

NOISE, VIBRATION AND HARSHNESS 2018 MEASUREMENT, ANALYSIS AND DESIGN FOR COMPLEX SYSTEMS

Institution of
**MECHANICAL
ENGINEERS**

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30 MARCH 2018

Seminar

22 May 2018
Birmingham

KEY SPEAKERS INCLUDE:

Marcus Potter, Head of Mobility
BAE Systems Land

Sean Biggs, Principal Technical Specialist,
Manual Transmissions and Inline Automatic
Transmissions
Jaguar Land Rover

Kian Banisoleiman, Principal Consultant, Analysis/
Hull – Section Leader, Marine Consulting
Lloyds Register

Robin Wareing, Global Mechanical and Vibration
Specialist
Cummins Generator Technologies

Simon Tate, Manager NVH Department
Ricardo UK



EXHIBITORS:



SUPPORTING ORGANISATION:



EVENT PARTNER:



Save 10% before 30 March 2018 www.imeche.org/nvh2018

NOISE, VIBRATION AND HARSHNESS 2018 MEASUREMENT, ANALYSIS AND DESIGN FOR COMPLEX SYSTEMS

22 May 2018, Birmingham

SPECIALIST NOISE AND VIBRATION ENGINEERS ARE CONSTANTLY ASSESSING METHODS TO REDUCE NOISE, VIBRATION, PREVENT ASSOCIATED WEAR AND IMPROVE THE CUSTOMER EXPERIENCE. THIS SEMINAR WILL ADDRESS THE CHALLENGES IN DESIGN, MEASUREMENT AND ANALYSIS OF NOISE, VIBRATION AND HARSHNESS ACROSS COMPLEX SYSTEMS.

With case studies across road vehicles, military vehicles, aerospace transport, power generation and marine contexts, join the only UK event bringing together noise industry specialists from different sectors.

Learn how engineers are effectively measuring and analysing their complex systems from a NVH perspective. Explore how computer aided engineering can be used effectively for NVH specific applications. Network with thought leaders and decision makers across noise and vibration engineering and learn new approaches to meet your vibro-acoustic targets.

ATTEND THIS EVENT TO:

- **Gain** unique access to NVH specialists across multiple industries
- **Hear** from leading manufacturers about their targets and standards and how these are being met
- **Understand** different approaches to methods of measurement and analysis of noise and vibration
- **Learn** how to optimise products from a noise and vibration perspective at design stage
- **Network** with cross industry experts with knowledge of industry requirements and the solutions and technologies available

2018 ADVISORY BOARD:

Stephanos Theodossiades,
Professor of Non-Linear Dynamics,
Loughborough University

KEY PROGRAMME HIGHLIGHTS:

- An insight into using Computer Aided Engineering for NVH applications from **Jaguar Land Rover**
- Understand how military vehicle NVH targets are being met from **BAE Systems**
- Tuning an exhaust for sound quality by subjective assessment of acoustic Computer Aided Engineering data from **Horiba MIRA**
- Impact of vibrations in ship propulsion systems from **Lloyds Register**
- Targeted Energy Transfer and the use of strong nonlinearity in design from the **University of Illinois**

BOOK EARLY AND SAVE UP TO 10%
OFFER ENDS 30 MARCH 2018

TERMS AND CONDITIONS APPLY

PROGRAMME

22 MAY 2018	
08:30	REGISTRATION AND REFRESHMENTS
09:00	CHAIR'S OPENING REMARKS Stephanos Theodossiades, Professor of Non-Linear Dynamics, Loughborough University
NOISE AND VIBRATION IN COMPLEX SYSTEMS	
09:10	MEETING NOISE, VIBRATION AND HARSHNESS REQUIREMENTS FOR MILITARY VEHICLES AND THE ASSOCIATED CHALLENGES Marcus Potter, Head of Mobility, BAE Systems Land
09:40	IMPACT OF VIBRATIONS IN SHIP PROPULSION SYSTEMS Kian Banisoleiman, Principal Consultant, Analysis/Hull – Section Leader, Marine Consulting, Lloyds Register
10:10	QUESTION AND ANSWER SESSION
10:20	PANEL: MANAGING THE CONFLICTING REQUIREMENTS OF NOISE AND VIBRATION WITH EFFICIENCY <ul style="list-style-type: none"> • Understanding the requirements from different engineering perspectives • Meeting industry targets and customer expectations • Innovations and approaches to balancing requirements going forward
10:55	NETWORKING REFRESHMENT BREAK
MEASUREMENT, ASSESSMENT AND MODELLING	
11:25	NVH REQUIREMENTS FOR 3 TO 7400 KVA ALTERNATORS IN THE POWER GENERATION MARKETS Robin Wareing, Global Mechanical and Vibration Specialist, Cummins Generator Technologies
11:55	POWERTRAIN NOISE, VIBRATION AND HARSHNESS: WHY USE COMPUTER AIDED ENGINEERING? Sean Biggs, Principal Technical Specialist, Manual Transmissions and Inline Automatic Transmissions, Jaguar Land Rover
12:25	TUNING AN EXHAUST FOR SOUND QUALITY BY SUBJECTIVE ASSESSMENT OF ACOUSTIC COMPUTER AIDED ENGINEERING DATA Mudassir Farooq, Senior Engineer, Horiba MIRA
12:55	QUESTION AND ANSWER SESSION
13:05	NETWORKING LUNCH
DYNAMIC APPROACHES TO DESIGN	
14:05	AN INVESTIGATION INTO DAMPING PROPERTIES OF ENGINEERING MATERIALS Simon Tate, Manager NVH Department, Ricardo UK
14:35	TARGETED ENERGY TRANSFER: INTENTIONAL USE OF STRONG NONLINEARITY IN DESIGN Lawrence Bergman, Professor Emeritus and Research Professor, Department of Aerospace Engineering, University of Illinois
15:05	NVH AND TARGETED ENERGY TRANSFER FOR AUTOMOTIVE POWERTRAIN APPLICATIONS Panagiotis Alevras, Research Associate, Loughborough University Martin O'Mahony, Application Specialist Drivetrain Systems Engineering, Ford Motors Ahmed Haris, CAE Engineer, AVL Powertrain UK
15:35	QUESTION AND ANSWER SESSION
15:45	NETWORKING REFRESHMENT BREAK
16:15	ROUNDTABLE DISCUSSIONS <ul style="list-style-type: none"> • How can engineers manage directly conflicting requirements of NVH and efficiency? • Effective use of NVH optimisation tools for improved applications • Approaches to meeting the ongoing challenges of electrical and hybrid vehicle acoustics • NVH as part of customer perception of vehicle quality and the impact on engineers
17:05	ROUNDTABLE FEEDBACK
17:20	CHAIR'S CLOSING REMARKS
17:30	END OF SEMINAR

