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ACOUSTICS BULLETIN

Institute of Acoustics
Sound • Noise • Vibration

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Institute affairs

Features

Cover image: The IOA annually honours people whose contributions to acoustics have been particularly noteworthy. The medals and awards programme has evolved over the years and is now quite wide ranging in its acknowledgment of academic achievement, practical engineering applications and innovations, student achievement and contributions to the Institute and to the world of science and technology.
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Regulars

Technical articles review procedure

All technical contributions are reviewed by an expert identified by the IOA Publications Committee. This review picks up key points that may need clarifying before publication, and is not an in-depth peer review.

The Institute of Acoustics is the UK's professional body for those working in acoustics, noise and vibration. It was formed in 1974 from the amalgamation of the Acoustics Group of the Institute of Physics and the British Acoustical Society. The Institute of Acoustics is a nominated body of the Engineering Council, offering registration at Chartered and Incorporated Engineer levels.

Institute of Acoustics
Sound • Noise • Vibration

The Institute has over 3000 members working in a diverse range of research, educational, governmental and industrial organisations.

This multidisciplinary culture provides a productive environment for cross-fertilisation of ideas and initiatives. The range of interests of members within the world of acoustics is equally wide, embracing such aspects as aerodynamics, architectural acoustics, building acoustics, electroacoustic, engineering dynamics, noise and vibration, hearing, speech, physical acoustics, underwater acoustics, together with a variety of environmental aspects. The Institute is a Registered Charity no. 267026

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Dear members

It is a privilege to share with you the latest developments from the IOA, a community that continues to demonstrate remarkable resilience, ingenuity and a healthy dose of curiosity.

IOA Medals and Awards Lunch 2025

We gathered in Edinburgh in May for our annual medals and awards lunch. The accomplishments recognised were impressive – from pioneering research to outstanding contributions to industry and education. The award citations were thoughtful and the responses from winners were witty and heartfelt – a reminder that behind every achievement is a person with a story and a passion. Everyone left feeling inspired. (See a full report of the event on page 14).

Celebrating UKAN: A network of innovation and collaboration

It is with a mixture of pride and nostalgia that I acknowledge the completion of the EPSRC-funded UK Acoustics Network (UKAN) and celebrate its outstanding and transformative contribution to acoustic innovation and collaboration across the UK.

Under the visionary leadership of Professor Kirill Horoshenkov and Professor Richard Craster, UKAN has reshaped the landscape of acoustic research and practice in the UK. Since its launch in 2017, this initiative has united over 1,900 members from academia and industry, creating a vibrant ecosystem. Through its 15 special interest groups, UKAN has fostered a spirit of inquiry that is both infectious and effective.

The numbers speak for themselves: 428 events, 18 pilot projects, 25 networking grants and 230 travel opportunities. This £2.4 million investment from the EPSRC has advanced acoustic innovation and demonstrated a commitment to inclusivity, supporting early career researchers and championing equality initiatives.

UKAN's collaborative spirit has been a catalyst for major research funding achievements, including the Centre for Doctoral Training in Sustainable Sound Futures, Noise Network Plus, and programme grants and fellowships. Each milestone is a testament to the network's ability to amplify scientific impact through collaboration.

UKAN stands as a community built on excellence, generosity and a shared belief in the power of acoustics. The network's influence on the £4.6 billion UK acoustics industry is a reminder that sometimes, the most innovative technology is simply the right conversation at the right time.

On behalf of the IOA, I extend my warmest congratulations to Professor Horoshenkov, Professor Craster, the academic management team, the volunteers leading all special interest groups and every member who has made UKAN an exemplar of collaborative excellence in acoustics.

Welcoming Noise Network Plus

We welcome the follow-on initiative, Noise Network Plus, which promises to build on UKAN's foundations with a focus on innovation, collaboration and integration of acoustics into broader policy and industry agendas. I encourage all members to get involved – whether you're a seasoned expert or just starting out, your voice matters.

Ongoing initiatives and plans

The IOA continues to be a hive of activity, with initiatives spanning education, policy, research and public engagement. Our Education and Digital Strategy, led by Executive Director, Mary-Jane Newton, is making steady progress.

On the policy front, we remain engaged with Parliament and Government bodies. Stephen Turner and Peter Rogers have represented the IOA at key meetings, including the House of Lords Science and Technology Committee, where they provided evidence on noise and health. We have also submitted responses to consultations on aviation noise policy and planning rules for air source heat pumps.

The revision of BS 8233 continues to generate lively debate. The draft standard is expected soon, and I encourage everyone to take the time to review it and provide feedback.

Our work on diversity and inclusion is progressing, with discussions about a potential 'Women in Acoustics' initiative, possibly expanding to other underrepresented groups. The EDI framework is being used internally to benchmark our progress, ensuring that we are moving in the right direction.

The website update project is on track. We hope to see the new site live soon, complete with the latest news, resources and maybe a few surprises.

Looking ahead

I am struck by the sense of possibility that surrounds us – the IOA is a community of individuals who share a passion for sound, silence and everything in between. Whether you are a researcher, consultant, student, or someone who appreciates good acoustics, you are part of this community.

I encourage all members to get involved in our upcoming initiatives – whether by joining a working group, attending a conference, or sharing your ideas and experiences. Planning is underway for the ACOUSTICS 2025 conference and I look forward to seeing many of you there.

With warmest regards

President, Institute of Acoustics

Engineering Division

The IOA Engineering Division will support you through the process to help you become one of more than 229,000 registrants that hold international professional recognition.

By Blane Judd BEng FCGI CEng FIET FCIBSE, Engineering Manager

Halfway through the year already and we continue to support members who are looking to become professionally registered. We held interviews in June. We are working with a group of members at present and will bring you more news later in the year as to their progress. We are working closely with the Engineering Council following a review of our license to complete the minor amendments I mentioned in my last article. Nothing will directly impact the process candidates are working through although some wording has changed in the code of conduct.

The example PRI report that we send to every applicant is important as it prevents several iterations of your submission. Please don't compare the process with colleagues from other PEIs – because of the unique nature of our position in acoustics, we do have some variations on the evidence requirements. This is mainly due to there being so few Master's programmes in the sector and so we need to explore how your knowledge has been gained through a greater emphasis on the content of your PRR. We will look at submissions and send them to volunteers to review, but only once we think they are close to being the final draft. If you are asked to re-work your submission it is because we only want to put applicants forward who stand a good chance of being successful.

When drafting the report think if you have selected a particular software to conduct modelling, if so, explain why you chose it, what the shortfalls may have been, what results you were expecting and how you validated the outputs. These are all part of the A and B competencies and will save you having to do several rewrites.

Above: We are now interviewing using the Engineering Council UK SPEC version 4

Because the IOA does not have any accredited training programmes, all applicants must submit an initial professional development (IPD) report. This is a narrative that explains how you have developed from being a qualified acoustician into a practicing engineer. We send an example of this report with all applications, so check the contents and add your own personal information.

Emma Lilliman has worked hard to make sure everyone gets the interview dates that suit them. Since we have a limited resource, we try to respond as quickly as possible, but high numbers of candidates all looking for feedback at the same time can cause a backlog, especially during holiday periods, please bear with us as we try our best to turn around your drafts quickly.

Neil Ferguson still helps us with academic equivalence support for those candidates who do not have recognised qualifications. You can check for yourself if your qualifications meet the required specification by visiting the Engineering Council website **http://www.engc.org.uk/courses**. But please don't panic if your specific qualification is not listed, as we can still help you through the process using individual assessment (see later in the article).

We hold several interview events through the year depending on the number of candidates we have coming forward for registration. Our next set scheduled for June are all booked up now, but there are interviews scheduled for October 2025. If you are interested in taking the next step to becoming a professionally registered engineer, contact us on **acousticsengineering@ioa.org.uk** sending a copy of your CV and copies of certificates and transcripts of your qualifications. It is important that we have all your further and higher education certificates, not just your highest attainment.

There are two routes to registration:

The **recognised qualification** route, if you have achieved the required learning outcomes through recognised qualifications in acoustics. Qualifications which provide the required level of knowledge and understanding are for IEng and accredited Bachelor's degree and for CEng an accredited integrated Master's degree or a combination of accredited Bachelor's and Master's degrees (see table below).

Recognised qualifications

Incorporated Engineer (IEng) One of the following:	Chartered Engineer (CEng) One of the following:
An accredited Bachelor's or honours degree in engineering or technology	An accredited Bachelor's degree with honours in engineering or technology, plus either an appropriate Master's degree or engineering doctorate accredited by a licensee, or appropriate further learning to Master's level*
An accredited Higher National Certificate (HNC) or Higher National Diploma (HND) in engineering or technology started before September 1999	An accredited integrated MEng degree
An HNC or HND started after September 1999 (but before September 2010 in the case of the HNC) or a foundation degree in engineering or technology, plus appropriate further learning to degree level	An accredited Bachelor's degree with honours in engineering or technology started before September 1999
A National Vocational Qualification (NVQ) or Scottish Vocational Qualification (SVQ) at level 4 that has been approved by a licensee, plus appropriate further learning to degree level*	Equivalent qualifications or apprenticeships accredited or approved by a licensee, or at an equivalent level in a relevant national or international qualifications framework†
Equivalent qualifications or apprenticeships accredited or approved by a Licensee, or at an equivalent level in a relevant national or international qualifications framework†	

* See: **www.engc.org.uk/ukspec4th** for qualification levels and HE reference points.
† For example, UNESCO's International Standard Classification of Education (ISCED) framework.

The **individual assessment** route, for applicants who do not have the recognised qualifications and who will have an individual assessment of their qualifications and any other relevant learning such as: formal academic programmes, in-employment training and experiential learning self-directed learning. In many instances, it is likely to be a combination of some or all these options.

Remember we are here to help you get through the process and advice and support is offered to every candidate personally.

For **individual assessment**, the Institute accepts several courses from certain academic centres in relevant subjects, such as audio technology, as being equivalent to accredited courses for the purposes of EC registration, without the need for further assessment.

The Institute recognises the IOA Diploma course and the several Master's courses linked to it as providing evidence if you are looking to gain CEng registration. You could also offer a PhD qualification, depending upon the content of the associated taught element. We can also offer support for registration via a 'technical report' route, if you do not have the relevant qualifications to help you demonstrate you are working as a professional engineer in acoustics. If you need to follow the technical route, we will discuss this with you before you embark on that process.

Election process

The election process is overseen by the Institute's Engineering Division Committee, which is made up of volunteers from the membership, to whom we are extremely grateful. They represent the ever-growing number of members holding EC registration and provide the essential peer review process that affirms that you are at the appropriate level for recognition as an Engineering Council Registered Professional Engineer.

Our video explains how members can gain professional recognition and Engineering Council registration through the IOA.
Watch at **https://www.ioa.org.uk/video/recognising-your-professionalism-0**

IOA 2025 Education Update

With Spring courses concluded our Autumn courses are filling up quickly. To avoid disappointment and to secure a place on your chosen course, please do not hesitate to contact your preferred centre for further details.

by Helen Davies, IOA Education

Forthcoming IOA Certificate Courses in 2025

Subject to recruitment, the IOA will be offering the following Certificate Courses between September and November 2025. In addition to long-established courses (Workplace Noise Risk Assessment, Environmental Noise Measurement, Building Acoustic Measurements) we will be running three additional courses:

- an Advanced Course in Report Evaluation;
- a Certificate Course in Soundscape Assessment; and
- a Certificate of Competence in Technical Report Writing.

