight acoustic metamaterials – a numerical and experimental study**
Peter Schrader, Research Assistant, Prof. Dr. H. Rottengruber, IMS, F. Duvigneau, Prof. Dr. Dr. U. Gabbert, IFME, Otto von Guericke University Magdeburg, Germany
- 14:00 **Vibration damping behaviour of flexible polyurethane foams under low and high strain regimes**
Mark Brennan, Research Manager, M. Dossi, Y. Wang, M. Moesen, J. Vandenbroeck, Huntsman Polyurethanes, Belgium
- 14:30 Refreshment break with coffee and tea in the exhibition area

VEHICLE NVH III

- 15:00 **Predicting pass-by noise levels for trucks based on component test bench measurements – by using virtual assembly techniques**
Patrick Corbeels, Product Manager, Dr. P. Van de Ponselee, M. Choukri, Siemens Industry Software NV, Belgium; R. Sinnig, Dr. W. Kerres, Daimler AG, Germany
- 15:30 **NVH development strategies for suspensions**
Andreas Schilp, Managing Director, Prof. Dr. H. Bathelt, AZL Technology Center GmbH, Germany
- 16:00 **A framework for the sensitivity analysis of transfer paths combining contribution analysis and response modification analysis**
Dr. Dejan Arsić, Key Account Manager, M. Pohl, Müller-BBM VibroAkustik Systeme GmbH, Germany
- 16:30 **Summary of the conference and closing remarks**
Dr. Davide Caprioli, Head of Product Acoustic and Thermal Performance, Autoneum Management AG, Switzerland; Wolfgang Siebenpfeiffer, Editor-in-Charge ATZ | MTZ | ATZelektronik, Germany



THE CONFERENCE IS SUPPORTED BY AUTONEUM

Autoneum is the globally leading automobile supplier in acoustic and thermal management for vehicles. The Company develops and produces multifunctional and lightweight components and systems for the engine bay, interior floor and underbody as well as for the body-in-white. The Company's products contribute significantly to the reduction of interior and exterior noise of cars, thereby enhancing vehicle comfort. They also reduce the weight of vehicles considerably, which leads to improved fuel efficiency and less CO₂ emissions. In addition, Autoneum provides specialized benchmark measurement systems for automotive acoustics allowing the NVH performance of component and material properties to be evaluated.

The Company's long-standing expertise and comprehensive technological know-how is recognized by almost 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 40 years ago. The Swiss-based Company employs more than 11,000 people at around 50 locations in over 20 countries. For more information, please go to www.autoneum.com.

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ATZ MTZ

VENUE

Gottlieb Duttweiler
Institute in Ruschlikon



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our new English-language eMagazine
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REGISTRATION FEE

€ 1,295.–

This includes the conference documentation, coffee breaks, soft drinks, two lunches, and the evening reception.

The registration fee is not subject to VAT in Switzerland.

VENUE

GDI Gottlieb Duttweiler Institute
Langhaldenstrasse 21 | 8803 Ruschlikon | Switzerland
www.gdi.ch/en/event-location

HOTELS

The hotels have room blocks at reduced prices for the participants.

**Please make your reservation quoting the reference
“Acoustics 2017” at Hotel Belvoir by 12 June 2017,
at Hotel Sedartis by 10 June 2017 or
at the Crowne Plaza Zurich by 9 June 2017.**

Hotel Belvoir

Säumerstrasse 37 | 8803 Ruschlikon | Switzerland
Phone +41 44 723 83 83
info@hotel-belvoir.ch | www.hotel-belvoir.ch
CHF 265.50 Single room including breakfast

Hotel Sedartis

Bahnhofstrasse 15/16 | 8800 Thalwil | Switzerland
Phone +41 43 388 33 00
info@sedartis.ch | www.sedartis.ch
CHF 233.50 Single room including breakfast

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Badenerstrasse 420 | 8040 Zurich | Switzerland
Phone +41 44 404 44 44
info@cpzurich.ch | www.crowneplaza.com
CHF 199.00 Single room including breakfast. Special conditions at the Crowne Plaza Zurich can only be booked via the following link: www.zuerich.com/en/visit/automotive-acoustics-conference-2017. There will be a bus transfer between Crowne Plaza Zurich and the venue.

Reservation at other hotels via ZURICH TOURISMUS
Phone +41 44 21540-40 | Fax +41 44 21540-44
hotel@zuerich.com

CONDITIONS

No cancellation charge is due if registration is cancelled by 12 June 2017. Cancellations made after that date will incur a charge of 35 % of the registration fee. For cancellations made after 19 June 2017, the full registration fee is payable. Cancellations must be made in writing. The date of the postmark will determine whether the deadline has been met. If you are unable to attend, we will be happy to accept a substitute participant.

Should a speaker be unable to attend at short notice by reason of force majeure, illness, accident, or other circumstances for which ATZlive cannot be held responsible, another qualified person will be appointed to the exclusion of any claim for compensation. Should the event be cancelled altogether, we will of course refund the registration fee.

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THE ORGANIZER

ATZlive

// Spotlight on Powertrain and Vehicle Engineering //

ATZ live

ATZlive organizes its high-caliber conferences for vehicle and engine specialists together with key representatives from research and industry to ensure that they are tailor-made to the needs of the participants and address the very latest issues. 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 in the market.

CONFERENCE REGISTRATION

Automotive Acoustics Conference

11 and 12 July 2017 | Zurich/Ruschlikon | Switzerland

In accordance with the General Terms and Conditions and the price list, I would like to order the following:*

- ☐ Participation in the conference at a price of € 1,295.–
The registration fee is not subject to VAT in Switzerland.

* The General Terms and Conditions of ATZlive apply
as published on the website www.ATZlive.de/AGB

I would like to take part in the following themed workshop
(see Tuesday 11 July 2017 at 16:00): ☐ A or ☐ B

Registration data

Family name

First name

Acad. title

Company / Institute

Department

Function

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Postal code / City

Country

Phone

Fax

E-mail of the participant

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