Co-located with:



HIGH PERFORMANCE POWERTRAINS

22 May 2018, Birmingham

Learn about the latest developments in high performance powertrains, looking at innovations from motorsport, high performance road vehicles and mass-market vehicles.

www.imeche.org/HPP2018

For the most up-to-date and detailed programme for the event, please visit www.imeche.org/nvh2018

- This programme is subject to change.
- The Institution is not responsible for the views or opinions expressed by individual speakers.

HOW TO BOOK YOUR PLACE

FEES AND CHARGES

Registration fees include entry to the sessions, refreshments and a copy of the conference proceedings.

Seminar and Workshop	Early Bird Rate Until 30 March 2018	Standard Rate
Member, IMechE/supporting organisation	£280 + VAT = £336	£320 + VAT = £384
Non-member	£390 + VAT = £468	£430 + VAT = £516
Student/Retired	£90 + VAT = £108	£100 + VAT = £120

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THREE WAYS TO BOOK

- 1 Online:
www.imeche.org/nvh2018
- 2 Email:
eventenquiries@imeche.org
- 3 Phone:
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Please read the information listed below as each booking is subject to the Institution's standard terms and conditions.

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Completed application forms should be returned to the address above, along with the correct payment. Attendance at the event will be confirmed on receipt of the full balance. All participants are advised to bring a copy of their confirmation with them on the day, to ensure the fastest possible entry.

SPECIAL REQUIREMENTS

Please inform us of any special requirements, ie dietary or access, on the relevant section of the booking form or email eventenquiries@imeche.org

CANCELLATION

For a refund (minus £25+VAT admin charge), cancellations must be received at least 30 days prior to the event. Replacement delegates are welcome at any time. The Institution reserves the right to cancel any event. In this case, the full fee will be refunded unless a mutually convenient transfer can be arranged. In the event that the

Institution postpones an event for any reason and the delegate is unable or unwilling to attend on the rescheduled date, they will receive a full refund of the fee paid. The Institution is not responsible for any loss or damage as a result of a substitution, alteration or cancellation/postponement of an event. The Institution shall assume no liability whatsoever if this event is cancelled, rescheduled or postponed due to a fortuitous event, Act of God, unforeseen occurrence or any other event that renders performance of this conference impracticable, illegal or impossible. For the purposes of this clause, a fortuitous event shall include, but not be limited to: war, fire, labour strike, extreme weather or other emergency.

Please note that while speakers and topics were confirmed at the time of publishing, circumstances beyond the control of the organisers may necessitate substitutions, alterations or cancellations of the speakers and/or topics. The Institution reserves the right to alter or modify the advertised speakers and/or topics if necessary without any liability to you whatsoever. Any substitutions or alterations will be updated on the event's webpage as soon as possible.

LIABILITY

The organisers do not accept liability for any injuries or losses of any nature incurred by delegates and/or accompanying persons, nor for loss or damage to their luggage and/or personal belongings.

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13TH INTERNATIONAL CONFERENCE ON TURBOCHARGERS AND TURBOCHARGING

16-17 May 2018, London

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www.imeche.org/turbo



HIGH PERFORMANCE POWERTRAINS

22 May 2018, Birmingham

Learn about the latest developments in high performance powertrains, looking at innovations from motorsport, high performance road vehicles and mass-market vehicles.

www.imeche.org/HPP2018

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