Details about each of the existing courses are given in the following sections. Unless indicated otherwise each certificate course lasts for five days and examinations take place on the last day. P10

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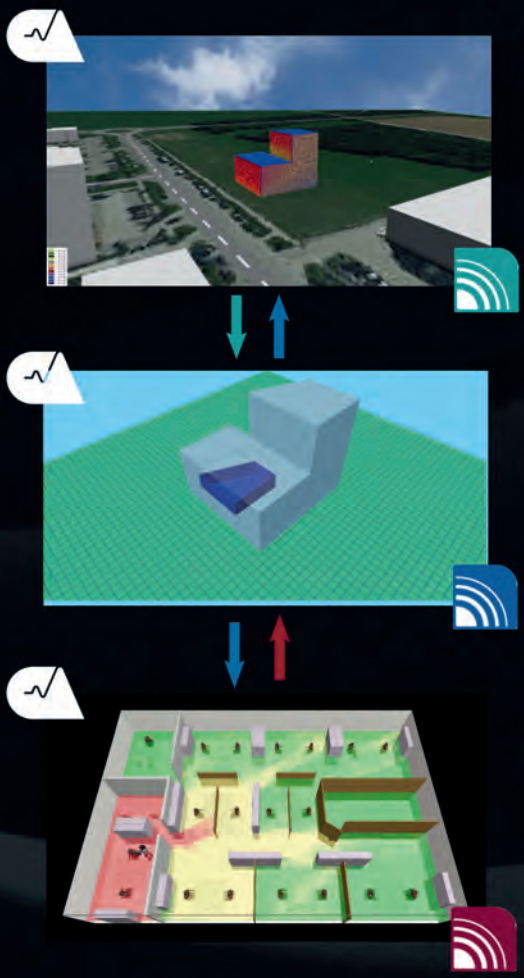

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Advanced Certificate of Competence in Report Evaluation (ACCRE):
This three-day course provides the skills required to critically read and evaluate technical reports in acoustics. While the course is appropriate to a wide audience it is aimed primarily at those people responsible for signing off on reports for quality control as well as those reviewing reports for compliance purposes such as senior positions in pollution control, environmental health practice or planning, and anywhere else that technical reporting is important.
Examination Date Scotland: Thursday 25 September 2025
Examination Date Southampton: Friday 24 October 2025

Certificate of Competence in Workplace Noise Risk Assessment (CCWNRA):
The course aims to provide the education and training needed to carry out workplace noise assessments in a competent manner, as required by the Control of Noise at Work Regulations 2005. Demand for competent noise exposure assessments is increasing and this course provides the latest information and training to meet the demands of the legislation, including a background of basic acoustics combined with 'hands on' practical experience of industrial noise measurements and associated assessment of workplace noise exposure.
Examination Date: Friday 26 September 2025

Certificate of Competence in Environmental Noise Measurement (CCENM):
This course seeks to provide a basic knowledge of the methodology of environmental noise measurement, including the use and accuracy requirements of sound level meters and analysers and to enable them to be aware of the significance of measurement data against the framework of standards and legislation for environmental noise.
Examination Date: Friday 10 October 2025

Certificate of Competence in Building Acoustics Measurement (CCBAM):
The course provides a basic knowledge of the methodology for measuring and reporting sound insulation and aspects of room acoustics, together with relevant provisions of key standards and guidance.
Examination Date: Friday 31 October 2025

Certificate Course in Soundscape Assessment (CCSA):
This course will enable attendees to understand the concepts of soundscape and undertake the assessment and data analysis required for a soundscape assessment.
Examination Date: Friday 7 November 2025

Certificate of Competence in Technical Report Writing (CCTRW):
The aim of this three-day course is to provide guidance on effective communication through good technical report writing. The course will cover various approaches to structuring reports and provide a detailed overview of what the relevant sections would normally contain. It will emphasise the importance of presentation skills. The course should be useful particularly for early career employees in acoustics and in science and anywhere that technical reporting both within and for outside organisations is important.
Examination Date: Friday 14 November 2025 P12

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New Course Under Development

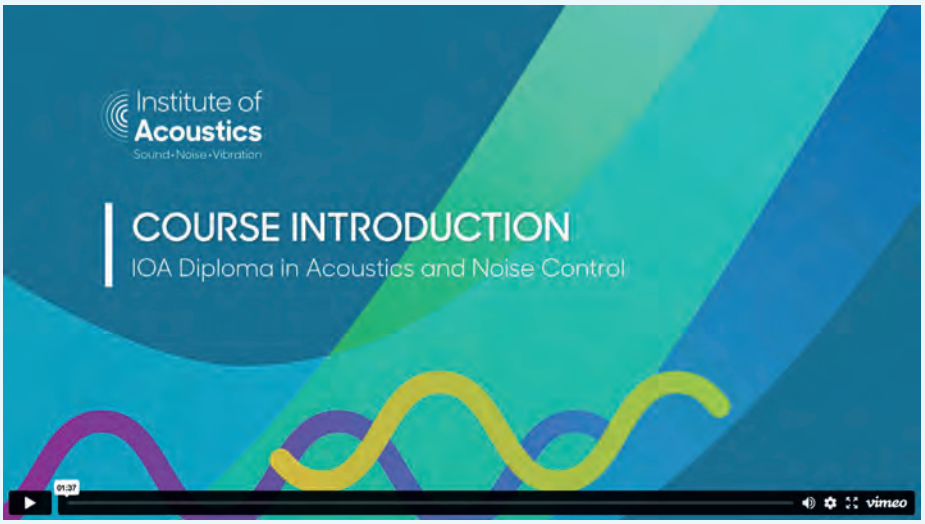
Certificate Course in Environmental Vibration Measurements (CCEVM):
This course provides a knowledge of the methodology of environmental vibration measurement including correct selection of vibration transducer and analyser, mounting and positioning of transducers and an appreciation of the role of measurement data within the framework of appropriate standards and legislation. The course is under development with delivery intended for Spring 2026.

Holders of certificate courses may apply for Tech IOA membership (further details are available from **membership@ioa.org.uk**).

Information on accredited centres and the IOA Certificate and Diploma courses they are delivering is at https://www.ioa.org.uk/education-training
Please contact your preferred centre directly for information on course dates, delivery methods, course fees and to register for the course. For any other enquiries contact **education@ioa.org.uk**

IOA Diploma 2025-26

The IOA Diploma continues to be the gold educational standard on the route to achieving MIOA. Applications for the 25/26 IOA Diploma are open.
Watch an introductory video here (IOA Diploma Overview).
Accredited Diploma centres include London South Bank University (LSBU), the University of Derby and KP Acoustics Research Labs who will offer the Diploma in Southampton and Manchester (Salford University).
Please enquire directly for more information on course dates, delivery, course fees and registration.
For tutored distance learning, please direct enquiries to **education@ioa.org.uk**



Please note: if you missed the 'Diploma Discovery Session' held on **26 June 2025** explaining all you need to know about the IOA Diploma, you can request access to the recording by contacting **education@ioa.org.uk**

Calling Acoustics Employers

Please help us improve the IOA Diploma in Acoustics and Noise Control.
As we review our Education portfolio at the IOA, it's important that we focus on what our employer population requires and values.
We are seeking your feedback on the changes you would like to see.
There are a few baseline questions about you and your organisation and a few for you to 'have your say' with opportunities for you to share your ideas and experiences.
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IOA 2025 Medals and Awards

The IOA annually honours people whose contributions to acoustics have been particularly noteworthy. The medals and awards programme has evolved over the years and is now quite wide ranging in its acknowledgment of academic achievement, practical engineering applications and innovations, student achievement and contributions to the Institute and to the world of science and technology.

Each year the IOA announces its prestigious award winners following the Institute's Council meeting held towards the end of March, and ahead of the annual conference. This year, the awards were presented at a lunch held at The Balmoral Hotel on Princes Street, Edinburgh.

In his opening address, Immediate Past President, Alistair Somerville, noted that with accidental timing the medals and awards event was held on VE Day when across Europe people were looking back 80 years and acknowledging the service and sacrifice of so many who defended the freedoms we enjoy today. Freedoms which are hard fought for but fragile. He said: "As custodians of this planet, we should be ever mindful of the consequences of our actions and the impacts on each other and our environment."

Fittingly, the event was held in Edinburgh, the home of Alexander Bell, born in 1847 and who became a student at University of Edinburgh.

Both his mother and wife were deaf, significantly influencing his life's work – his research on hearing and speech eventually led to the first US patent for the telephone, on 7 March 1876. The definition of the decibel originated in the measurement of transmission loss and power in telephony of the early 20th century in the Bell System in the United States and to round it off nicely, the *bel* was named in honour of Alexander Graham Bell.

Alistair said: "Although these are the 2025 awards, much of what we are recognising today relates to excellence and service over many years and a lifetime of professional practice."

Award winners:

Rayleigh Medal

The Rayleigh Medal is the IOA's premier award, given to persons of undoubted renown for outstanding contributions to acoustics. The medal is named after John William Strutt, Third Baron Rayleigh (1842-1919), a versatile physicist who conducted experimental and theoretical research in virtually every branch of the subject. A graduate, fellow and eventually Chancellor of Cambridge University, he was a fellow and President of the Royal Society. His book *The Theory of Sound* remains a landmark text in the development of acoustics.

Professor Phillip Joseph

Above: (L-R) Professor David Waddington with the 2025 Rayleigh Medal winner, Professor Phillip Joseph

Phillip's citation

Professor Phillip Joseph has made outstanding contributions to acoustics over more than three decades, particularly in aeroacoustics; combining theoretical and experimental work. His influence also extends to duct acoustics, noise control and underwater acoustics. His PhD research on local active noise control, still highly cited, defined the limits of creating local quiet zones in diffuse sound fields.

Phillip's research impact is reflected in over 6,100 citations and an h-index[1] of 44. More importantly, his work has influenced practical engineering, including:

- analytical models for predicting interaction noise from outlet guide vanes, used by Rolls-Royce;
- an 'in-duct to far-field' measurement technique for broadband fan noise, generating valuable industrial data; and
- pioneering work on serrated leading-edge designs for noise reduction, now further developed by Safran S.A.

A common theme in Phillip's work is using deep theoretical insight to create real-world solutions. As an educator, he has trained 31 PhD students and more than 50 undergraduate and MSc students, many of whom now lead in the aerospace sector. He is known for his mentorship, enthusiasm and fostering of long-term collaborations.

Beyond research and teaching, Phillip has significantly contributed to the acoustics community as subject editor for Journal of Sound and Vibration, coordinator of the UK Acoustics Network SIG for aeroacoustics, and technical chair of the 2022 AIAA/CEAS Aeroacoustics Conference.

Internationally recognised and actively consulting across industries, Professor Joseph exemplifies the qualities celebrated by the Rayleigh Medal and would be a worthy recipient. P16

Footnote

1 An h-index is an author-level metric that measures both the productivity and citation impact of the publications, initially used for an individual scientist or scholar.

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PENGUIN RECRUITMENT

In his acceptance speech Phillip said: "The envelope with the IOA postmark on it sat on my kitchen worktop for about three days before I opened it. I thought it was a begging letter but just before I recycled it, I thought I'd better see what it said and I found out I had won the Rayleigh Medal. It is hugely humbling and slightly embarrassing when you look at the list of previous winners, but I have been very lucky to have spent my career at the Institute of Sound and Vibration Research. Anyone who has been there will know the place is falling down and half the equipment is 50 years old and rusty, but what makes the place so special is its people and I have been incredibly fortunate to work with some truly remarkable pioneers in acoustics. For someone who has never won anything before, to receive this award is the cherry on the cake, but if you know how much I didn't know, you'd withdraw the award, but only I know that."

RWB Stephens Medal

The RWB Stephens Medal was named after Dr Ray Stephens, the first President of the IOA. His main interests lay in physical acoustics but he is remembered by generations of students for his continuing work in education. The medal is awarded in odd-numbered years for outstanding contributions to acoustics research or education.

Above: (L-R) Professors David Waddington and Simon Chandler-Wilde with his RWB Stephens Medal

Professor Simon Chandler-Wilde
Simon's citation:
Simon Chandler-Wilde is a Professor of Mathematics at the University of Reading. He has made outstanding contributions to the field of acoustics through his research, teaching and academic administration. He graduated with a BSc in mathematics in 1981, MSc in engineering mathematics in 1983 and PhD in environmental sound propagation in 1988. He has worked in academia solving a range of highly challenging mathematical and engineering problems related to acoustic wave propagation, scattering and noise control. He was one of the first people to develop advanced boundary integral equation methods and codes to study outdoor sound propagation numerically in the presence of porous surfaces, rough terrain and noise barriers of complex shapes. His work in this area provided the foundation for the development of new noise barrier designs, understanding complex terrain and porous surfaces effect. His work has been used worldwide to control noise from road traffic and trains. In more recent years he has focused on developing general purpose computational methods and underlying theoretical acoustics. He has published 95 journal papers that are highly cited and lay down a foundation for the development of a range of new highly efficient computational methods for acoustic wave propagation. He has led or co-led 25 research grants related to acoustics. He has organised major conferences and a range of workshops on wave theory and computation. This body of work has been recognised by several awards and invitations as plenary speaker at major international conferences.

In his acceptance speech, Simon noted that he'd been an IOA member for around 40 years, so long in fact that all the people the medals are named after he knew personally. He said: "I remember being wined and dined one evening by Peter Lord in Manchester about the possibility of a job at Salford. I didn't get the job but had a very nice evening.

"I'm someone who works at the interface of acoustics and mathematics with a lot of incredibly technical problems and excellent people to work with. Of course, as an academic, a professor, you are reliant on all your Phd students, research assistants and colleagues and I have been very lucky in that respect, so looking back over the past 40 years this has been a fantastic career to work in and this presentation is very special."

