Testimonials:

“The presence and contribution of this conference makes it unique in the UK”
Clive Sutton, Ricardo UK

“Great networking opportunity and chance to see high quality presentations”
Marco Tarabra, Ferrari S.p.A

“Overall, a fantastic conference. Well planned out event to network with the industry experts and have the right dialogue on our technical challenges”
Mark Stickler, Ford Motor Company

“It exceeded all my expectations with respect to networking”
Peter Kosic, Akrapovic

“One of the best events we have ever seen on automotive NVH”
Diego Capelli, Free Field Technologies

“Based on the way that it has been organized and the high level of delegates that were here, including a lot of decision makers, we’ve met all the right people and I developed more leads than from most other exhibitions”
Matt Lucas, HBM Prenscia

“One of the best Forums I have been to with respect to networking opportunities. Very well organised”
Tony Shepperson, Head Acoustics UK, Ltd.

Scientific Committee & Keynote Speakers:

Aaron Hankinson
Chief Engineer Driven Attributes Engineering
Jaguar Land Rover, UK

Marco Ballatore
Head of Department, Whole Vehicle Physics
Bentley Motors Limited, UK

Alexandre Nunes
Associated Director, Vehicle Attributes
NIO, China

Johan Stenson
Senior Director Driving Dynamics and Noise & Vibration Centre
Volvo Car Group, Sweden

Ernesto Varricchio
NVH Testing Principal Engineer
McLaren Automotive Ltd

Hear about the latest case studies on:
► NVH in chassis, powertrain and body engineering
► Active NVH control & sound quality enhancement
► Design of advanced pedestrian alert systems and minimization of environmental noise pollution

Discover innovative concepts in:
► Psychoacoustics, sound branding and balance between refinement and acoustic character
► Acoustic requirements and sound quality for EVs and HEVs and fully autonomous vehicles
► Full NVH simulation, testing and validation, acoustic integration and attribute balancing

Learn about advanced technologies in:
► Structural dynamics and materials science, solutions with lightweight passive NVH tools
► Aero-acoustics technologies, duct acoustics and combination of acoustic and thermal performance optimization

Join our interactive sessions and discuss with leading experts about:
► Cost efficiency and effective co-operation between OEMs and suppliers
► Passive NVH solutions versus active sound technologies
► Sound branding and marketing aspect of NVH
► NVH opportunities on autonomous, connected & shared vehicles

To Register: T +44 1618 841 208, +44 161 768 0059 | Email info@internect.co.uk
https://www.internect.co.uk/content/3/international-forum-automotive-acousticsvibration-nvh-
Welcome to the International Forum
Automotive Acoustics & Vibration - NVH 2018

Dear members of the Automotive Acoustics & Vibration - NVH Community,

Following the last 4 successful series of our Automotive Acoustics & Vibration-N VH Forum, with representatives from more than 200 international companies and 20 countries, it is a great pleasure for us at Internect to host the 5th NVH Forum, 30 September - 1 October 2019 in Manchester, UK.

With a unique conference format that effectively combines high quality presentations with smart and innovative networking opportunities, Internect’s NVH Forum is a "must attend" event for all players in the Automotive Acoustics and Vibration market.

Our selective participant field, with decision makers, heads of departments, senior experts from international companies, NVH suppliers, prestigious research institutions and the largest representation of OEMs will bring together the latest acoustics ‘State of the Art’ through a variety of interactive sessions, panel discussions, workshops and industry case studies.

Gain insight into the cutting-edge technologies through our exhibition and variety of presentations on powertrain and chassis NVH refinement, ANC technologies, sound branding, EV-HEV sound development, NVH simulation, CFD & wind tunnel testing, NVH for high performance and sports cars as well as lightweight noise control materials among many other topics. Join our round table discussions, interactive sessions, evening workshops and special evening event to exhaust your networking potential in this 2-day exclusive event for automotive NVH experts.

Don't miss the opportunity to join the premier Automotive NVH Conference, the event with largest OEM representation, the NVH meeting venue for automotive manufacturers and suppliers!

We look forward to welcoming you in Manchester to make this event another success in the global automotive engineering calendar!

Kind regards

Maria Nikolopoulou
Managing Director
Internect Limited, UK

Conference Location:
Radisson Blu Hotel Manchester Airport
Chicago Avenue Manchester Airport M90 3RA
United Kingdom
Sponsorship and Exhibition Opportunities:

Are successful marketing strategies and fruitful networking opportunities among your biggest challenges?

Are you looking for an effective means to:

• Raise the profile of your business
• Enhance the perception of your brand
• Interact with a targeted international participant field of your prospective and existing clientele?

