

REPRODUCED SOUND 2024

40TH ANNIVERSARY CONFERENCE AND EXHIBITION

12-14 November 2024

The Bristol Hotel, Princes Street, Bristol



Tuesday 12 November 2024

17:00	Registration opens
18:30	Workshop:
	<p>The Reproduced Sound Committee have sourced a select number of examples of classic analogue synthesisers and modern digital / hybrid clones, which represent a range of the most iconic sounds. We are hosting an evening to explore select models by listening, inviting discussion, comparison of key features, and performing fundamental measurements. We hope to explore the nuances with a bit of a sceptical mind, far from marketing stories, to understand what makes these synthesizers so celebrated. Please join us for this fascinating delve into the arcane world of some classic synth sounds.</p>

Wednesday 13 November 2024

08:00	Registration and refreshments
09:00	Conference opening and welcome address <i>EAG Chairman, Ludovico Ausiello</i>
09:15	Peter Barnett Memorial Award Acoustics: Inside Out and Back to Front <i>Keith Holland, Consultant</i>
10:30	Refreshments
11:00	SESSION 1 - SPATIAL AUDIO 1 Chair: Keith Holland
11:00	Beyond the frame - textural realisation in cinema sound <i>Sharon Coleclough, Staffordshire University</i>
11:30	And then it turned outside-in: new insights into spatial game audio <i>Mat Dalglish, Staffordshire University Games Institute</i>
12:00	Immersive spatial audio experiences <i>Jacob Hollebon, Audioscenic</i>
12:30	Lunch

SESSION 2 – TRANSDUCERS

Chair: Ludovico Ausiello

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| 13:30 | Looking at the ear as a compressed sensing system
<i>Jamie Angus-Whiteoak, Consultant</i> |
| 14:00 | Iterative metric-based waveguide optimisation
<i>Lewis Macdonald, Celestion</i> |
| 14:30 | Tuning and performance evaluation for surface mounted audio haptic transducer systems
<i>Stephen Oxnard, Laurence J. Hobden, Ethan Stanhope, Christian S. E. Cotton, Meridian Audio</i>
<i>[Stephen Oxnard is Vice Chair of AES UK Section]</i> |
| 15:00 | Representation of directional loudspeakers in a finite element room acoustic
<i>Patrick C Macey, PACSYS</i> |
| 15:30 | Refreshments |

SESSION 3 – HEARING HEALTH FOR AUDIO AND ACOUSTICS PROFESSIONALS

Chair: Adam Hill

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| 16:00 | Hearing health for audio and acoustics professionals |
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As a community that works with sound for a living, our ears are an invaluable tool of the trade. Yet, over the course of a career, we can all expect some deterioration in our hearing. What are the early symptoms? How does it affect our ability to work accurately and efficiently? Do audiologists understand our needs and can they provide the support we need? How can we look after our ears to sustain better hearing for longer? Join us for this panel session, where together we will collaboratively explore answers to these questions and more. Available to answer your questions, the panel will include a hearing scientist, a clinical audiologist, and audio and acoustics professionals with lived experience of varying degrees of hearing loss.

Panel members:

Ian Wiggins, University of Nottingham (moderator); Philip Newell, Consultant; Rob Shephard, NHS; Simon Lewis, Consultant

SESSION 4 – LIVE SOUND AND VENUES

Chair: Andrew Horsburgh

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| 17:00 | Enhanced sound level monitoring at live events using loudness meters
<i>Jonathan Digby, Adam Hill, University of Derby</i> |
| 17:30 | How to shoot yourself in the foot with arrays of point-and-shoot loudspeakers
<i>David Gilfillan, Gillfillan Soundwork; Glenn Leembruggen, Sound Directions</i> |
| 18:00 | Close |

Conference Dinner

The Mud Dock

Thursday 14 November 2024

08:00 Registration and refreshments

SESSION 5 – MEASUREMENT

Chair: Bob Walker

09:00 **An Internet of sounds based method for acoustic profiling of rooms and audio spaces.**

Ishah Ali MacLaclan, Birmingham City University; John Crawford, Ingenious Audio

09:30 **Characterisation of a resonating system by means of electrical impedance measurement**

Ludovico Ausiello, University of Portsmouth; Joerg Panzer, RandD Team, Germany

10:00 **Measurements of multitone distortion in octave bands of a cinema-mixdown loudspeaker system**

Glenn Leembruggen, Avo Mardikian, Sound Directions, Australia

10:30 Refreshments

SESSION 6 – INTELLIGIBILITY

Chair: Paul Malpas

11:00 **Word score vs STI tests of a public address system in an underground train station platform.**

Osborn Fong, Camille Hanrahan-Tan, Glenn Leembruggen, Sound Directions, Australia

11:30 **Multi-channel audio processing for music therapy analysis**

Arina Epure, Thomas Dietzen, Katrien Foubert, Toon van Waterschoot, KU Leuven, Belgium

12:00 **Challenges in the assessment of spatial audio in automotive environments.**

Bogdan Bacila, Mihai Orita, Filippo Fazi, University of Southampton

12:30 EAG AGM

13:00 Lunch

SESSION 7 – SPATIAL AUDIO 2

Chair: Keith Holland

14:00 **3D Auralisation**

Dan Pope, Lucion Delta-Simons

14:30 **A subjective comparison of ambisonics rendered using virtual stereo microphone techniques**

Anantha Girijavallabhan, Bruce Wiggins, University of Derby

15:00 **Radial filter design for open spherical microphone arrays**

Nara Hahn, ISVR, University of Southampton

15:30 Refreshments

SESSION 8 – DIVERSITY PRESENTATION

Chair: Mark Bailey

16:00 **Diversity presentations and discussion**
Mark Bailey

SESSION 9 – SIGNAL PROCESSING

Chair: Ludovico Ausiello

16:30 **Complex-valued neural networks for the reproduction of single frequency sound fields**
Isaac J. Lambert, Vlad S. Paul, Philip A. Nelson, ISVR, University of Southampton

17:00 **Sound field analysis using a complex-valued neural network**
Vlad S. Paul, Nara Hahn, Philip A. Nelson, ISVR, University of Southampton

17:30 **Close**

Conference Dinner

The Mud Dock, 40 The Grove, Bristol BS1 4RB