AB Wood Medal (USA/Canada)

The AB Wood medal and attendant prize is awarded in alternate years to acousticians based in the UK/Europe (even years) and in the USA/Canada (odd years). It is aimed at researchers who are under 40, whose work is associated with the sea. Following his graduation from Manchester University in 1912, Albert Beaumont Wood became one of the first two research scientists at the Admiralty to work on antisubmarine defence. He designed the first directional hydrophone and was well known for the many contributions he made to the science of underwater acoustics and for the help he gave to younger colleagues. The AB Wood Medal was instituted after Albert's death by his many friends on both sides of the Atlantic and was administered by the Institute of Physics until the formation of the IOA.

Dr Shima Abadi (USA)
Shima's citation
Dr Shima Abadi has been nominated for the AB Wood Medal and prize for her exceptional contributions to ocean acoustics, signal processing and marine bioacoustics. Beginning her academic journey as a student and teaching assistant under her nominator, she later joined their research group and completed a PhD on blind deconvolution and array signal processing in 2013. She is now an Associate Professor at the University of Washington with cross-departmental appointments.

Dr Abadi's work includes developing blind deconvolution techniques for remote acoustic source identification, particularly for marine mammals and pioneering frequency-difference beamforming – a method that pushes spatial sampling limits. Her innovations have had broad interdisciplinary impact, extending to seismology and radar.

She has also advanced distributed acoustic sensing (DAS) using ocean-floor fibre-optic cables – originally for seismic use – to monitor underwater acoustics. This enables high-resolution detection of whale calls, ship noise and other signals over vast distances, benefiting marine conservation, naval applications and the energy sector. This groundbreaking work attracted a $1.5 million grant from the Paul G Allen Family Foundation.

Additionally, Dr Abadi has expanded public use of Ocean Observatories Initiative (OOI) data by developing open-source tools and launching the 'Ocean Noise Explorer' platform, significantly increasing global accessibility to underwater acoustic data.

She is also a dedicated mentor and advocate for open science and diversity in STEM, guiding students through hands-on research and outreach. Her leadership, innovation, and commitment to community exemplify the spirit of the AB Wood Medal.

Peter Lord Award

Above: (L-R) Donald McNeill, Richard Perkins, Hilary Notley and James Trow with DEFRA's Peter Lord Award

The Peter Lord Award is awarded annually for a building, project or product that showcases outstanding or innovative acoustic design, or outstanding acoustic implementation and is presented to the team or individual responsible for the acoustic design or acoustic aspects of the project. Peter Lord, a former IOA President who died in 2012, was a hugely influential figure in UK acoustics, being a driving force behind the setting up of the IOA, the founder of the Applied Acoustics department at the University of Salford and the first editor-in-chief of Applied Acoustics.

DEFRA and delivery partners

DEFRA's citation:

DEFRA is recognised for its outstanding contribution to acoustics design through the creation of a groundbreaking national noise model.

DEFRA has delivered a world-first in national-scale acoustic modelling, creating a detailed noise map of 100% of England's public roads and railways at 10-metre resolution. This innovative system transforms how noise exposure is understood, going beyond regulatory requirements to support better-informed, fairer policy decisions that can improve health and wellbeing across the country.

The model captures lower noise levels than ever before and uses advanced Common Noise Assessment Methods in Europe (CNOSSOS) methodology, tailored to the UK through rigorous research. It allows for analysis in octave bands, tracks changes over time and supports future projections. Designed in a cloud environment, it is scalable, cost-effective and ensures long-term value by storing data in open formats for use by a wide range of stakeholders.

Unlike previous approaches, DEFRA now owns the full modelling system – not just the outputs – enabling powerful scenario testing and exposure assessments for all 67 million people in England. The data feeds directly into national health impact tools and supports a proposed indicator to track progress over time. Every component has been independently reviewed by experts across acoustics, geospatial and digital disciplines.

This system supports local authorities with varying technical capacities and enables strategic and site-level assessments. It allows exploration of quieter, more tranquil areas and opens new opportunities for biodiversity and mental health research. Its modular design also creates potential for future environmental modelling beyond noise.

Already adopted by the Scottish and Welsh governments and used by National Highways, the system is saving public money and enabling GB-wide consistency. Its adaptability is proven, with third parties applying the data in other software and contexts.

This achievement reflects outstanding collaboration. Led by DEFRA and NCL, with delivery from Mott MacDonald, Acustica, NGIS and Stapelfeldt, the project exemplifies excellence in acoustic design and digital innovation.

Receiving the award for DEFRA, Hilary Notley acknowledged the huge contribution made by the people who helped build the project and build the model. She said: "DEFRA couldn't have done this project without the support of the Scottish Government and the Welsh Government or the many members of the IOA who helped to scope out the project at the start and provided some user research so that we knew that we were developing something that people would want to use. This was very much an industry effort and we are very grateful for all the help that we have had."

UKAN

Above: (L-R) Professors David Waddington and Kirill Horoshenkov with UKAN's Peter Lord Award

UKAN's citation:

It is with great pleasure that the Institute of Acoustics presents the Peter Lord Award to the UK Acoustics Network (UKAN) for its outstanding contribution to acoustic innovation and collaboration across the United Kingdom.

Under the leadership of Professor Kirill Horoshenkov and Professor Richard Craster supported by a strong academic management team, UKAN has transformed the landscape of acoustic research and practice in the UK. Since its inception in 2017 this remarkable initiative has united more than 1,900 members across academia and industry, breaking down traditional silos through 15 vibrant special interest groups. The network has facilitated 428 events, funded 18 pilot projects, supported 25 networking grants and enabled 230 travel opportunities for researchers.

This £2.4 million investment from the Engineering and Physical Sciences Research Council (EPSRC) has advanced acoustic innovation with an unwavering commitment to inclusivity, dedicating significant resources to early career researchers and equality initiatives. The network's collaborative spirit has directly contributed to major research funding achievements, P18

including the Centre for Doctoral Training in Sustainable Sound Futures, Noise Network Plus, Programme Grants and Fellowships.

UKAN exemplifies Peter Lord's vision of acoustic excellence and community building. The network's impact on the £4.6 billion UK acoustics industry demonstrates how innovative networking can amplify scientific impact.

We congratulate Professor Horoshenkov, Professor Craster, the academic management team, the volunteers leading all special interest groups and members who have made UKAN an exemplar of collaborative excellence in acoustics.

Professor Horoshemkov accepted the award on behalf of UKAN and said: "It is not just me and Richard Craster, but all the UKAN management team, particularly Simon Chandler-Wilde who contributed significantly to making UKAN an exemplary network, copied by other networks sponsored by engineering and physical sciences. Since its inception in 2016, UKAN has been supported by IOA and we look forward to their continued support. Funding for UKAN+ ends in June 2025 and after that we will be integrating with the research co-ordination committee, meanwhile, the last UKAN+ initiative is to create a sound economics document to demonstrate a stronger case for funding more acoustics-led research in the UK."

Richard Cowell Sustainability Award

This award is open to individuals or teams, who can demonstrate and provide evidence of one or more of the following:

* an exemplar contribution towards the delivery of sustainability; for today and for future generations;
* demonstration of value in all three key areas (societal, economic and environmental); and
* can clearly demonstrate a significant contribution – through education, design, construction practices or guidance – that promotes the implementation of sustainability through acoustics.

The Richard Cowell Award for Sustainability is given on a rolling basis to those who reach the bar (and not an annual award), as this will enable winners of each year's cohort to have a recognised period as honoured members.

Peter Rogers

Peter's citation:
Peter Rogers has been given the Richard Cowell Sustainability Award for his outstanding commitment to sustainability and his efforts in promoting action in line with the United Nations sustainability goals.

He has worked tirelessly on implementing green practices at his own company whilst championing the IOA and ANC's respective transitions towards becoming more environmentally responsible. He has also taken this a step further by engaging with the IOA membership and providing tools that are accessible to everyone, first with the Sustainable Design Task Force, later in the Sustainability Working Group and now in the Parliamentary Liaison Group. Peter has made a significant impact in creating a healthier and more sustainable future.

His dedication to promoting and implementing sustainability measures has set a benchmark in the industry, inspiring others to act for the preservation of our planet. With vision and determination, Peter exemplifies the principles of sustainability, leaving a legacy that benefits both present and future generations.

Turn to page 23 to read Peter's additional information on his award.

Peter Barnett Award

Inaugurated in 2001 by the IOA Electroacoustics Group, this annual award honours Peter Barnett who died the previous year. It recognises advancements and technical excellence in the fields of electroacoustics, speech intelligibility and education in acoustics and electroacoustics. Peter had a wide range of interests in acoustics but primarily in the fields of electroacoustics and speech intelligibility. A stalwart of the Reproduced Sound series of conferences, he was known for his mathematical approach to problems.

Above:
Reena Mahtani and Peter Rogers. Peter won the Richard Cowell Sustainability and was nominated by Reena

Dr Soren Bech

Soren's citation:
Dr Soren Bech's extensive research in perceptual audio evaluation has provided the foundation for assessing audio system quality. His work in this field has been prolific and continues to be widely referenced.

As a member and co-chair of ITU Study Groups, Dr Bech played a crucial role in drafting the first version of ITU-R Recommendation BS.1116 *Methods for the Subjective Assessment of Small Impairments in Audio Systems, including Multichannel Sound Systems.* This recommendation has stood the test of time and is still the recognised standard for the critical assessment of audio quality, particularly in the context of coding systems. Along with a few collaborators, Dr Bech determined the form and structure of the critical statistical analysis methodology that underpins the recommendation.

His contributions extend beyond academia and standards development; two members of the Electroacoustic Group Committee have had direct experience of Dr Bech's teaching, describing it as "highly impactful and insightful." Bob Walker, who served alongside him on an ITU committee, found his contributions valuable.

Dr Bech was also an active researcher in several international collaborative projects, including *Archimedes* (perception of reproduced sound in small rooms), which was a joint undertaking between the DUT, Bang and Olufsen of Denmark and KEF Electronics of England.

IOA Early Careers Award for Innovation in Acoustics

The annual IOA Early Careers Award for Innovation in Acoustics is awarded every year to recognise excellence and achievement within acoustics among those who are aged under 35 or early on in their careers in industry. It departs from the usual format in that it is also intended to increase awareness of the value of acoustic engineering and technology to the community at large.

Alec Korchev

Above: Alec Korchev with his Young Person Award for Innovation

Alec's citation:

Alec Korchev is recognised with the Young Person Award for Innovation for his exceptional drive, insight and early-career impact within the field of acoustics.

It was immediately apparent that Alec would be engaged, enthusiastic and driven. Clarke Saunders Acoustics offered him a position in early 2020 – just before the pandemic, but the company honoured the offer and took the risk of 'onboarding' him during lockdown. In a difficult situation, when others have wilted, Alec has thrived. He brings new energy and perspective to the teams he works in and is willing to challenge established working practices with unusually keen insight and focus.

Alec has been instrumental in developing an area so niche that he has become the accepted authority both within the company and externally, to the extent that he is now pursuing it as a PhD project.

Meanwhile, with an unusual level of involvement and contribution to both IOA and ANC activity for one so early in his career, Alec has accelerated development within the industry as well as being a valued and highly effective member of the consultancy team.

His rapid development as a key player, and his work on his PhD consultancy niche prompted Clarke Saunders to define a new grade, making Alec the company's first 'specialist consultant', confident that his enthusiasm and drive will be a catalyst for others to attempt to follow suit.

Interviewed after receiving his award, Alec said: "Acoustics is one of those fields that doesn't get as much recognition as it deserves. Finding acoustics as a career path for me was truly life-changing and every day I am proud to do what I do; there's so much variety in what we do and excitement about projects we get involved with – there's never a dull moment."

Honorary FIOA

The grade of Fellow is the senior professional class. Every candidate for election (or transfer) to the class of Fellow of the Institute, in the opinion of the Council, must have made a significant contribution to acoustics or to the profession of acoustics.

Dennis Baylis

Dennis's citation:

Dennis's dedication and unwavering commitment to the IOA will leave a lasting legacy, and his contributions have been fundamental to the continued success of the Acoustics Bulletin and other publications.

Dennis has gone above and beyond his formal role as Advertising Manager, not only securing vital advertising revenue but also proactively participating in work that may not directly result in commission. His willingness to put in extra work exemplifies his commitment to the IOA's success.

He is highly respected for his professionalism, meticulous attention to detail and the accuracy of his reports. The IOA Publications Committee has greatly benefited from his clear and comprehensive data presentations, which include inflation adjustments and strategic insights to support decision-making. Dennis has also played a vital role in helping the IOA transition towards digital advertising, ensuring that publications remain relevant and financially viable in a changing media landscape.

Dennis's positive approach to collaboration and problem-solving makes him an asset to any team. He is always available to support his colleagues, no matter the time of day, and his gentle, kind manner has fostered strong professional relationships. His retirement will undoubtedly leave a gap that will be challenging to fill.

For these reasons, Dennis Baylis deserves the honorary fellowship. His contributions to the IOA have been significant and long-lasting and his professional and personal qualities have made a significant impact on everyone who has had the pleasure of working with him.