With our strategic marketing campaign ahead of the event we contribute to your company’s recognition, positioning you as a leading supplier through verbal and online means. At the conference we offer you an excellent platform to display your solutions, services and products, network with your target audience and influence other companies’ budgeting.

How?

Please contact us for detailed information:
Tel.: +44 1618 841 208, +44 161 768 0059,
Email: info@internect.co.uk

Sponsors and Exhibitors:

MSC Software develops simulation software technology that enables engineers to validate and optimize their designs using virtual prototypes. Customers in almost every part of manufacturing use our software to complement, and in some cases even replace the physical prototype “build and test” process that has traditionally been used in product design.

http://www.mscsoftware.com/

Free Field Technologies (FFT), an MSC Software Company, is a leading global company focused on acoustic simulation and engineering services. Actran, FFT’s software suite, leads numerous technology trends of vibro and aero-acoustic modelling. Used by key actors of the Automotive, Aerospace, Home Appliance and Heavy Equipment industries, Actran helps engineers reduce noise and improve the sound quality of their products. Actran is chosen for both its powerful general purpose simulation features and its unique capabilities to address specific industrial needs.

www.fft.be

BETA CAE Systems transformed Simulation and Analysis world by introducing revolutionary automation software tools and practices into CAE for the Automotive Industry, almost 30 years ago. Committed to our mission to enable engineers to deliver results of high value, we continue to offer state-of-the-art, high-performance software and best-in-class services. Our Simulation Solutions liberate innovation of low risk and high Return-On-Investment.

http://www.beta-cae.com

Brüel & Kjær has led the Sound & Vibration field for over 75 years, and that is not about to change. Brüel & Kjær’s Automotive division helps customers solve NVH challenges by developing advanced technology for measuring and managing sound and vibration. The solutions and technology we provide shorten development time, ensure component quality and optimize vehicle performance. We offer advanced NVH solutions like the NVH Simulator and DISCOM NVH Analysis systems.

http://www.bksv.com

ESI Group is a leading innovator in Virtual Prototyping software and services. Specialist in material physics, ESI has developed a unique proficiency in helping industrial manufacturers replace physical prototypes by virtual prototypes, allowing them to virtually manufacture, assemble, test and pre-certify their future products. Coupled with the latest technologies, Virtual Prototyping is now anchored in the wider concept of the Product Performance Lifecycle™, which addresses the operational performance of a product during its entire lifecycle, from launch to disposal. The creation of a Hybrid Twin™, leveraging simulation, physics and data analytics, enables manufacturers to deliver smarter and connected products, to predict product performance and to anticipate maintenance needs.

http://www.esi-group.com/
Conference Programme:

Gain insight into case studies from leading international companies, join our round-table discussions, interactive sessions and evening workshops in this 2-day exclusive event for automotive NVH experts.

Following topics will be covered:

**Automotive Noise Challenges & Solutions**

- Psychoacoustics, sound branding and balance between refinement and acoustic character
  - Individuals’ perception of NVH
  - Sound representation and emotional response
  - Can sportiness and refinement coexist?
  - Marketing the sound and sound branding while meeting legislative standards
  - The role of sound masking in acoustic design

- Reconciliation of vehicle performance with legal requirements for pass-by noise regulation
  - External noise regulation
  - Tyre dynamics, tyre noise reduction & mitigation
  - Sound character and noise regulations

- Active & adaptive exhaust systems
  - Is loudness the only measure of performance?
  - Alternative approaches to the development of desirable sound characteristics
  - Solutions to implementation challenges: mechatronics & adaptive systems
  - Enhancement & replacement of motor sound with other sources

- NVH in chassis, powertrain & body engineering
  - Developments in multi-body dynamics NVH modelling of vehicle systems
  - TPA techniques
  - Structural dynamics
  - Target setting, cost-effective NVH development and integration
  - Mitigation or enhancement – the role of active systems in acoustics and vibration

**NVH Integration & Attribute Balancing**

- Full NVH simulation, testing & validation
  - Advanced CAE-based methodologies for acoustics and vibration comfort

- Full vehicle NVH simulation from early concept design stage
  - CAE for reduction of project time
  - Hardware-in-the-loop and person-in-the-loop experiences
  - Cross-attributes balancing and NVH enablers
  - New testing tools
  - Delivery process

- Aero-acoustics
  - Duct acoustics: wave propagation, sound generation mechanisms, flow noise suppression
  - Simulation: models, methods and tools
  - Case studies: supercharged and turbocharged induction systems and exhaust systems
  - Transmission of airborne noise into vehicle interiors
  - CFD, statistical energy analysis and alternative tools
  - Wind noise measurement technologies
  - Application of Active Noise Technology to aero-acoustic problems

