MONDAY 23 APRIL 2018

09:00 Registration and refreshments – Lower Hall

ROOM 1 - ASSEMBLY ROOM

09:35 Welcome by Prof Barry Gibbs, President-Elect, Institute of Acoustics
09:40 Introduction to the benefits of the UK Acoustic Network, Prof Kirill Horoshenkov, University of Sheffield
09:50 (Sessions in Room 1, 2 & 3)

ROOM 1 - ASSEMBLY ROOM

ENVIRONMENTAL NOISE Chair: David Waddington

10:00 Noise Policy in Wales
Martin McVay, Joanne Smith, Welsh Government

10:30 Updating the synergies and conflicts between air quality and noise action planning
Nigel Jones, Matthew Burdett, Extrium; Simon Shilton, Acustica; Richard Maggs, Bureau Veritas

11:00 The future of strategic noise mapping-intelligent design to support intelligent policy
Matthew Burdett, Nigel Jones, Extrium

11:30 Refreshments

12:00 Rayleigh Medal Lecture 2018 - On track for a quieter future
David J Thompson, ISVR, University of Southampton

13:00 Lunch – Exhibition – Lower Hall

13:45 Environmental Noise Group AGM – Room 1

ENVIRONMENTAL NOISE Chair: Steve Mitchell

14:00 BS4142;2014 context and case studies
Jon Tofts, Environment Agency

14:30 Perceptual testing of BS4142:2014 character corrections
Rahiel Ghani, David Waddington, University of Salford

15:00 Evaluation of the subjective method in BS4142:2014 for sound characteristics
Shanti Wisniewska, Jacobs

15:30 Refreshments – Lower Hall

ENVIRONMENTAL NOISE Chair: David Waddington

16:00 A step-by-step guide to evaluating the prominence of impulsive sounds from an audio recording
Naomi Tansey, Arup; Matt Torjussen, noise.co.uk

16:30 Using planning conditions to improve indoor environmental quality (IEQ) of new residential developments
Nick Conlan, Jack Harvie-Clark, Apex Acoustics

17:00 An integrated assessment of acoustic, ventilation and overheating conditions for dwellings
Anthony Chilton, Max Fordham; Jack Harvie-Clark, Apex Acoustics; James Healey, WSP

17:30 Close

17.45 **IOA Young Members Group** invite all Young Members and Students to a "**Happy Hour**" sponsored by Pliteq at **33 Windsor Place**, a short walk from the City Hall.

City Hall – Assembly Room

19:00 Drinks Reception - 19:30 Conference Dinner - Awards followed by entertainment by Roger Kelly

MONDAY 23 APRIL 2018

ROOM 2 - FERRIER HALL

NOISE AND VIBRATION ENGINEERING Chair: Sarah Haynes

10:00 Life cycle evaluations of railway turnout crossings impact attenuation methods using soft fasteners and composite sleepers
Sakdirat Kaewunruen, M Sechet, M Hamarat, K Goto, University of Birmingham

10:30 Assessment mitigation and prediction of gymnasium noise background
James Bligh, Pliteq

11:00 Assessing the vibro-acoustic radiation characteristics of a compact consumer appliance
Daniel Taylor, Dyson

11:30 Refreshments – Lower Hall

12:00 Rayleigh Medal Lecture 2018 - On track for a quieter future – Room 1
David J Thompson, ISVR, University of Southampton

13:00 Lunch – Exhibition – Lower Hall

13:45 **Noise and Vibration Engineering Group AGM – Room 2**

NOISE AND VIBRATION ENGINEERING Chair: Malcolm Smith

14:00 Substructuring approach and blocked forces method: application for structure-borne vibration prediction in heavy weight assemblies
Diego Miguez, O Farrel, l M Bannister, R Arbabi, Farrat Isolevel; Andy T Moorhouse, Andrew S Elliott, University of Salford

14:30 Vibration isolation performance for industrial metal forming presses
Chad N Himmel, JEAcoustics, USA

15:00 Challenges in monitoring construction noise in live Royal Opera House during open up project
Tomasz Galikowski, Peter Henson, Bickerdike Allen Partners

15:30 Refreshments – Lower Hall

NOISE AND VIBRATION ENGINEERING Chair: Nathan Thomas

16:00 Measurements of hockey ball hitting backboards covered by different materials
Jack Harvie-Clark, Weigang Wei, Adam Cooks, Apex Acoustics

16:30 Industrial applications of acoustic metamaterials
Nicolas Etaix, Dyson

17:00 Lateral vibrations of curved railway tracks to transient excitations
Sakdirat Kaewunruen, Chayut Ngamkhanong, Xin Liu, University of Birmingham