John Pritchard

John's citation:

The award of HonFIOA for John Pritchard is well merited. John Pritchard joined the late Dr Mike Fillery at the University of Derby to teach acoustics-related courses. In 1989, with Dr Fillery, he initiated an MSc course in applied acoustics. Following the retirement of Dr Fillery, John became course leader, for the MSc and the Diploma and secured advanced standing for IOA Diploma holders so that they gain the MSc qualification in acoustics after being exempted from its first year.

John helped to deliver the IOA Certificates of Competence in Workplace Noise Risk Assessment (CCWNRA) and in Environment Noise Measurement (CCENM) at the University of Derby since they were first introduced. Together with Alan Whitfield, John delivered the CCENM in the Birmingham area and was responsible for bespoke deliveries of the course for Local Authorities and for UK Coal.

John has served as an examiner for the Noise Control Engineering (NVCE) Module of the IOA Diploma and he has served as Chair of Education Committee, on Certificates of Competence committees and as Deputy Chief Examiner for the Diploma.

John has been responsible for several teaching innovations at Derby and for the IOA. For Derby, during the pandemic years, he devised online tutorials, some of which were pre-recorded and involved writing on transparent glass screens.

He has been an active supporter of the Midlands Branch of the IOA, including arranging for the University of Derby to host branch meetings on a regular basis. P20

In summary John has been an outstanding IOA Diploma tutor for about 26 years. It is likely that without his dedication and commitment to the course, the Diploma would not be running at the University of Derby today. He has been an active member of the IOA Education Committee, serving as Chair and as Diploma examiner and contributing to the running of the IOA Diploma and Certificates in many ways. He has been instrumental in introducing acoustics content into other courses at the University of Derby and has been actively involved in IOA Midland Branch activities for many years.

Distinguished Services to IOA Award

The Award for Distinguished Services to the Institute was introduced so that the Institute could publicly acknowledge the debt owed to individual members who have provided sustained assistance over the years in some way with the running of the Institute.

Mike Breslin

Above: Professor David Waddington with Mike Breslin and his Distinguished Services to the IOA Award

Mike's citation:
Mike, a stalwart of the acoustics industry, boasts an impressive three decades of

commitment. His contributions to the IOA have certainly made their mark and his active involvement as a committee member spans three branches (Southern, Midlands and Central) and his insights have shaped the organisation's direction.

His role within the IOA Measurement and Instrumentation Group expresses his technical knowledge and his passion for precision have elevated the field. Whether on stage at conferences or through the pages of the Acoustics Bulletin, Mike's thought-provoking contributions resonate and his knowledge-sharing enriches the community.

When faced with challenges, Mike links individuals to solutions, fostering collaboration and growth, many people call him for technical and career guidance. Mike has consistently backed the IOA's endeavors and his sponsorship through ANV Measurement Systems has bolstered critical initiatives.

In summary, Mike embodies the spirit of the acoustics industry, weaving together expertise, generosity and a genuine desire to empower others.

David Trew
David's citation:
David shows the values and spirit of the IOA through his dedicated service. A highly accomplished consultant and recognised expert across several fields of acoustics, David has risen to the level of partner within his organisation – a testament to his professional excellence and leadership.

What truly sets David apart, however, is his tireless commitment to supporting the work of the IOA. He has volunteered his time consistently and generously, balancing his demanding professional responsibilities with a deep sense of duty to the acoustics community. David has played an active role at branch and committee level, as well as serving on working groups.

The IOA is proud to recognise David's outstanding service and commitment. His ongoing contributions continue to strengthen the IOA and support its mission to advance acoustics for public benefit. He is a truly deserving recipient of this award.

Timothy Ward
Timothy's citation:
While at HSE, Timothy Ward provided an essential link to HSE policies and guidance.

As Chair of the Certificate of Competence in Workplace Noise Risk Assessment (CCWNRA) management Committee, despite the many other pressures on his time since working for Finch Consulting, Tim has guided the extensive discussions related to revisions to syllabus content and delivery that might help to improve recruitment.

He led discussions in further developing CCWNRA course to make it accessible to a wider audience while maintaining its status as a valuable qualification and he proposed changes to the syllabus with the aim of streamlining and making the course more focused. Tim has constantly striven to ensure that the course exam and practical elements best show that candidates will be able to fulfil the role of a noise competent person.

His continued service, thoughtful leadership and collaborative approach make him a highly deserving recipient of this award.

Geoff Kerry Award

The Geoff Kerry Award for Distinguished Long Service to the Institute acknowledges publicly the debt owed to individual members who have served the Institute in various ways for normally 20 years but no less than 15. The award is given to recognise significant contributions in any capacity, for example, by serving on Council, committees or working groups, being honorary officers or assisting with conference organisation or other projects.

Martin Lester
Martin's citation:
Martin became a student member of the IOA in 1985 and assisted with the Spring and Autumn Conferences between 1985 and 1989. In 1986, he joined the North-West Branch committee and served as Hon Treasurer until 1997, when he moved to Northern Ireland. He became a member of the IOA in 1988 and a registered chartered engineer through the IOA scheme in 1997.

In 1998, Martin joined the newly formed Irish Branch committee, serving as Hon Treasurer in 2001, Acting Chairman in 2004, and Chairman from 2006 to 2020. He was elected to the IOA Council in 2007 and served as Honorary Treasurer from 2009 to 2015.

Martin organised significant events, including the 2002 Irish Branch meeting on road traffic noise and the 2005 joint Irish and Scottish Branch meeting on sound insulation. He also tutored the IOA Diploma course on Noise and Vibration Control Engineering in 2008-09.

In 2015, Martin was elected an Honorary Fellow of the IOA for his extensive service.

He joined the Meetings Committee in 2015 and has chaired the annual conference since 2016, also managing ICSV 24 in 2017 and Internoise 2022.

Re-elected to the IOA Council in 2016, Martin resumed his role as Honorary Treasurer in 2020 and served until 2024.

Over his 16 years on the IOA Council, he spent 10 years as Honorary Treasurer. During the pandemic, Martin assisted with the weekly Zoom Member's Forum meetings and contributed to the joint ANC and IOA information documents.

For his many years of service and dedication, the Institute is delighted to present the Geoff Kerry Long Service to the Institute Award to Martin Lester.

Promoting Acoustics to the Public Award

The Award for Promoting Acoustics to the Public has been created to encourage activity that generates greater awareness of the importance of acoustics outside the acoustics' fraternity, that is to people without acoustical expertise. The award may recognise either a single piece of outstanding work or sustained long-term activity.

Edinburgh Science

Edinburgh Science's citation: Through their work with the IOA, Edinburgh Science have undoubtably done much to promote acoustics to the public between 2017 and 2024, however, the focus of the nomination for this award is really on the work conducted during the pandemic years. The moving lock, stock and barrel of the careers hive into the fully virtual environment was a great achievement and resulted in a higher engagement with pupils from high- Scottish Index of Multiple Deprivation (SIMD) schools than pre-covid. They also managed to run a successful virtual event for the public with professional volunteers (including acousticians) taking part to engage with the public.

Above: The team from Edinburgh Science collecting their Promoting Acoustics to the Public Award

Their work was also notable through the rapid development of boxes and downloadable/online video content etc to be sent out to teachers to teach the generation science with their pupils offline/ without science communicators on site. And again, this content was available to the public and to parents for home learning for free.

Without this work, acoustics would have had much less of a presence in schools and homes and with the public during this difficult time for science engagement and Edinburgh Science deserve to be recognised for going above and beyond what they were engaged by the IOA to do.

Catching up with IOA colleagues

Rounding up

In his closing speech, Professor David Waddington, IOA President, said: "It has been a true pleasure to celebrate the remarkable achievements of our award recipients – the dedication, innovation and service inspires us all. Today, we have honoured some outstanding contributions to acoustics and we have reaffirmed the strength and vibrancy of our community, so as we move forward let us continue to foster collaboration, encourage innovation and uphold the highest standards of excellence."

Below: A room full of congratulations and friendly chat

Peter Rogers wins the 2025 IOA sustainability award

As reported on page 18 of this issue, Peter Rogers, MD at Sustainable Acoustics Ltd won the IOA 2025 Richard Cowell Sustainability in Acoustics Award. He is only the second recipient of this prestigious commendation.

By Coby Mumford and Di Rogers

Above: Peter at the Winchester Science Centre

David Waddington, President of the IOA, congratulated Peter, saying: "We are delighted to present the Richard Cowell Sustainability Award to Peter Rogers in recognition of his outstanding commitment to sustainability and his leadership in aligning acoustics with the UN Sustainable Development Goals. Peter's work has made a lasting impact, setting a benchmark for sustainability in our field and inspiring others to take action."

Initially called the IOA Sustainable Design Award, The Richard Cowell Sustainability in Acoustics Award was created in 2019, and is granted for pioneering sustainability in acoustics. We are delighted that Peter's trailblazing work has been recognised by the IOA, specifically his successes in introducing sustainability into mainstream acoustics and engaging professionals within the wider environmental arena. We want to take this opportunity to share our journey to inspire others in the industry and related fields, and to offer our support to like-minded businesses that embark on this process.

How it began

More than two decades ago Peter was an acoustician based in Manchester with an ambition to deliver acoustics for the 21st century. When he met his now-wife, Diana, an environmental analyst working at WWF, these ideas became a concrete vision – sustainability and acoustics could complement each other and help the planet flourish. Peter saw acoustics playing a proactive and positive role in society, instead of simply managing the harmful impacts of noise, euphonic, contextual and natural sound can add to our positive experiences within the built environment and connect us to the natural world. The central challenge was articulating this effectively to others in the field. This marked the beginning of Peter's increasing involvement with the IOA and together with Richard Cowell (whose legacy is commemorated through the award), they encouraged events and discussion concerning sustainability. During this time the pair stressed

the importance of long-term thinking among those in the industry and the need to deepen conversations about sustainability.

Sustainable Acoustics is formed

In 2012, industry discussions around sustainability were still in their infancy. Peter felt he could most significantly add to the development of sustainable acoustics by living it through his day-to-day work, which led to the idea of starting a company that embodied this purpose. The English Cogger Partnership (TECP) was a small acoustics company in Winchester, owned by acousticians Colin English and Nigel Cogger. Coming with a great reputation and industry links to ARUP, Peter and Diana bought TECP in April 2014 and, after a transitional year, rebranded the company as Sustainable Acoustics. Maintaining two talented acousticians, Louise Conroy and Chris Heal, the company launched its new mission – continuing acoustic excellence with sustainability front and centre.

Putting sustainability front and centre

Sustainable Acoustics Ltd began life in April 2014 – three days before Peter and Diana's second child was born. Peter described how becoming a parent brings the future into sharp perspective, saying: "In many ways, it was becoming a parent which marked the moment I knew I wanted to help make the world a better place for the next generation, but it was not until I had a vision for Sustainable Acoustics that the pieces of that puzzle fell into place."

Since then, sustainable acoustics as a design concept has made the leap from theory into practice. Peter says he is proud that today there are many acoustic consultancies who embody the principles of sustainability in acoustics.

He said: "Despite lots of positive changes in the industry, the challenges facing humanity have deepened dramatically. We face a global poly-crisis which requires us as engineers, to help provide solutions to this highly complex, multifaceted problem."

There are numerous ways acoustics can contribute to delivering social and environmental value and help communities to prosper. One example of sustainable acoustics in action is the application of Agent of Change. Making urban spaces work for the range of stakeholders within communities is a key part of delivering sustainability within the built environment. Recently, Sustainable Acoustics Ltd has been working on two existing live music and nightclub venues (the Cumberland Arms, Newcastle and The Nightingale, Birmingham). The process has involved quantifying the acoustic baseline of the venues robustly, covering all types of events and establishing collaboration with the developers seeking to place new homes nearby. The Agent of Change principle is enshrined in planning policy but takes time to implement successfully and the company's work with the stakeholders in this example allows residents to have suitable conditions for living (especially sleeping) whilst ensuring that the venues continue to operate unhindered.

Looking ahead

A recent Intergovernmental Panel on Climate Change (IPCC) report highlights alarming trends, including unprecedented warming, rising sea levels and extreme weather events. Spring 2025 was the driest since 1852 and biodiversity is in widespread decline – this requires urgent action.

Sustainability is about setting progressive goals and taking action. As part of our work amplifying our impact across our value chain, we are currently undergoing the B Corp assessment. Already a carbon neutral company, we are also working with the Science-Based Targets Initiative (SBTi) to make concrete commitments to further reduce our greenhouse gas emissions.