- Combined optimization of acoustic and thermal performance attributes
  - Engine bay acoustics and thermal performance: conflict or complement?
  - NVH solutions in the vehicle’s air conditioning system
  - Thermo-acoustics applications in the automotive world
  - How to achieve optimal combination of attributes

- Cost-effective co-operation between OEMs, suppliers and development partners
  - Communicating the NVH requirements for the whole project
  - The NVH business case: investments & unit costs, NVH payback
  - Design of win-win solutions

- Active sound technologies versus passive NVH solutions
  - Advanced Active Noise Cancellation technologies

- Passive efficiency: what does State-of-the-Art look like?
- Active sound technologies versus passive NVH solutions

**NVH in Vehicle Electrification**

- Acoustic requirements for EVs and HEVs
  - E-driveline development
  - NVH trends and challenges
  - Interior and exterior EV acoustic and vibration challenges: alternative approaches
  - HEVs: smart managing NVH in the transitions between EV mode and ICE mode

- Sound quality in a high performance EV
  - Electrified propulsion: NVH strategies across the full frequency range
  - EVs: what does “high performance” sound like?
  - Lean & mean: vehicle efficiency while meeting EV sound challenges

- Design of advanced pedestrian alert systems
  - Vehicle sounds and the requirements of visually impaired pedestrians
  - Minimising environmental noise pollution
  - Intelligent alert systems and alternative solutions

**Structural Dynamics & Materials Science**

- Innovative and cost-efficient structures and materials
  - E-driveline development
  - NVH trends and challenges
  - Interior and exterior EV acoustic and vibration challenges: alternative approaches
  - HEVs: smart managing NVH in the transitions between EV mode and ICE mode

- Challenges and solutions with lightweight NVH enablers
  - Lightweight NVH efficiency
  - Intelligent use of mass and stiffness
  - Requirements for effective acoustic damping
  - Isolation and attenuation strategies

**NVH in Autonomous Vehicles**

- NVH challenges in driver-assisted and fully autonomous vehicles
  - Driver assistance systems trends and NVH challenges
  - Consequences for NVH of the arrival of autonomous vehicles
  - What should my car sound like when I’m not driving it myself?
  - NVH solutions in autonomous vehicles

**EVENING WORKSHOPS**

**Workshop A:** NVH in Downscaled Turbo-Charged Engines  
**Workshop B:** Passive NVH Solutions versus Active Sound Technologies  
**Workshop C:** Noise Optimisation for Electric & Hybrid Vehicles  
**Workshop D:** Full Vehicle NVH Simulation & Testing

*Workshops A and B are running in parallel on the 30th of September 2019 and Workshops C and D are running in parallel on the 1st of October 2019. Our workshops are an excellent opportunity for networking and deep insight concerning the listed topics. Led by the workshop leader, the aim of this 1.5-hour session is to offer the participants the chance to interact with their peers, to raise questions and share views and opinions in a targeted participant field.*
Delegate participation packages

<table>
<thead>
<tr>
<th>Conference Packages</th>
<th>Early-Early Bird Discount Price until 17th May</th>
<th>Early Bird Discount Price until 31st of August</th>
<th>Standard Price from 1st of September (upon availability)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premium Package (2-day conference + 2 workshops)</td>
<td>£915 + VAT</td>
<td>£1,025 + VAT</td>
<td>£1,280 + VAT</td>
</tr>
<tr>
<td>Upgraded Package (2-day conference + 1 workshop)</td>
<td>£870 + VAT</td>
<td>£980 + VAT</td>
<td>£1,220 + VAT</td>
</tr>
<tr>
<td>Basic Package (2-day conference)</td>
<td>£760 + VAT</td>
<td>£870 + VAT</td>
<td>£1,070 + VAT</td>
</tr>
</tbody>
</table>

Evening Networking Event & Dinner on the 30/09/2019 (Price £100 + VAT) □ Yes □ No
(Evening networking event & formal dinner including drinks and music entertainment on the 30th of September)

Please choose evening workshop(s) on the 30th of September and/or the 1st of October 2019:
30/09/2019 □ Workshop A: NVH in Downsized Turbo-Charged Engines
30/09/2019 □ Workshop B: Passive NVH Solutions versus Active Sound Technologies
01/10/2019: □ Workshop C: Noise Optimisation for Electric & Hybrid Vehicles
01/10/2019: □ Workshop D: Full Vehicle NVH Simulation & Testing

NOTE: Workshops A and B on the 30th September as well as C and D on the 1st of October run simultaneously

Delegate Details:
Title: □ Mr □ Mrs □ Dr □ Prof
First Name: __________________________ Last Name: __________________________
Job Title: __________________________ Department: __________________________
Email: __________________________ Telephone: __________________________

Payment must accompany this registration form. Registration will be confirmed only on receipt of full payment.

