

ACOUSTICS 2019

13-14 MAY 2019, DOUBLETREE BY HILTON, STADIUM WAY WEST, MILTON KEYNES



ROOM 1

- 08:30 Registration and refreshments
- 09:30 Welcome – Barry Gibbs, President, Institute of Acoustics
- 09:45 Change Rooms

ENVIRONMENTAL NOISE

- WHO Guidelines Session – Chair: Steve Mitchell, ERM
- 10:00 Development of the WHO Environmental Noise Guidelines for the European Region 2018
Stephen Stansfeld, Queen Mary University of London
- 10:30 Current assessment of health effects, and how this may change in light of the WHO Guidelines
Ben Fenech, Public Health England
- 11:00 WHO Environmental Noise Guidelines for the European Region 2018: What do the new guidelines mean for practitioners and decision makers?
Rupert Thornely-Taylor, Rupert Taylor
- 11:30 Refreshments
- 12:00 R.W.B. Stephens Medal Lecture: Research, teaching and practice in architectural acoustics
Raf Orłowski, Ramboll Acoustics
- 13:00 Lunch
- 13:45 Environmental Noise AGM
- Tranquility Session – Chair: David Waddington, University of Salford
- 14:00 Positive sound environments: a case for evolving acoustic terminology
Peter Rogers, Sustainable Acoustics
- 14:30 DeStress: Soundscapes, quiet areas and restorative environments
Sarah Payne, Neil Bruce, Heriot-Watt University
- 15:00 Tranquil City: embracing calm for healthier city living
Grant Waters, Tranquil City
- 15:30 Refreshments
- Planning Session – Chair: David Waddington, University of Salford
- 16:00 Environmental Net Gain – possible metrics for integrating acoustics for planning
Mike Barrett, BWB Consulting
- 16:30 Aircraft Noise Policy: An update on the DfT consultation on the aviation strategy and how it may change airport noise management and planning
Steve Mitchell, ERM
- 17:00 A comparison of low frequency noise criteria
Jon Tofts, Environment Agency
- 17:30 CLOSE
- 18:00 IOA AGM
- 19:00 Drinks Reception followed by Conference Dinner at 19:30

ROOM 2

MEASUREMENT & INSTRUMENTATION

- INSTRUMENTATION CORNER LIVE – Chair: John Shelton, AcSoft
- 10:00 Parameters of vibration measurement, and vibration calibration
John Shelton, AcSoft
- 10:30 An introduction to acoustic measurement parameters
Mark Dowie, Bruel & Kjaer UK
- 11:00 Field calibration of your sound level meter – with corrections
Richard Tyler, Consultant
- 11:30 Refreshments
- 12:00 R.W.B. Stephens Medal Lecture (ROOM 1)
- 13:00 Lunch
- 13:45 Measurement & Instrumentation AGM
- Chair: Sue Dowson
- 14:00 How important are specification standards for acoustical instruments?
Sue Dowson
- 14:30 Legal metrology aspects of sound and vibration regulations; how do we ensure we get it right?
Ian Campbell, Campbell Associates
- 15:00 Specifying CE marked road noise barriers
Giles Parker, Sound Barrier Solutions
- 15:30 Refreshments
- Chair: Mark Dowie, Bruel & Kjaer UK
- 16:00 Distributed sound monitoring for urban noise problems
Ben Piper, Acoustic Sensor Networks, Paul McDonald, Sonitus
- 16:30 Noise measurements in airflows
Steve Cawser, Aecom
- 17:00 Noise source identification techniques: simple to advanced array applications
Bernard Ginn, Bruel & Kjaer, Denmark
- 17:30 CLOSE

ROOM 3

Registration and refreshments (Room 1)
 Welcome – Barry Gibbs, President, Institute of Acoustics (Room 1)
 Change Rooms

PHYSICAL ACOUSTICS

Chair: Daniel Eford, Sonobex

10:00 Broadband slow sound on a glide-symmetric metasurface
 Joseph G Beadle, T Starkey, J R Sambles, A P Hibbins,
 University of Exeter