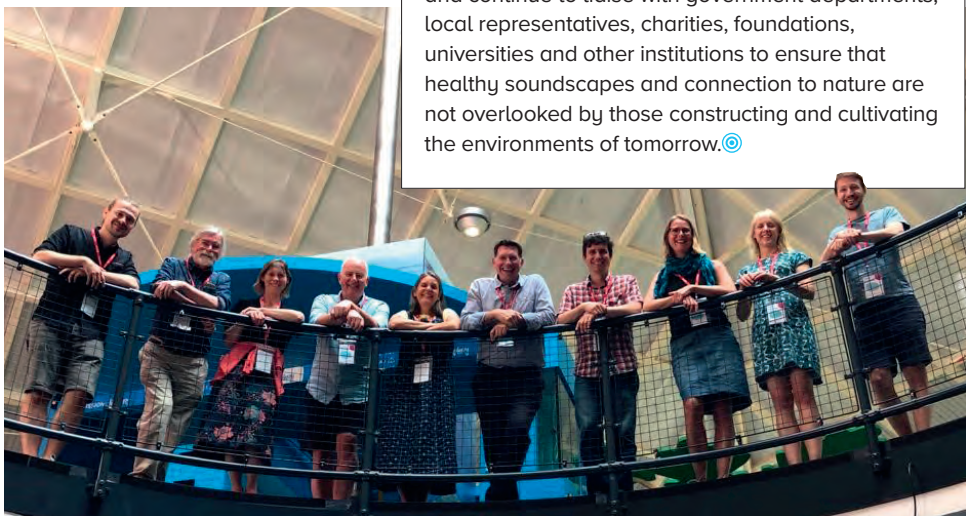
Sustainability is also about getting your own house in order, so to this end, we have recently acquired ISO14001 certification, and we maintain our commitment to reaching net zero by 2030.

It is through the work that we do that we can have the largest effect. The UN Sustainable Development Goals have become a foundation for our work at Sustainable Acoustics, and we are excited by the appetite for holistic thinking within government and the private sector. Peter's *Sustainable Acoustics Lexicon* has updated Lindsay's Wheel to provide a framework for the next generation of acousticians, now adopted by the ANC. We welcome the interest in combining traditional acoustic practices with forward-thinking environmental and socially focused goals.

How the wider industry can help

Accepting his award, Peter called on members of the industry to join him on the sustainability journey saying: "Sound is ubiquitous and affects us all. It is an honour to be recognised by the IOA for being a leader in the field where acoustics and sustainability is concerned. We need to think bigger and move more quickly to help humanity get back on the right pathway. I call on the rest of our industry to follow our lead and hope to see this award won by many following in our footsteps."

Peter continues to dedicate a significant amount of time to inspiring change in others by delivering talks about sustainability, acoustics and embedding the sustainable development goals into acousticians' work. Furthermore, as a company, we are aiming to expand our relationships in policymaking circles and continue to liaise with government departments, local representatives, charities, foundations, universities and other institutions to ensure that healthy soundscapes and connection to nature are not overlooked by those constructing and cultivating the environments of tomorrow.



Below: Sustainable Acoustics' 'away day' 2023

IOA EVENTS FOR 2025-26

12th INTERNATIONAL CONFERENCE ON
AUDITORIUM ACOUSTICS 2025 (see advert below)
8-10 September 2025
The Bristol Beacon, Bristol

IOA ANNUAL CONFERENCE AND EXHIBITION
Acoustics 2025
19-21 October 2025
The DoubleTree by Hilton, Milton Keynes

REPRODUCED SOUND 2025:
PASSION, PROCESSING, AND PERCEPTION
Organised by the Electroacoustics Group
18-20 November 2025
The Old Swan, Harrogate

Other event

54TH INTERNATIONAL CONGRESS AND EXPOSITION ON
NOISE CONTROL ENGINEERING (Inter-Noise 2025)
24-27 August 2025
São Paulo, Brazil
https://tinyurl.com/54internoise

2026

ICUA 2026
INTERNATIONAL CONFERENCE ON
UNDERWATER ACOUSTICS
15-18 June 2026
University of Strathclyde Technology & Innovation Centre (TIC), Glasgow

For up-to-date information visit www.ioa.org.uk

Shortlist announced for the ANC Awards

The shortlist has been announced for the Association of Noise Consultants 2025 Awards.

Promoting and recognising excellence among UK acoustic consultants, the accolades look for examples of work that display innovation and originality in acoustic design or approach to a particular project.

THE SHORTLIST:

Building Acoustics (sponsored by AcSoft)
Create Consulting Engineers – Ironworks
Cundall – Pattern Shop
Ion Acoustics – Mulberry Academy, London Dock

Sports and Leisure (sponsored by Cirrus Research)
Adrian James Acoustics – Roarr! Dinosaur Theme Park
Peninsular Acoustics – Formby Village Padel Club

Vibration Prediction and Control (sponsored by Getzner)
Cahill Design Consultants – Oseyo, London Bridge
Create Consulting Engineers – St George's Hospital
Hoare Lea – Oxford Instruments

Performance Spaces (sponsored by CMS Danskin)
Acoustic Consultants – Albert Hall, Swansea
Sandy Brown – The Halls, Wolverhampton
SRL Technical Services – Co-op Live, Manchester

Studios and Clubs (sponsored by CDM Stravitec)
Hoare Lea – Eastbrook Studios
Suono, RBA Acoustics and Hoare Lea – Corsica Studios
Hunter Acoustics – New Recording Studio Facilities, Care for the Family

Environmental Noise (sponsored by ANV Measurement Systems)
Red Twin – De-tuning of Whistling Brise Soleil
WSP – Tungsten West

Sustainability (sponsored by the Institute of Acoustics)
Ion Acoustics – Mulberry Academy, London Dock
SRL Technical Services – Beaulieu Park Primary School

Innovation (sponsored by Mason)
Buro Happold/Vanguardia – Visa Live at le Louvre
Peninsular Acoustics – Formby Village Padel Club
SRL Technical Services – Co-op Live, Manchester
Stantec – BBC – Innovative Noise at Work Risk Management System
WSP – Tungsten West

We will publish the results in the next issue of Acoustics Bulletin.

ANC Awards 2025

The 2025 Awards took place at the Annual Conference, on 25th June at the Crowne Plaza, Birmingham, where the shortlisted entrants gave four minute presentations. The results were announced at a dinner that evening and the awards were presented by Pallab Ghosh.

The awards promote and recognise excellence among UK acoustic consultants and look for examples of work that displays innovation, and originality in acoustic design or approach to a particular project.

Awards were presented in the following categories –

Buildings
Environmental Noise
Innovation
Performance Spaces
Small Consultancies
Sports and Leisure
Studios and Clubs
Sustainability
Vibration Predication and Control

ANC ACOUSTICS & NOISE CONSULTANTS ACOUSTIC AWARDS 2025

You can see more about the winning entries here –
association-of-noise-consultants.co.uk/awards-2025

Approved Membership Applications

The Membership Committee reviewed 47 application forms at their meeting held on 10 April 2025 at the IOA headquarters in Milton Keynes. Following the Committee's recommendations, the Council has recently approved 20 corporate applications. Of the applications reviewed, 24 were from new candidates seeking to join the IOA, while the remaining applications were from existing members requesting upgrades.

FIOA

Jordan Cheer	Nick Treby

Corporate members

Ed Anderson	David Kendal
Calum Cais	Steven Mitchell
Rodrigo Carniato Francalacci	Andrea Rodriguez
Chi Lung Chan	Will Rowe
Diego Cordes	Joe Rutt
Celia Diaz Brito	John Sails
Guy Favill	Elizabeth Samphier
Zachary Fox	Michael Welsh
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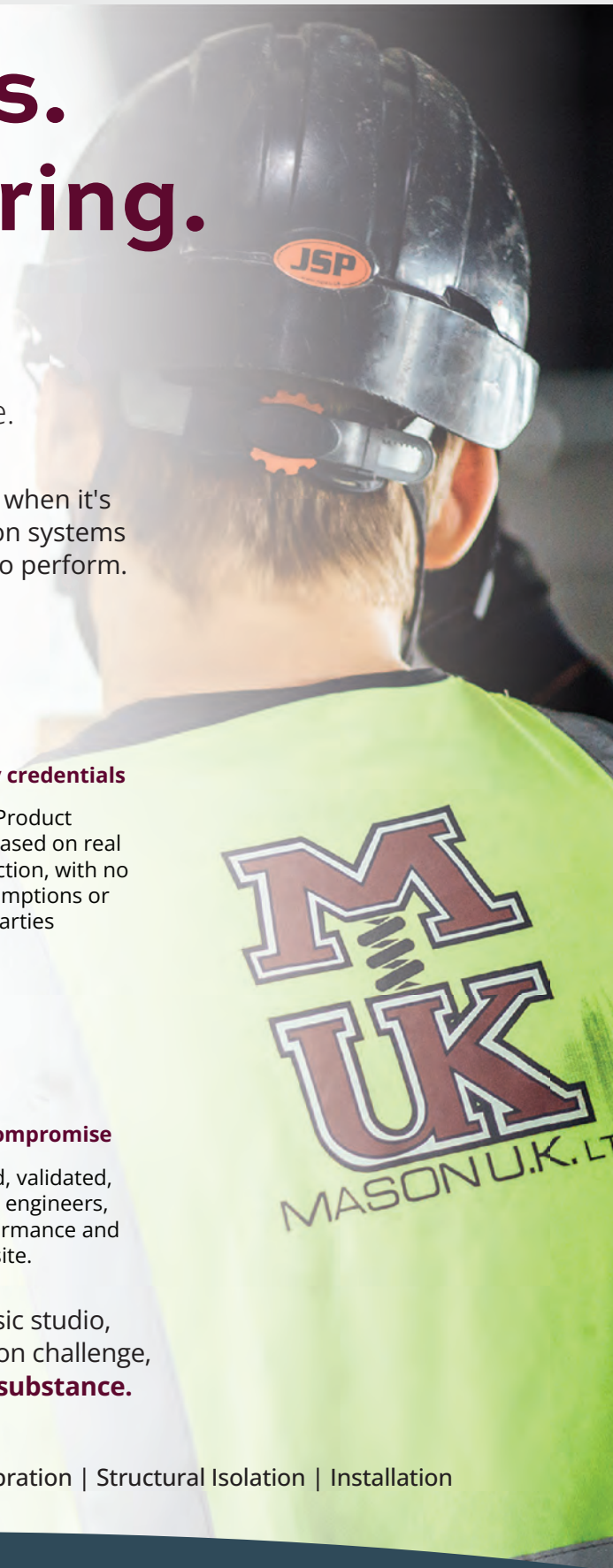

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UK Acoustics Network Plus provides new resources for IOA outreach

Early positive and inclusive experiences of STEM careers including acoustics are essential to widening access and interest in 'non-traditional' subjects and careers.

By Simone Graetzer and Vicky Wills

Above:
Helen Sheldon's WEST poster

In 2024-2025, the UK Acoustics Network Plus (UKAN+) collaborated with Women in Engineering, Science and Technology (WEST), to produce a set of materials on careers in sound for outreach in primary and secondary schools. These can be used to promote acoustics, audiology, audio engineering, sound recording/design and foley, music production and sound-related careers more broadly to primary and secondary school students, amongst others, to draw attention to the careers available in sound, noise and vibration.

The WEST Fund was established in memory of Ros Wall who was instrumental in setting up a range of local and national projects to encourage women and girls to take up careers in non-traditional roles in science, engineering, technology and the built environment. WEST works with brilliant role models to change perceptions about what girls and women can do.

Resources

The full set of UKAN+-WEST materials is now available on the UK Acoustics Network Plus (UKAN+) website and YouTube channel at **https://tinyurl.com/OutreachWEST**

For the role model posters and videos, the four job titles highlighted are

- sound and vibration engineer/ acoustical consultant;
- film sound designer;
- DJ; and
- audiologist.

There are four corresponding posters available in both pdf and jpg formats and an outreach e-book containing guidance from WEST.

UKAN+ wishes to thank the role models and volunteers, including Helen Sheldon (pictured), Mariana Lopez, Nicole Vasey, Laura Taylor, Lucy Clague and Rebecca Vos. Thanks also to the filmmaker, Rowenna Baldwin, for her wonderful work. Everyone is welcome to use these resources to promote careers in STEM for non-commercial educational or charitable purposes. If you are interested in using them for other purposes, please contact WEST at **info@westskills.org.uk** Please share and credit appropriately and send your feedback to Simone at **s.n.graetzer@salford.ac.uk**

More outreach materials

There are also outreach materials available on the Institute of Acoustics website, such as the careers guide (**https://www.ioa.org.uk/news/acoustics-sound-career-2025-produced-institute-acoustics**) and the primary school competition (**Primary Schools Competition 2025 Flyer.pdf**) and young persons competition (**ioa_schools_comp_final.pdf**). Additionally, as part of the Project Reverb initiative, a series of activities was created, along with instructions and presentation slides, and these can be found in the membership area of the website (**https://www.ioa.org.uk/member-pages/project-reverb-resources**). If you are not able to access these, or would like to talk to someone about an upcoming STEM event, please email the committee at **STEM@ioa.org.uk**

The IOA is currently working on a website for teachers and young people, with links to all resources in one place, with plans to go live in 2026.

