

# Automotive Acoustics Conference

5th International ATZ Conference on Vehicle Acoustics  
9 and 10 July 2019 | Zurich/Rueschlikon | Switzerland



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## **CALCULATION AND SIMULATION**

Efficient approaches  
for analysis and  
development

## **VEHICLE NVH**

Increasing  
relevance due  
to future mobility

## **NVH OF HEVS & BEVS**

New approaches for  
the drive train and  
components

### /// KEYNOTE LECTURES

**Dr. Ralf Bocksch**, Daimler AG, Germany | **Léon Gavric**, PSA Groupe, France |  
**Yoshiki Konishi**, Toyota Motor Corporation, Japan

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# Automotive Acoustics Conference

## WELCOME

The increased variety and complexity of today's powertrains further increases the effort required for acoustic development. As a result, acoustic experts are faced with the challenge of effectively reducing the noise of the powertrain and its components. Lightweight construction also increases the complexity of striving for a comfortable NVH level. Better measurement analyses and faster calculation methods are important tools for this and central topics in the experts' discussion.

Starting with keynote lectures by leading industry executives, the 5th 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 2019 program also features two parallel expert discussions aiming at the latest trends in the automotive industry: "The future of aeroacoustics in the automotive industry" and "Tire noise: an old problem that requires new methods, new products, new ideas".

The next edition of this leading global conference in the field of automotive acoustics will again take place at the renowned Swiss thinktank Gottlieb Duttweiler Institute (GDI) in Zurich/Rueschlikon under the patronage of Professor Dr. Paolo Ermanni of ETH.

We look forward to meeting you in Zurich on 9 and 10 July 2019!

On behalf of the Scientific Advisory Board

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

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



## 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: development, design, material, and component characterization/validation, calculation and simulation, testing, and production.

# PROGRAM

TUESDAY 9 JULY 2019

- 9:15 **Welcome and opening of the conference**  
Martin Hirzel, CEO Autoneum Holding Ltd, Switzerland;  
Dr. Alexander Heintzel, Editor-in-Chief ATZ | MTZ Group,  
Springer Nature, Germany

## KEYNOTES

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Moderator: Dr. Davide Caprioli, Head of Product Acoustic and Thermal Performance, Autoneum Management Ltd, Switzerland

- 9:30 **Electric vehicles and principal NVH issues**  
Léon Gavric, Vice President, Senior Expert NVH,  
PSA Groupe, France
- 10:00 **EQC – sound makes the difference**  
Dr. Ralf Bocksch, NVH Project Coordinator, Dr. A. Bauer,  
C. Meier, Daimler AG, Germany
- 10:30 Refreshment break with coffee and tea in the exhibition area

## NVH OF HEVS & BEVS

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

- 11:00 **Research on design principles of the electric powertrain mount of pure electric vehicles**  
Perry Gu, Executive Chief NVH Engineer, Q. Kang,  
Geely Automobile Research Institute, P.R. China
- 11:30 **Methods and solutions for the integration of the HV battery into the NVH development of a BEV**  
Howard Brentnall, Airborne Lead Engineer Vehicle NVH / Vehicle Engineering, Jaguar Land Rover Ltd, United Kingdom;  
Francesca Ronzio, Team Leader Products and Systems Simulation, F. Di Marco, Autoneum Management Ltd, Switzerland;  
L. Wang, Autoneum France SASU, France
- 12:00 **A method for designing and delivering interior and exterior noise of an electric vehicle**  
Mark Allman-Ward, NVH Simulation Specialist,  
Brüel & Kjær UK, United Kingdom; Piercarlo Miglietta,  
NVH Technical Fellow, G. Di Nenno, FCA Italy S.p.A., Italy
- 12:30 Lunch in the exhibition area

14:00 **Two parallel expert discussions I** Choose on the day, listen to the experts, and share your ideas:

**The future of aeroacoustics in the automotive industry**

Moderator: Yves Detandt, FFT, MSC Software Belgium

Aeroacoustics has made significant progress over the last decades, mixing experimental and numerical research. Experts will give different perspectives for the automotive industry on the lessons learned and future challenges.

**Tire noise: an old problem that requires new ideas**

Moderator: Claudio Bertolini, Autoneum Management Ltd

The advent of electrification and the evolution of legislation on exterior noise have suddenly increased the priority level of tire noise. Are we ready? Experts from car-makers, tire manufacturers, and sound package suppliers will present their views on the current state of the art and the future.