10:30 Mechanisms of acoustic surface wave generation by rigid cylinder arrays
 David L Berry, Universidad de Evora, Shahram Taherzadeh,
 Keith Attenborough, Open University

11:00 Acoustical performance of hard-backed layers incorporating slits and partitions
 Keith Attenborough, Open University

11:30 Refreshments

12:00 R.W.B. Stephens Medal Lecture (ROOM 1)

13:00 Lunch

13:45 Physical Acoustics AGM

Chair: Mike Swanwick, Rolls Royce

14:00 How many parameters do we need to model the acoustical properties of porous media accurately?
 Kirill Horoshenkov, University of Sheffield

14:30 On the uncertainties in outdoor sound propagation over a porous ground
 Jordan Parry, Kirill Horoshenkov, University of Sheffield,
 Duncan Williams, Dstl

15:00 Determining mechanical parameters of the bone using a vibro-acoustic method
 Haydar Ayyun, London South Bank University

15:30 Refreshments

Chair: Keith Attenborough, Open University

16:00 Understanding the vibro-acoustic behavior of infinite homogeneous and composite rods. The application for distributed optical fibre acoustic sensors
 Piotr Golacki, ISVR Consulting, D J Thompson, ISVR,
 University of Southampton

16:30 From light to sound: audible acoustic prisms
 Thomas J Graham, Gianluca Memoli, University of Sussex

17:00 Conservation laws for a non-linear system describing the evolution of third harmonic resonances of waves
 Mark C W Jones, Gordon J A Hunter, Kingston University

17:30 CLOSE

ROOM 1

BUILDING ACOUSTICS

Chair: Roger Kelly, CDM

10:00 Construction methods undertaken during the Royal Opera House Open-Up Project
 George Taylor, Adam Fox, Mason UK

10:30 How architectural design of stages influenced stage acoustic parameter values
 Iliaria Fichera, Luigi Marletta, Remy Wenmaekers, Cundall,
 University of Catania

11:00 The acoustic design of the Linbury Theatre
 Ned Crowe, Helen Butcher, Arup

11:30 Refreshments

12:00 Plenary Lecture:
 Value of acoustics to the UK economy
 John Lincoln, Harlin Ltd

13:00 Lunch

13:45 Building Acoustics AGM

Chair: Andrew Parkin, Cundall

14:00 Towards acoustic criteria for inclusion in mainstream classrooms
 Emma Greenland, Anderson Acoustics, Bridget Shield,
 London South Bank University

14:30 Noise pollution in hospitals: an intractable problem?
 Andreas Xyrichis, Kings College London, John Wynne,
 University of the Arts, London

15:00 Achieving floor vibration serviceability limits in healthcare buildings without impacting on flexibility of space planning
 Matthew Harrison, Buro Happold

15:30 Refreshments

Chair: James Healey, WSP

16:00 Assessing Lmax for residential developments: the AVO guide approach
 Anthony Chilton, Max Fordham, David Trew, Bickerdike Allen,
 Beth Paxton, Nick Conlan, Jack Harvie-Clark, Apex Acoustics

16:30 The Lombard effect in open plan offices
 Peter Leonard, Anthony Chilton, Max Fordham

17:00 Acoustics for open plan offices: developing the new ISO standard
 Jack Harvie-Clark, Apex Acoustics

17:30 CLOSE

ROOM 2

NOISE AND VIBRATION ENGINEERING

Chair: Malcolm Smith, University of Southampton

10:00 Dynamic analysis of a turnout system with moving train loads

Mehmet Zahid Hamarat, Sakdirat Kaewunruen, University of Birmingham

10:30 Effects of static and dynamic material properties on vibration responses of high speed railways

Ting Li, Qian Su, Southwest Jiaotong University, Sakdirat Kaewunruen, University of Birmingham