17:30 Close

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MONDAY 23 APRIL 2018

ROOM 3 - COUNCIL CHAMBER

PHYSICAL ACOUSTICS Chair: Mike Swanwick

10:00 Acoustic metamaterials for low frequency industrial applications
Daniel Elford, Luke Chalmers, Richard D Wilson, Karol Bugaj, Sonobex Limited

10:30 Influence of flare variation on the low frequency sound absorption of mufflers based on the "acoustic black hole effect"
Neha Sharma, Olga Umnova, Andy Moorhouse, University of Salford

11:00 Interaction of high amplitude waves with acoustic metamaterials
Daniel Brooke, O Umnova, A S Elliott, University of Salford; P Leclaire, T Dupont, University of Burgundy, France

11:30 Refreshments – Lower Hall

12:00 Rayleigh Medal Lecture 2018 - On track for a quieter future – Room 1
David J Thompson, ISVR, University of Southampton

13:00 ***Lunch – Exhibition – Lower Hall***

13:45 Physical Acoustics Group AGM – Room 3

PHYSICAL ACOUSTICS Chair: Mike Swanwick

14:00 Development of an optimal array of sensors for the reconstruction of a rigid rough surface based on scattered ultrasound
Giulio Dolcetti, Anton Krynkin, University of Sheffield

14:30 Approximation to wave propagation through periodic array in poro-elastic medium
Anton Krynkin, University of Sheffield, Jean-Philippe Groby, Universite du Maine, France

15:00 Acoustic emission spectra associated with the formation of brittle cracks
Victor V Krylov, Loughborough University

15:30 Refreshments – Lower Hall

PHYSICAL ACOUSTICS Chair: Mike Swanwick

16:00 Tailored acoustic filtering and absorption using compound rigid gratings
Tim Starkey, J G Beadle, G P Ward, J D Smith, J R Samble, A P Hibbins, Exeter University

16:30 Influence of activation processes on the activated carbon felts microstructure and impact on the acoustic performances
Hugo Karpinski, O Umnova, J A Hargreaves, University of Salford; R Venegas Castillo, C S Lehmann Fernandez, Carbon Air Ltd; M A Nahil, University of Leeds

17:00 What is the actual influence of a nano-fibrous membrane on the acoustical property of porous substrate?
Kirill V Horoshenkov, A Hurrell, M Jiao, University of Sheffield; M Pelegrinis, John Cotton Group

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City Hall – Assembly Room
19:00 Drinks Reception - 19:30 Conference Dinner - Awards followed by entertainment by Roger Kelly

TUESDAY 24 APRIL 2018

ROOM 1 - ASSEMBLY ROOM

BUILDING ACOUSTICS Chair: James Healey

09:00 An audio demonstration of how our ears are more sensitive to changes in low frequency noise, and of how lightweight constructions can perform well at low frequencies
Roger Kelly, CDM-UK

09:30 Engineering of fitness centre floors on structural slabs with a fundamental frequency <10Hz
Matthew Harrison, Buro Happold

10:00 Overview of the sound insulation design of the Royal Birmingham Conservatoire
Michael Whitcroft, Hoare Lea Acoustics

10:30 The impact of classroom noise on reading comprehension of secondary school pupils
Bridget Shield, R Conetta , London Southbank University; D Connolly, J Dockrell, UCL; Trevor Cox, Charlie Mydlarz, University of Salford

11:00 Refreshments Lower Hall

BUILDING ACOUSTICS Chair: Roger Kelly

11:30 Acoustic quality of open office spaces
Andrew Parkin, Cundall

12:00 Towards the acoustical characterisation of an intensive care unit
Deborah Dawson, M Hamilton, B Philips, St Georges University Hospital; R Barham, Acoustic Sensor Networks;

12:30 Confidence in room acoustic design: an empirical approach
Jack Harvie-Clark, Apex Acoustics

13:00 Setting the tone for the visit: the use of soundscapes in museum foyers for increasing visitor engagement
Angus Deuchars, Arup

13:30 Building Acoustics Group AGM - Room 1

13:45 Lunch – Exhibition – Lower Hall

WIND FARM NOISE Chair: Gavin Irvine

14:30 Wind turbine noise amplitude modulation penalty considerations
Malcolm Hayes, Hayes McKenzie Partnership; Gavin Irvine, Ion Acoustics; Matthew Cand, Hoare Lea Acoustics; Dick Bowdler, Consultant

15:00 Site experience with wind turbine noise AM analysis
Matthew Cand, Hoare Lea; Malcolm Hayes, Tom Levet, Hayes McKenzie Partnership; Gavin Irvine, Ion Acoustics

15:30 A short history of the dangers of infrasound
Dick Bowdler, Consultant

16:00 Revision of the German recommendation (LAI-Notes) for the application of ISO9613-2 in windfarm sound propagation calculations
Sylvia Broneske, Krispian Lowe, Innogy Renewables UK; Sabine Schulz, UL DEWI, Germany

16:30 Close and Refreshments

TUESDAY 24 APRIL 2018

ROOM 2 - FERRIER HALL

INSTRUMENTATION CORNER LIVE - Chair: James Tingay

This morning session is prepared and presented by members of the Measurement and Instrumentation Group Committee and will bring to life many issues specific to instrumentation and its use. As many of the presenters are instrumentation experts, they have found collectively that there are several recurring problems faced by acousticians often caused by limitations of the technology that might not be fully understood!