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The IOA Bursary Fund update

IOA Council allocated £10,000 to the Bursary Fund, which it aims to use in both improving IOA members' access to acoustics-related training and activities and also helping them to carry out acoustics-related STEM activities, where funding from other sources may be limited or unavailable.

Reena Mahtani FIOA,
Chair of the Bursary Fund

By Reena Mahtani FIOA, Chair of the Bursary Fund

The Spring round of the Bursary Fund closed for applications at the end of May with three applications received before the deadline. The first one asked for support with postgraduate fees, the second applicant asked for assistance to attend Acoustics 2025 and the third requested funding to attend and present a paper at Euronoise in Malaga. At the time of writing this update, we are reviewing the applications to decide whether to provide the requested funding or not, and you will definitely hear more of the successful applicants in the next issue of Acoustics Bulletin.

I would like to use this occasion to point out that we are unable to fast track any applications, and if funding is needed to attend a conference, we advise to submit the application at least three months before the conference, or as soon as abstract acceptance is received. This way we can make sure funding can be released in time for the conference if the application is successful. We also need to know whether any academic or research institutions were approached for funding before the application to the IOA Bursary Fund.

Apply here

By the time this issue reaches you, the Summer round will be open for applications until the end of August. The application form is here: **https://www.ioa.org.uk/can-we-help/bursary-fund-application-form**

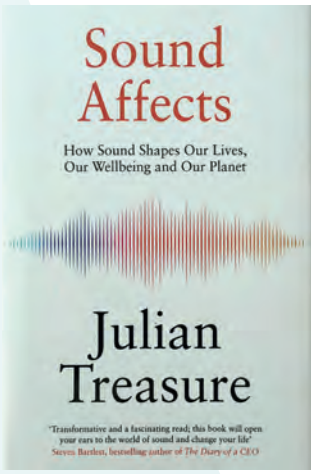
The programme is open to any member of the Institute, including students, so if you or someone you know could benefit from financial assistance from the Institute for training or STEM activities, please get in touch!

Good luck!

‘Sound Affects’ *by Julian Treasure*

In every moment of our lives, sound shapes us – it influences our emotions, our focus, our stress levels and even our behaviour. This is the central premise of *Sound Affects*, the new book by Julian Treasure.

Reviewed by Alex Shaida



Treasure is a well-known expert on all things auditory. Though not a professional acoustician, he brings a wealth of experience as an author, international speaker and consultant on conscious listening, impactful speaking and the strategic use of sound in business. With more than 150 million views of his five TED and 11 TEDx talks, Treasure has become a leading voice in this field. He has also taught more than 150,000 students in communication skills and is a frequent guest on global media platforms. His background as a drummer adds another layer of insight into his nuanced understanding of sound.

As someone working within the Institute of Acoustics, an organisation committed to serving its 3,000+ members and promoting the importance of acoustics, I was especially curious to explore this book from a broader, more public-facing perspective.

Structure and themes

Treasure organises the book around key categories of sound:

- **biophony** – the orchestra of the natural world;
- **anthropophony** – human-made sounds, from cities to gadgets;
- **geophony** – the sounds of the earth, such as wind and weather;
- **cosmophony** – the sounds of the cosmos; and
- **silence** – presented as a vital and powerful ‘sound’ in itself.

While *Sound Affects* explores all these domains, its central focus is on the human condition. One of the most compelling topics is silence – not merely the absence of noise, but a restorative space that can bring calm, productivity and mental clarity. Interestingly, the book describes how extreme silence, such as that experienced in anechoic chambers, can be disorienting. Still, Treasure argues that reclaiming silence is essential for personal and societal wellbeing.

The impact of sound

Treasure presents a compelling case for how sound affects us on four levels:

- **physiologically** – influencing heart rate and stress;
- **psychologically** – impacting our mood and emotions;
- **cognitively** – affecting focus and mental clarity; and
- **behaviourally** – shaping decisions and social interactions.

A key concern he raises is the growing inequality of access to quiet, natural spaces. If society continues to undervalue silence, Treasure warns, tranquillity could become a luxury reserved for the wealthy.

Conscious listening and sound responsibility

At the heart of the book is a strong advocacy for ‘conscious listening – being more intentional about how we listen to and interact with sound. Treasure encourages readers to:

- reflect on whether sounds in their environment are healthy, helpful, or happy;
- reconnect with natural soundscapes and rediscover silence; and
- take responsibility for the sounds we create and consume.

In an era where reading and writing dominate educational curricula, Treasure rightly argues that listening is vastly undervalued. Our increasingly urban lifestyles disconnect us from the soothing sounds of nature, potentially affecting our health and mental wellbeing.

A call for research and awareness

Treasure expresses concern over the lack of mainstream scientific research on sound’s impact on health, even as anecdotal and alternative communities increasingly champion its importance. He highlights vocal learning – a rare trait in nature and a significant factor in human evolution – as something we may undermine by tolerating ever-increasing levels of noise pollution.

Final thoughts

There’s much more in *Sound Affects* than can be captured in a single-page review. For anyone curious about how sound influences our lives, Julian Treasure offers a wealth of accessible and thought-provoking insights. He reminds us that improving our listening skills and seeking healthier soundscapes can lead to greater peace, creativity and happiness.

As someone who enjoys walking along windswept beaches, absorbing the hush of caves and writing in quiet spaces, I found this book to be both illuminating and deeply affirming. It’s an excellent resource for anyone looking to broaden public understanding of acoustics – both within and beyond the professional community.

EARLY CAREERS GROUP

An introduction to Auditorium Acoustics presented by Chris Hunt

The Early Careers Group has held two useful and important meetings recently as reported by Zach Simcox and Aaron Tomlinson.

By Zach Simcox, ECG Chair

On 14 April, Chris Hunt, Senior Acoustic Consultant at Theatre Projects, presented the history of auditorium acoustics to the ECG members.

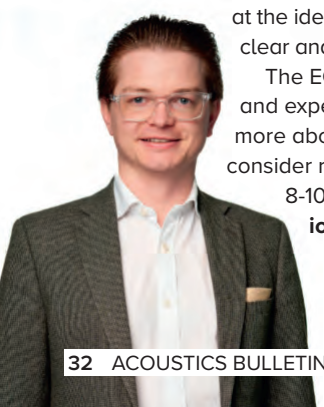
Above: The New Bund 31 Performing Arts Center in Shanghai

From ancient Greek amphitheatres to Chinese opera houses and classical concert halls, acoustic design has always been an important consideration for these spaces to give the best experience for audiences. In performances, clarity is important for understanding and reverberation is important in order to feel the energy.

In the late 1800s Wallace Clement Sabine was tasked with improving the acoustics of the Fogg Lecture Hall at the Fogg Art Museum, Harvard University. Armed with an organ pipe, a stopwatch and a bunch of cushions, he calculated the reverberation time of the room. In his research he invented the Sabine equation and with it, modern room acoustics. Acousticians could now calculate the reverberation time based on the room volume and absorbing surfaces.

Chris demonstrated the evolution of auditorium acoustics by describing the projects he has completed and is currently working on. He showed images of beautifully designed rooms with curved wooden panels to direct reflections, which also cunningly hid high-tech speakers to enhance and reinforce the sound. Adding digital reinforcement allows for flexibility of the types of performance in a room, from speech to orchestral music whilst maintaining high quality room acoustics. Purists may have scoffed at the idea, but from the audience perspective the sound is clear and enjoyable.

The ECG would like to thank Chris for sharing his time and experience with the group. If you would like to hear more about the exciting world of auditorium acoustics, consider registering for Auditorium Acoustics 2025, held on 8-10 September at Bristol Beacon, Bristol. (**https://www.ioa.org.uk/civicrm/event/register?id=969&reset=1**)



Left: Chris Hunt, Senior Acoustic Consultant at Theatre Projects

Planning Practice Guidance on Noise readthrough

By Aaron Tomlinson

On Friday 2 June, the ECG hosted their latest online readthrough of the Planning Practice Guidance on Noise (PPGN). The session was led by Zach Simcox and we were delighted to welcome Stephen Turner who provided knowledgeable insights throughout the session.

One of the first points raised was that the guidance still contains links to outdated versions of the National Planning Policy Framework (NPPF).

There was also some discussion around the phrase in the guidance suggesting that noise can 'override other planning concerns.' This was felt to be misleading, as both the NPPF and the Noise Policy Statement for England (NPSE) are clear that planning decisions need to consider all issues in balance. Paragraph 5 of the PPGN supports this view, highlighting the need to 'mitigate and reduce to a minimum,' which reflects the NPSE's principle of taking reasonable steps to manage adverse effects. In practical terms, this means making a genuine effort to control noise when it falls between the Lowest Observed Adverse Effect Level (LOAEL) and the Significant Observed Adverse Effect Level (SOAEL).

A key question raised was whether staying within LOAEL and applying mitigation could justify exceeding recommended levels in standards like BS 8233 or BS 4142 — and if so, by how much. The point was made that BS 4142 provides both numerical benchmarks and a qualitative assessment, and that the goal isn't necessarily to eliminate all adverse effects, but to show that effective measures are being taken to keep them under control.

The conversation also turned to whether any consistent national noise levels exist for LOAEL and SOAEL. While thresholds often vary between local authorities, it was noted that BS 8233 figures are commonly used to define LOAEL in residential settings. SOAEL is less clearly defined, though the aviation sector does provide some benchmarks (such as 54 dB L_{Aeq} during the day and 41 dB L_{Aeq} at night).

Finally, there was some reflection on which supporting documents are referenced in the guidance. The first version of the PPGN included a handful of technical references, but there remains some reluctance to cite non-governmental documents. While BS 4142 and BS 8233 are not named, the inclusion of ProPG: Planning & Noise was welcomed. There was also mention that some relevant material, including guidance on national networks and aviation noise, seems to have been overlooked.

The session gave attendees a chance to go through the guidance in detail, ask questions and hear expert views on how it's applied in practice. Many thanks to Zach Simcox for guiding the read-through and to Stephen Turner for sharing his knowledge and experience throughout.

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Rainbow-trapping resonator array for high-level sound absorption

Sound absorbers designed for high sound pressure levels (SPLs) are ever more critical in aerospace industries. Traditional solutions with resonant absorbers exhibit useful damping properties, although they can struggle to maintain the intended behaviour at the high SPLs readily encountered during flight conditions.

By Adam A. Cavanagh, Acoustics Engineering Research MSc student, The University of Salford

Noise control methods in ducted aeroengines typically rely on perforated liners installed along engine intakes and exhausts. For example, single- and double-degree-of-freedom resonator arrays usually compose such liners by cavity-backing the perforations. Under linear acoustic conditions ($\lesssim$ 120 dB), these resonators are efficient sound absorbers due to the thermoviscous losses inherent in their narrow dimensions. However, their performance can change significantly at sufficiently high SPLs due to the amplitude-dependent increase of perforates' acoustic resistance.

Resonant absorbers generally have narrow band gaps, meaning that they interact with waves with frequencies near the structure's resonance frequency, thus resulting in targeted sound absorption. The primary noise source in turbofan or electric ducted fan (EDF) engines is the fans and their spectra include both broadband and sharp tonal components that can exceed 150 dB during flight conditions.

The noise's high SPL and broadband nature make effective attenuation challenging. This and forecasted air travel trends highlight the need for effective sound absorbers. By analysing a 2D proof-of-concept absorber, we show that the rainbow-trapping effect can be used to design a compact and efficient high SPL broadband sound absorber.