11:00 Re-engineering the Airblade V

Nathan Thomas, Kondwani Kanjere, Dyson

11:30 Refreshments

12:00 Plenary Lecture (ROOM 1)

13:00 Lunch

13:45 Noise & Vibration Engineering AGM

Chair: Nathan Thomas, Dyson

14:00 Application of dynamic sub structuring and in situ blocked force method for structure borne noise prediction in a reverberation room

Diego Miguez, O Farrell, M A Bannister, R Arbabi, Farrat Isolevel, A T Moorhouse, A S Elliott, University of Salford

14:30 Sound insulation predictions using the FDTD method

Celia Diaz Brito, Brian Hamilton, Stefan Bilbao, University of Edinburgh

15:00 Case Study: New Energy Centre at Marlowe Road Estate Regeneration – noise control design and ventilation strategy under an onerous planning condition

Josh H Wilson, RPS Group

15:30 Refreshments

Chair: Simon Stephenson, RPS Group

16:00 Reducing environmental noise from reactive plant on an electrical substation

Peter Barling, Simon Stephenson, RPS Group

16:30 Vibration integrity management, acoustic and finite element analysis and in field measurement of stress and vibration on onshore gas pipeline and re/depressurization facilities

Max Davies, Wood group

17:00 Prediction of impact noise and vibration generated by heavy impact sources on floors with elastomeric coverings

Martin McNulty, Nikhilesh Patil, Hoare Lea

17:30 CLOSE

ROOM 3

MUSICAL ACOUSTICS

Chair: David Sharp, Open University

10:00 Apparent asymmetry in discriminating between two closely spaced pitches

Richard Seaton, D Sharp, A Jones, D N Pim, Open University

10:30 A low frequency absorber design suitable for music recital halls

Stephen Dance, D Shearer, P Menin, London South Bank University

11:00 Pipe organ reservoir resonance

Alan J Taylor, University of Salford

11:30 Refreshments

12:00 Plenary Lecture (ROOM 1)

13:00 Lunch

Chair: Stephen Dance, London South Bank University

14:00 An investigation into the acoustics of the Odeion of Herodes Attikus

Eleni Tavelidou, Chris Barlow, Solent University

14:30 Establishing a spin-out business for consumer audio-effects products: sharing our experiences

Patrick Gaydecki, University of Manchester, Sheheera Ismail, AMS

15:00 Processing of multi-modal environmental signals recorded from a "smart" beehive

Gordon Hunter, D Howard, O Duran, R Busquets, Kingston University, S Gauvreau, ENSI-Caen, France

15:30 Refreshments

SPEECH AND HEARING

Chair: Gordon Hunter, Kingston University

16:00 Acoustic characteristics of Gibbon vocal source

Shi Yu, D Demolin, University of Sorbonne, France

16:30 Acoustic features of muriqui vocalizations

Didier Demolin, Sorbonne University, France, F D C Mendes, University of Brasilia

17:00 Reducing processing requirements for right whale detection from autonomous surface vehicles

Will Vickers, B Milner, University of East Anglia, R Lee, Guardine

17:30 CLOSE

POSTERS

BS4142:2014 and intermittent energy generation and storage facilities

[Giles Hine, RPS Group](#)

Improving our dining experience – getting interior acoustics on the 'menu' of restaurants

[Georg Schöner, Jenny Brookes, Rockwool](#)

Life cycle and sustainability assessment of under-sleeper pads for railway vibration suppression

[Pasakorn Sengsri, Chayut Ngomkhanong, Sakdirat Kaewunruen, University of Birmingham](#)

Post occupancy perception of acoustics, ventilation and overheating within residential dwellings

[Kim Coleman, Hodkinson Consultancy](#)

An alternative approach to determining specific, residual and background sound levels

[Matt Torjussen, Noise.co.uk](#)

School atria: a new approach for design and testing

[Ross Latue, Jack Harvie-Clark, Apex Acoustics](#)