Payment Details
Billing Address:
Contact Person (Fill out only if contact person is different from delegate):
First Name: __________________________ Last Name: __________________________
Email: __________________________ Telephone: __________________________
Organisation: __________________________
Address: __________________________
Postcode/Town: __________________________ Country: __________________________
Approving Manager: __________________________
Signature: __________________________

I agree to Internect Limited payment terms.

Payment Methods
☐ PAY BY BANK TRANSFER QUOTING REFERENCE NVH FORUM
Payment details will be sent with invoice.

☐ PAY BY CREDIT CARD: □ VISA □ AMEX □ MA □ DIS □ MCB
For payment by credit card please call us at: +44 1618 841 208, +44 161 768 0059
*The ban on credit card fees within the EU applies to consumers and not to companies. Please note that we only accept company credit/debit card payments.

Ways to Register:
Online: https://www.internect.co.uk/content/3/international-forum-autorotive-acousticsvibration-nvh-2018-
ref=500automotive-acousticsvibration-nvh-2018-ref=500
Email: Please send completed scanned booking form to info@internect.co.uk
or fax it to +44 1618841287
Phone: +44 1618 841 208, +44 161 768 0059

For event enquiries please call +44 1618 841 208, +44 161 768 0059 or email info@internect.co.uk

For more information on how to claim your discount.

Conference Location & Accommodation:
Radisson Blu Hotel
Manchester Airport Chicago Avenue, Manchester Airport M90 3RA, United Kingdom

Conference delegates may take advantage of a limited number of rooms at a reduced rate at the conference hotel by booking until the 16th of August 2019.
Please go to our website at: https://www.internect.co.uk/content/3/international-forum-autorotive-acousticsvibration-nvh-2018-ref=500
for more information on how to claim your discount.

PAYMENT & CANCELLATION POLICY ATTENDANCE AT THE EVENT WILL ONLY BE CONFIRMED WITH PAYMENT RECEIVED IN FULL AND MAY BE SUBJECT TO CANCELLATION BY INTERNECT. PAYMENT BY BANK TRANSFER MUST BE RECEIVED WITHIN 5 WORKING DAYS FROM THE DAY OF REGISTRATION. THE REGISTRATION FEE DOES NOT INCLUDE TRAVEL AND ACCOMMODATION COSTS. YOU ARE WELCOME TO SUBSTITUTE DELEGATES AT ANY TIME BY PROVIDING ADVANCE NOTICE TO INTERNECT. IN THE EVENT THAT INTERNECT CANCELS OR POSTPONES AN EVENT FOR ANY REASON, A CREDIT TO THE VALUE PAID WILL BE ISSUED WHICH MAY BE USED FOR A RESCHEDULED DATE FOR THE CONFERENCE, IF APPLICABLE, OR ANOTHER INTERNECT CONFERENCE FOR UP TO 2 YEARS FROM ITS DATE OF ISSUE. EXCEPT AS SPECIFIED ABOVE, NO CREDITS OR REFUNDS WILL BE ISSUED FOR CANCELLATIONS, POSTPONEMENTS OR ALTERATIONS. IT MAY BE BEYOND THE CONTROL OF INTERNECT OR AS MAY BE DEEMED NECESSARY BY INTERNECT MANAGEMENT, TO BE IN THE BEST INTEREST OF THE CONFERENCE GENERAL, TO ALTER THE PROGRAMME WITHOUT NOTICE INCLUCING THE SUBSTITUTION, ALTERATION OR CANCELLATION OF SPEAKERS, TOPICS OR THE ALTERATION OF THE DATES AND VENUE OF THE EVENT. INTERNECT RESERVES THE RIGHT TO MAKE SUCH ALTERATIONS AND CANCELLATIONS, SUCH ALTERATIONS WILL BE UPDATED ON OUR WEBSITE. INTERNECT SHALL ASSUME NO LIABILITY WHATSOEVER IN ANY WAY RELATED TO THE EVENT THIS CONFERENCE IS CANCELLED, RESCHEDULED, POSTPONED OR ALTERED.

PERSONAL DATA INTERNECT GATHERS YOUR PERSONAL DATA IN ACCORDANCE WITH THE GENERAL DATA PROTECTION REGULATION (GDPR) AND THE DATA PROTECTION ACT 2018.

© INTERNECT LIMITED