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

## CALCULATION AND SIMULATION I

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Moderator: Dr. Christian Schuster, Manager Vehicle NVH Programs, Ford Motor Company, Germany

16:00 **In-vehicle analysis of powertrain-induced noise using FRF substructures**

Dr. Rene Visser, Technical Director, U. Fiedler, CDH AG, Germany

16:30 **Challenges of time domain simulation applied to powertrain-specific noise radiation**

Tomohiro Yamada, Assistant Manager, Y. Atsumi, E. Umemura, Toyota Motor Corporation, Japan;  
T. Courtois, ATN Auto Acoustics Inc., Japan

17:00 **Measurement of transfer matrices of PU foams for sound absorption and TL applications**

Mark Brennan, Research Manager, M. Dossi, K. Verniers, J. Vandenbroeck, Huntsman Polyurethanes, Belgium;  
R. Boonen, NABLA Technisches Beratungsbüro, Germany

approx.

17:30 End of the first day of the conference

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19:00 **Networking dinner in Zurich**

Enjoy a delightful evening with colleagues and speakers.

# PROGRAM

WEDNESDAY 10 JULY 2019

## KEYNOTE

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Moderator: Prof. Dr. Hartmut Bathelt, Managing Director,  
AZL Akustikzentrum GmbH, Germany

- 8:30 **12th generation Corolla development**  
Yoshiki Konishi, Chief Engineer ZB / CV Product Planning /  
CV Company, Toyota Motor Corporation, Japan

## VEHICLE NVH I

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Moderator: Prof. Dr. Hartmut Bathelt, Managing Director,  
AZL Akustikzentrum GmbH, Germany

- 9:00 **Attribute balancing – trading off noise versus emissions, ride and handling, driveability**  
Matthew Maunder, Technical Specialist Powertrain NVH,  
G. Maclean, B. Munday, P. Crowther, Ricardo UK Ltd,  
United Kingdom
- 9:30 **Using 3-dimensional transfer path analysis to predict the in-vehicle electrical power steering noise performance from wheel-to-wheel rig measurements**  
Charbel Massoud, Technical Specialist Steering Systems NVH,  
Y. Kandinov, ZF Group, USA; J. Viehhofer, ZF Group, Germany

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

## VEHICLE NVH II

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Moderator: Léon Gavric, Vice President, Senior Expert NVH,  
PSA Groupe, France

- 10:30 **Target setting for vibration transmission through driveline components based on on-vehicle and on-bench evaluation**  
Bart Bergen, Senior Noise & Vibration Engineer, J. Ashwin Chavan,  
K. Van De Rostyne, Toyota Motor Europe, Belgium
- 11:00 **The performance of locally resonant metamaterial patches on rear shock towers of a vehicle to reduce structure-borne road noise**  
Luca Sangiuliano, PhD Researcher, C. Claeys, E. Deckers,  
W. Desmet, J. De Smet, Department of Mechanical  
Engineering, KU Leuven / Flanders Make, Belgium
- 11:30 **Design of sound package for pass-by noise reduction: process and application**  
Claudio Bertolini, Principal Engineer NVH Tools and  
Methodologies, J. Horak, T. Lafont, Autoneum  
Management Ltd, Switzerland

12:00 Lunch in the exhibition area

## CALCULATION AND SIMULATION II

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Moderator: Claudio Bertolini, Principal Engineer NVH Tools and Methodologies, Autoneum Management Ltd, Switzerland

- 13:00 **Utilizing a source-path-contribution approach with a desktop NVH simulator to improve powertrain NVH development efficiency**  
Christopher Cundy, Technical Specialist Powertrain NVH Systems, M. Stickler, R. Luken, Ford Motor Company, USA
- 13:30 **Parametric analysis of an automotive wheel arch acoustic treatment**  
Romain Baudson, Product Marketing Manager, B. Van den Nieuwenhof, MSC Software Belgium SA, Belgium; F. Ronzio, T. Lafont, Autoneum Management Ltd, Switzerland
- 14:00 **Robustness and variability prediction of electric machine noise using CAE**  
Mehdi Mehrgou, Lead Engineer NVH Simulation, I. Garcia de Madinabeitia Merino, J. Pohn, J. Garmendia Gutierrez, Dr. C. Priestner, AVL List GmbH, Austria
- 14:30 Refreshment break with coffee and tea in the exhibition area

## MEASURING AND TESTING

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Moderator: Piercarlo Miglietta, NVH Technical Fellow, FCA Italy S.p.A.