Acoustic rainbow-trapping

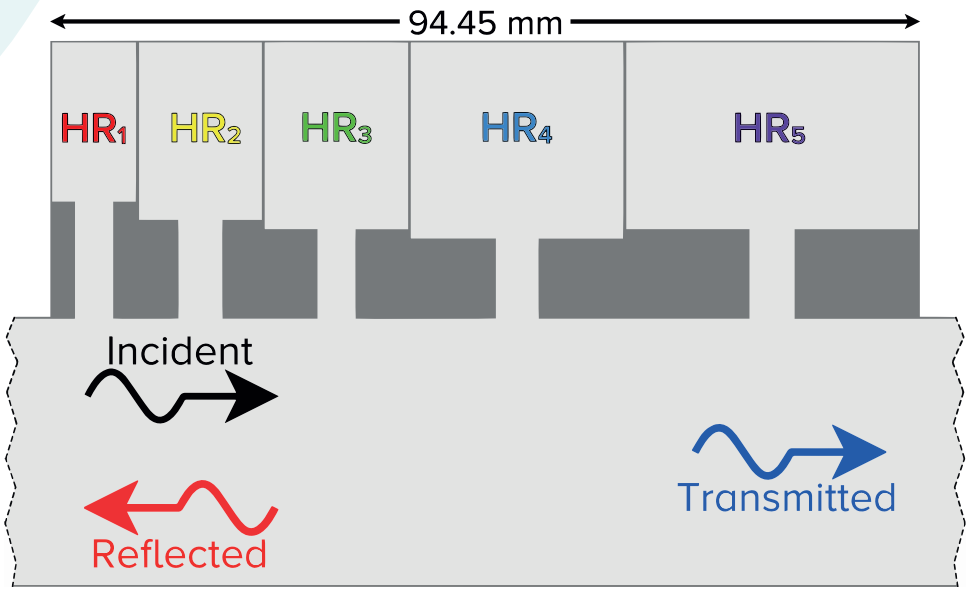
'Rainbow-trapping' refers to a spatial reduction in wave speed (slow sound). In this case, the reduction causes the energy of different frequency waves to become 'trapped' at differing points in space, where, once trapped, the inherent attenuation mechanisms efficiently dissipate that energy. We achieve this by tuning an array of ducted Helmholtz resonators (HRs) to cascade their resonance frequencies. Hence, they cover a broadband range when combined.

Design principles

The 2D rainbow-trapping resonator array (RTRA) comprises five HRs attached side-on to a duct of 29mm arbitrary height. The RTRA linear response (low SPL) was approximated using the transfer matrix method with equivalent properties obtained from the Johnson-Champoux-Allard model. We constrained the total length and width to 100mm and 30mm to represent realistic size restrictions.

The five HRs were tuned using an optimisation method (genetic algorithm) constrained to enhance absorption at high SPLs (e.g. > 130 dB). The paramount constraint was on the neck widths, ensuring a minimum height of 4mm. This way, the optimised design facilitates nonlinear loss mechanisms (e.g. vortex shedding) to dissipate high-amplitude wave energy more efficiently.

The HRs were tuned to the 1-2 kHz range to cover a typical aeroengine's loudest fan noise harmonics (due to the blade passing frequency). These components are more noticeable than the broadband components so targeting them is a good way to reduce the perceived loudness and annoyance.



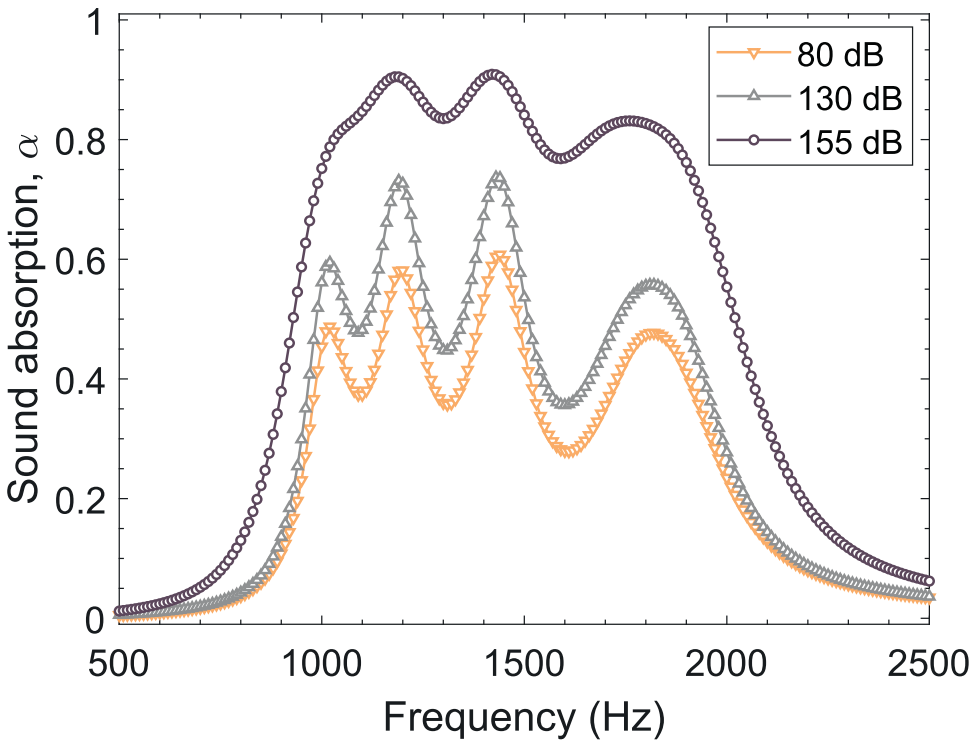
Below: The 2D RTRA's configuration. Five resonators are attached to a main duct, with the incident, transmitted and reflected wave icons

Performance

The RTRA's nonlinear response (high SPL) was analysed numerically using the finite element method in COMSOL Multiphysics™. The system was excited with plane waves at three SPLs, 80 dB, 130 dB and 155 dB, corresponding to the linear, weakly nonlinear and strongly nonlinear regimes.

The RTRA shows reasonable broadband absorption at 80 dB. The four distinct peaks illustrate how each HR contributes to the combined response; their resonances overlap due to the moderate quality factors, causing maxima between each HR resonance frequency.

The absorption grows substantially with SPL thanks to their relatively wide necks, contrasting a typical resonant absorber's behaviour (usually with sub-millimetre-sized perforations), where the increased resistance reduces absorber-wave interaction and inhibits energy dissipation. Conversely, the RTRA design exploits the increasing resistance. Its absorption is approximately 0.8 or higher across the target range at 155 dB.



Next steps

The conceptual RTRA highlights potential methods for high SPL broadband sound absorption. We plan to build on the summarised modelling work to represent realisable (axisymmetric) geometric configurations and experimentally validate the results with impedance tube measurements. The findings will help design compact and lightweight sound absorbers for small- and large-scale ducted fan engines.

Above: Absorption plot: Frequency-dependent sound absorption of the RTRA at low, medium and high SPLs. Results were obtained numerically using FEM

Careers in underwater acoustics

For an island nation, we don't have enough experts working in underwater acoustics. According to UKAN's Professor Kirill Horoshenkov, this country desperately needs people to work in this area so he got in touch with Professor Traci Neilsen, Brigham Young University, Physics and Astronomy and asked her to share the story of her work in the field. Hers is a timely and very welcome article.

By Professor Traci Neilsen, Brigham Young University, Physics and Astronomy

Acoustics is fundamental to many different areas of study, technology and innovation and although careers in acoustics cover a variety of fields, few young people know of these options. Most acousticians describe discovering acoustics at some point along their career path so the IOA and the UK Acoustics Network (**UKAN**) have both developed fabulous resources describing different careers. As a complementary effort, I recently led the Committee for Outreach and Education of the Acoustical Society of America to create infographics for select careers in acoustics **https://exploresound.org/acoustics-careers/** that are intended to attract the attention of secondary school (high school) students and university students who are searching for a career path. Links to the UK Acoustic Network **Resources Archive – The UK Acoustics Network** and other career information are provided in the 'Learn More' link on each career page. (If you have ideas for additional resources that could be included, please email me at **tbn@byu.edu** with your suggestions.) As current Chair of ASA's Committee on Outreach and Education, I can say that we hope to continue working with the IOA and UKAN to increase understanding about the rewarding careers in acoustics.

Two of these 16 careers focus on underwater acoustics:

1. Acoustical oceanography (**https://exploresound.org/acoustics-careers/acoustical-oceanography/**) and
2. Underwater communications (**https://exploresound.org/acoustics-careers/underwater-communication/**).

The spread of careers in underwater acoustics, however, covers a much broader range and touches on many of the 10 challenges identified by the UN Decade of Ocean Acoustics (**https://oceandecade.org/challenges/**).

Sound in the ocean is used to conduct environmental impact studies, monitor ambient ocean noise levels, as well as seismic activity (**https://acousticstoday.org/2021-summer-twenty-thousand-leagues-under-the-sea-recording-earthquakes-with-autonomous-floats-frederik-j-simons-joel-d-simon-and-sirawich-pipatprathanporn/**) and tsunamis.

Marine bioacoustics focuses on monitoring species populations and migrations to assist conservation efforts.

Shipping noise is monitored to quantify the amount of anthropogenic noise in the ocean (**https://acousticstoday.org/the-bureau-of-ocean-energy-management-and-ocean-noise-shane-guan-jill-lewandowski-and-erica-staaterman/**) and can be used to monitor fishing activities.

Clever noise mitigation technologies have been developed to limit the impact of marine construction noise and the noise produced by offshore wind (**https://acousticstoday.org/the-underwater-sound-from-offshore-wind-farms-jennifer-amaral/**) and marine energy (**https://acousticstoday.org/listening-to-the-beat-of-new-ocean-technologies-for-harvesting-marine-energy-joseph-haxel-christopher-bassett-brian-polagye-kaustubha-raghukumar-and-cailene-gunn/**) is closely monitored.

Acoustic tomography involves measuring ocean currents and temperature and provides estimates of how the ocean environment is changing.

The rapidly changing Arctic is being closely monitored with acoustics (**https://acousticstoday.org/ocean-acoustics-in-the-rapidly-changing-arctic-peter-f-worcester-matthew-a-dzieciuch-and-hanne-sagen/**), as well as the sounds produced by glaciers (**https://acousticstoday.org/the-underwater-sounds-of-glaciers-grant-b-deane/**).

Similarly, acoustic recordings are used as a rain gauge for the open ocean to provide information about the changing climate (**https://acousticstoday.org/rainfall-at-sea-using-the-underwater-sounds-of-raindrops-as-a-rain-gauge-for-weather-and-climate-barry-b-ma-brian-d-dushaw-and-bruce-m-howe/**).

Ocean technologies also rely on acoustics; active sonars are used to survey the seafloor and for sub-bottom profiling. Underwater communication is enabled via underwater acoustic modems leading to the need for developing improved underwater acoustic transmitters and sensors.

Many marine operations are being conducted by autonomous underwater vehicles (AUVs) that require advanced navigation and robotic operations. To support all these activities, underwater sound propagation must be modelled (**https://acousticstoday.org/computational-acoustics-in-oceanography-the-research-roles-of-sound-field-simulations-timothy-f-duda-julien-bonnel-emanuel-coelho-and-kevin-d-heaney/**, and the interactions between the sound and the seafloor need to be understood (**https://acousticstoday.org/the-acoustics-of-marine-sediments-by-megan-s-ballard-and-kevin-m-lee/**).

Advanced digital signal processing techniques (**https://acousticstoday.org/model-based-ocean-acoustic-signal-processing-edmund-j-sullivan/**) have been developed to filter and enhance data from arrays of hydrophone to acoustically speaking ;'find a needle in a haystack' as they identify quiet noise sources amid the cacophony of noise in the ocean (**https://acousticstoday.org/physics-based-signal-processing-approaches-underwater-acoustic-sensing-lisa-m-zurk/**). The detecting, localising and tracking of sound sources actively seeks to ensure the safety of the seas and harbours.

Entry level information

Although there is great need for experienced researchers in all of these areas, limited opportunities exist for students to get formal training specifically in underwater acoustics. There are several resources which can be of great benefit to those who are learning about underwater acoustics though – entry level information on many topics is nicely organised on the Discovery of Sound in the Sea (DOSITS) website (**dosits.org**).

The DOSITS project continues to provide reliable information on underwater acoustics for a wide variety of audiences, from students to policy and decision-makers at environmental regulatory agencies. (Morin, 2016) DOSITS hosts webinar that hundreds of people watch live or view later on the webpage (**https://dosits.org/decision-makers/webinar-series/**). DOSITS also have an extensive audio gallery with examples of hundreds of sounds recorded in the sea (**https://dosits.org/galleries/audio-gallery/**).