09:00 Standards
James Tingay, Cirrus Research

09:30 Measurements Range and Dynamic Range
Simon Bull, Castle Group

10:00 Digital recording formats and their use and limitations in post analysis
Mark Dowie, Bruel & Kjaer UK

10:30 Measuring Ln's (broadband and 1/3 octave)
Simon Bull, Castle Group

11:00 ***Refreshments – Lower Hall***

INSTRUMENTATION CORNER LIVE - Chair: Simon Bull

11:30 Calibration – have you been set up?
Glynne Parry, Consultant

12:00 Windshields and their use/abuse
John Shelton, AcSoft

12:30 App-based measurements
James Tingay, Cirrus Research

13:00 Considerations for vibration transducers –geophone or accelerometers
John Shelton, AcSoft

13:45 ***Lunch – Exhibition – Lower Hall***

MEASUREMENT AND INSTRUMENTATION - Chair: John Shelton

14:30 Sound intensity: what it is, how to measure it and practical applications
John Campbell, Campbell Associates

15:00 Thermal acoustic testing of heating, ventilation and air conditioning products
Rebecca Hogg, BSRIA

15:30 Assessing rail-induced vibration in terms of VDV
Jorge DeAvillez, Saif Bunni, WSP

16:00 ***Close and Refreshments***

TUESDAY 24 APRIL 2018

ROOM 3 - COUNCIL CHAMBER

MUSICAL ACOUSTICS Chair: Michael Wright

09:00 Vibro-electric transfer path analysis of a solid body electric guitar
Andrew Elliott, University of Salford; Jonathan Magill, Marshall Amplification; Paul Kendrick, University of Salford

09:30 The effects of centrifugal blowers and reservoir resonance on organ pipe flutter
Alan J Taylor, University of Salford

10:00 Perceptual investigations of acoustic and digitally emulated violins based on controlled listening studies
Thomas Lloyd, P Gaydecki, University of Manchester; J Ginsborg, C Yates, Royal Northern College of Music; H Johannsson, Johannsson Violins, Iceland

11:00 Refreshments – Lower Hall

ROOM 3 - COUNCIL CHAMBER

SPEECH AND HEARING Chair: Gordon Hunter

11:30 The impact of hearing loss on physical health and cognition
Bridget Shield, London Southbank University

12:00 Singing and Loudness: a short study at the Royal Opera House
Stephen Dance, John Bernays, Samantha Liu, London South Bank University

12:30 Workplace noise, hearing protection and HSE's approach on risk reduction
Chris Steel, T Wu, P Delderfield, Health & Safety Executive

13:00 Enhancing automatic speech recognition for mathematical applications via incremental parsing
Gordon Hunter, Marina Isaac, Eckhard Pflugel, James Denholm-Price, Kingston University

13:30 Lunch – Exhibition – Lower Hall

16:00 Close and Refreshments

1400 ROOM 3 COUNCIL CHAMBER
EPSRC UK Acoustics Network Steering Committee Meeting - by invitation only

16:00 Close and Refreshments

POSTER PRESENTATIONS - Lower Hall

Measurements of hockey ball hitting backboards covered by different materials
Jack Harvie-Clark, Weigang Wei, Adam Cooke, Apex Acoustics

Lateral vibrations of curved railway tracks to transient excitations
Sakdirat Kaewunruen, Chayut Ngamkhanong, Xin Liu, University of Birmingham

Progress in platforms for real-time emulation of the acoustic violin
Patrick Gaydecki, Thomas Lloyd, University of Manchester; Sheheera Ismail, AMS Neeve

Real-time prediction of structure borne noise using in-situ transfer path analysis
Lucy Barton, Andrew Elliott, Andy Moorhouse, University of Salford, John Smith, DSTL

Active cancellation and enhancement of noise with two identical ducts using an Arduino Due
Jayjun Lee, NLCS, North Korea

Assessment of ground borne vibration from underground trains on proposed residential development
Luis Gomez-Augustina, Jerry Rees, London South Bank University

Active control of engine order noise in a car using an electronic sound generator
Young –Sup Lee, Incheon National University, Korea

Tracheal sound acquisition using laser Doppler vibrometer
Haydar Aygun, London South Bank University, A Apolskis, SOCOTEC UK

High speed photography as a tool for musical instrument research
Alan Woolley, D M Campbelll, A Lopez-Carromero, University of Edinburgh