- 15:00 **Development of a methodology for acoustic analysis and optimization of mechatronic fuel injection systems**  
Christian Mühlbauer, Development Engineer, Prof. Dr. H.-P. Rabl, CHP Messtechnik GmbH, Germany; Prof. Dr. H. Rottengruber, Institute of Mobile Systems (IMS), Otto von Guericke University Magdeburg, Germany
- 15:30 **Advanced NVH measurement data processing of electric motors under electromagnetic excitations**  
Karine Degrendele, NVH R&D Engineer, J. Le Besnerais, E. Devillers, EOMYS Engineering SAS, France
- 16:00 **Auxiliary equipment in electric vehicles – evaluation of noise quality based on component tests**  
Sebastian Roßberg, Senior Project Manager, HEAD acoustics GmbH, Germany
- 16:30 **Summary of the conference and closing remarks**  
Dr. Davide Caprioli, Head of Product Acoustic and Thermal Performance, Autoneum Management Ltd, Switzerland

approx.

17:00 End of the conference



## THE CONFERENCE IS SUPPORTED BY AUTONEUM

Autoneum is the globally leading automotive supplier in acoustic and thermal management for vehicles. The Company develops and produces multifunctional and lightweight components and systems for the interior floor and engine bay as well as the underbody. The innovative products and technologies contribute significantly to the reduction of interior and exterior noise of cars, thereby enhancing driving comfort. They also make vehicles considerably lighter, which leads to improved fuel efficiency and less CO<sub>2</sub> 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 50 years ago. The Swiss-based Company operates 55 production facilities and employs around 13,000 people in 25 countries.

For more information, please go to [www.autoneum.com](http://www.autoneum.com).

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## MEDIA PARTNERS

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## VENUE

GDI Gottlieb Duttweiler Institute  
Langhaldenstrasse 21  
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[www.gdi.ch/en/event-location](http://www.gdi.ch/en/event-location)



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[elke.vanlon@springernature.com](mailto:elke.vanlon@springernature.com)



## REGISTRATION FEE

€ 1,345.–

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.

## HOTELS

**A variety of hotels in and around Rueschlikon and Zurich can be booked at special rates, quoting the reference “Acoustics”:**

### **Hotel Belvoir**

Säumerstrasse 37 | 8803 Rueschlikon | Switzerland  
Phone +41 44 723 83 83  
info@hotel-belvoir.ch | www.hotel-belvoir.ch  
CHF 265.50 Single room including breakfast  
Please make your reservation by 8 June 2019

### **Hotel Sedartis**

Bahnhofstrasse 15/16 | 8800 Thalwil | Switzerland  
Phone +41 43 388 33 00  
info@sedartis.ch | www.sedartis.ch  
CHF 222.50 Single room including breakfast  
Please make your reservation by 8 June 2019

### **ibis Zurich Adliswil Hotel**

Zurichstraße 105 | 8134 Zurich-Adliswil | Switzerland  
Phone +41 44 711 8585  
welcome@ibiszurich.ch |  
www.accorhotels.com/de/hotel-1989-ibis-zurich-adliswil/index.shtml  
CHF 147.50 Single room including breakfast  
Please make your reservation by 1 June 2019

### **Crowne Plaza Zurich**

Badenerstrasse 420 | 8040 Zurich | Switzerland  
www.crowneplaza.com  
CHF 211.50 Single room including breakfast  
Please make your reservation by 8 June 2019.  
Special conditions for the Crowne Plaza Zurich can only be booked via  
<https://www.zuerich.com/en/visit/automotive-acoustics-conference-2019>

**There will be bus transfers between hotels and venues.**

## CONDITIONS

Cancellations are possible until 17 June 2019. If a cancellation is made after this date, the full registration fee will be charged. 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 canceled altogether, we will of course refund the registration fee.

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## THE ORGANIZER

**ATZlive**

**// Spotlight on Powertrain and Vehicle Engineering //**

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 on the market.

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

# ATZ live

# CONFERENCE REGISTRATION

## Automotive Acoustics Conference

9 and 10 July 2019 | Zurich/Rueschlikon | 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 € 1,345.–  
The registration fee is not subject to VAT in Switzerland.

\* The General Terms and Conditions of ATZlive apply  
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Ms.  Mr.

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First name

Acad. title

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Company / Institute

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Department / ZIP code

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