Additional marine sounds are available from the Ocean Conservation Research group at **https://ocr.org/sound-library/** and a list of labeled datasets of ocean sounds is hosted by the UKAN at **https://acoustics.ac.uk/open-access-underwater-acoustics-data/**

Online tutorials

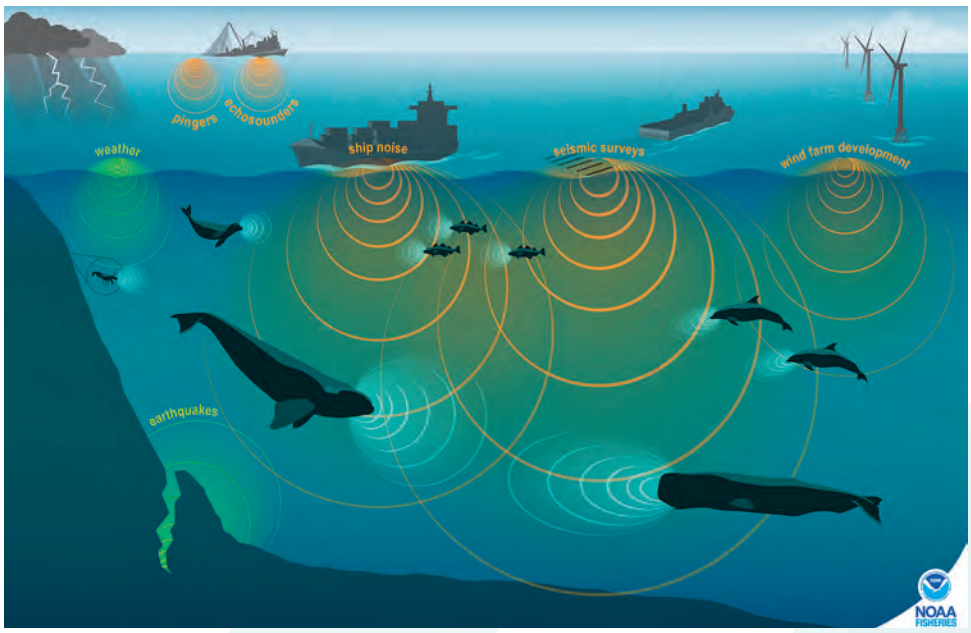
For those wishing for more advanced examples of how to model and analyse ocean sounds, several open-source resources are available such as the Ocean Acoustics Library (OALIB), which is supported by the US Office of Naval Research (**https://oalib-acoustics.org**).

OALIB provides links to sound propagation models based on rays, normal modes, the parabolic equation, wavenumber integration and benchmarks for the latest 3D sound propagation models.

Recent ONR-funded efforts to increase exposure and training in ocean acoustics have led to an incredible collection of online tutorials, two examples are Ocean Hack Week (**https://oceanhackweek.org/about/pasthackweeks.html**) and the Bridge to Ocean Acoustics and Technology (BOAT) workshops (**https://boat-fundamentals.readthedocs.io/en/latest/landing.html**).

Many GitHub repositories are available that can be used for modeling and processing ocean acoustics data, one of these was created for a special session I co-chaired for the Acoustical Society of America's virtual meeting in November 2024. our experts in key fields of ocean acoustics were asked to contribute video descriptions and a Jupyter notebook to be hosted in an open GitHub repository (**https://github.com/tbneilsen/underwater-acoustics-data-processing)**.

John Ragland, University of Washington, provided a Jupyter notebook (**https://github.com/tbneilsen/underwater-acoustics-data-processing/tree/main/noise_statistics_with_OOI_hydrophones**) and a video at P38



Below: Figure 1. Schematic of many noise sources in the ocean (Credit: NOAA Fisheries)

(**https://www.youtube.com/watch?v=RVE_0-kFffE**) showing how to access OOI data and calculate the noise statistics.

As an example of active sonar, Wu-Jung Lee, Applied Physics Laboratory (UW-APL), University of Washington, shared an example of Echopype (**https://github.com/OSOceanAcoustics/echopype-examples**), which is an open-source Python library for processing echosounder data in a scalable and interoperable approach.

Kathleen Wage, George Washington University, presented a tutorial at (**https://github.com/tbneilsen/underwater-acoustics-data-processing/tree/main/freq_wavenumber_tutorial**) on frequency-wavenumber array processing.

The final contribution was a detailed explanation (**https://www.youtube.com/watch?v=-M_1YkVI5F8**) and description (**https://github.com/tbneilsen/underwater-acoustics-data-processing/tree/main/das_tutorial**) of how to retrieve and process fibre optic data for distributed acoustic sensing provided by TJ Flynn, Johns Hopkins University Applied Physics Laboratory Lab.

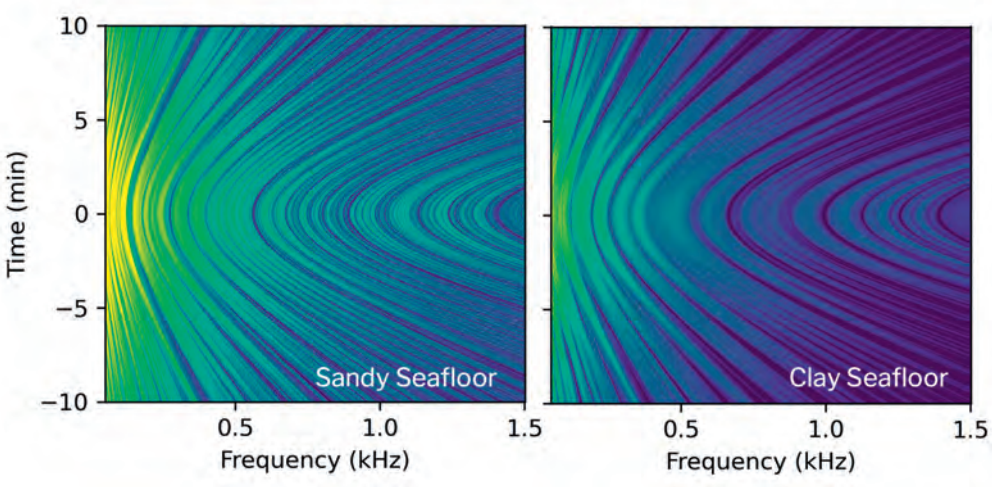
Sonar challenges

A large percentage of work in ocean acoustics falls into two categories:

- active sonar; and
- passive sonar.

Active sonar refers to scenarios in which a known sound is purposefully generated and the reflected sound is recorded, similar to echolocation. One example of active sonar is the multibeam echosounder illustrated in Figure 1.

Passive sonar, on the other hand, deals with sounds that are being made by unknown or uncontrolled sound sources and recorded on underwater microphones (hydrophones). My student-centred research group is studying a passive sonar application in which characteristics of the seabed are inferred from the sounds of transiting cargo ships. Specifically, we are training deep learning (DL) algorithms to identify the type of seabed in the area where a cargo ship is traveling and one or more hydrophones are listening. The input data samples for the deep learning algorithm are spectrograms of the shipping noise.



Above: Figure 2. Synthetic spectrogram of shipping noise for an area with 75m water and seafloor covered with sand or clay, generated using the Wales-Heitmeyer source spectrum (Wales, 2002) and the range-independent normal mode model ORCA (Westwood, 1996)

Several challenges exist when applying DL to passive sonar applications. First, supervised training of deep learning neural networks requires labeled data. In my application, this requires a label for the seabed class associated with each ship noise, because, in general, the seabed class is not known. My group is using synthetic ship noise spectrograms over the cavitation noise from ships as the training and validation data (Van Komen, 2021; Escobar, 2021). An example of the synthetic ship noise spectrograms generated for the same ship but with different seabed types are shown in Figure 2 to illustrate the impact of the seabed on the broadband sound propagation. After the DL models are trained and validated on the synthetic spectrograms, the generalisability of the trained models is demonstrated when they are applied to measured ship noise spectrograms to obtain an effective seabed type.

A second challenge is how to evaluate the generalisation results when the correct answer is unknown. Accuracy cannot be used, so a statistical representation of the results is needed to obtain a measure of the precision – to obtain the statistical distribution of results, an ensemble learning approach is used in which the results from multiple trained models are combined. The precision of the aggregated results can be obtained using the information entropy of the distribution and thus, a measure of uncertainty is obtained (Lau, 2025).

Sliding in to underwater acoustics

Additional challenges in ocean acoustics applications of DL include the temporal and spatial variability of the sound speed in the water and interference from additional noises, both natural and anthropogenic, some of which are illustrated in Figure 3. Ongoing work seeks to tackle these and many additional challenges in finding robust passive sonar deep learning approaches to seabed characterisation.

Now that I have shared a bit about my research, I return to where this column began: How did I find a career in underwater acoustics? In short, I slid into it, departed for a while and then dived in again!

As a graduate student pursuing a PhD in physics at the University of Texas (UT) at Austin, I decided to study acoustics because I enjoyed the fundamental physical principles and felt that acoustics would provide me with a broad range of job possibilities. I then contacted faculty members with research positions in acoustics, one involved highway noise barriers and the other underwater acoustics. It was an easy decision for me and I began learning about underwater acoustics, signal processing, sound propagation modeling and optimisations with Dr Evan Westwood at the Applied Research Laboratory, UT at Austin.

After receiving my PhD and completing a part-time postdoc, I took a break from research while raising my three children. My husband became a faculty member in the Department of Physics and Astronomy at Brigham Young University and I taught a few classes each year at the university as an adjunct instructor. Once our children were all in school, I did part-time research with other acoustics faculty members and had the opportunity to apply

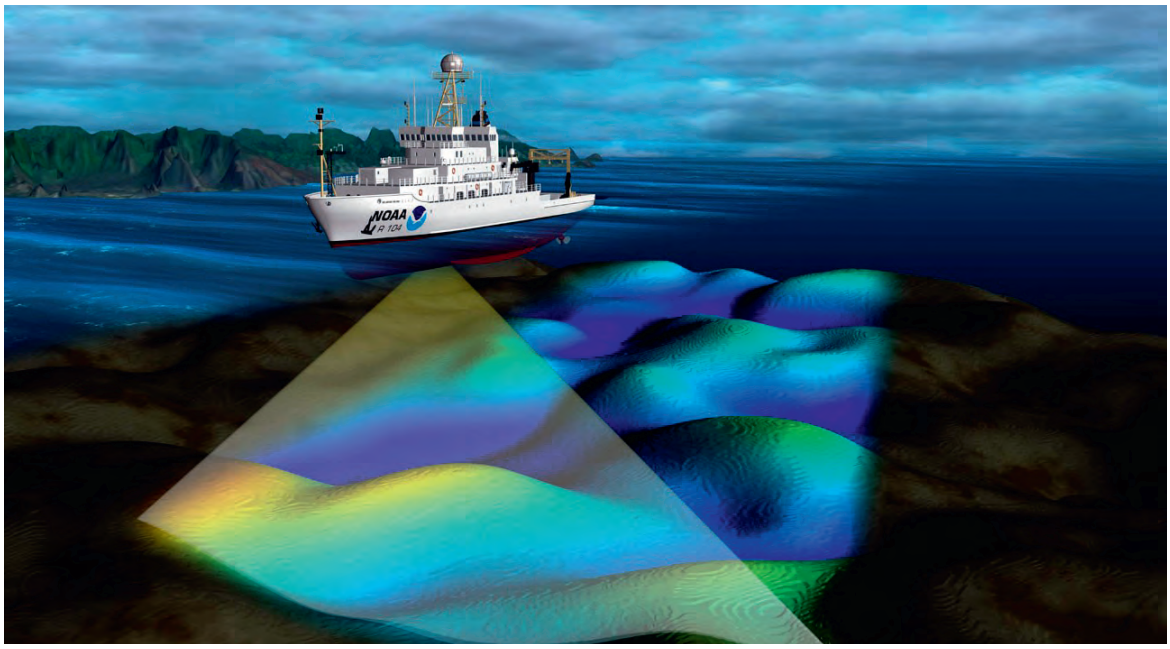
sound propagation modeling and optimisation work to jet aircraft noise.

When our youngest child was entering high school, I decided to apply for a full-time faculty position and in May 2018, I began that position and dived back into underwater acoustics. I observed the progress that had been made in my absence and understood that I did not have time to catch up but needed to begin my research group with the current hot topic: machine learning. My post-doctoral advisor, Dr David Knobles, invited me to participate on a grant and helped me get re-established, the underwater acoustics community was welcoming and the transition has been better than I ever expected.

I have particularly enjoyed the opportunity to connect with scientists and engineers throughout the world as we apply acoustics to study our amazing oceans. One such venue is the International Conference on Underwater Acoustics (ICUA), sponsored by IOA. I hope everyone takes full advantage of networking opportunities at such conferences (**https://acousticstoday.org/home/networking-up-tracianne-b-neilsen/**). My attendance at ICUA in 2022 and 2024, paved the way for my six-month sabbatical at the University of Southampton and the National Oceanographic Center. I will have returned to Utah by the time this article is published, but I am truly grateful for the hospitality shown by so many as I visited different UK universities – I am pursuing extended collaborations with several groups and looking forward to visiting again.

In sharing this personal narrative, I hope it may make room for squiggly careers (Tupper, 2020). I also hope that it motivates people to pursue or to share information about careers in underwater acoustics. By working together, we can help achieve the goal of the UN Decade of Ocean Science to find "the science we need for the ocean we want." (**https://oceandecade.org/**)

Below: Figure 3. Visualization of how multibeam sonar is used to map the seafloor. (By NOAA's National Ocean Service – Flickr: Collecting Multibeam Sonar Data (Original source: National Ocean Service Image Gallery), Public Domain, **https://commons.wikimedia.org/w/index.php?curid=30679792**)



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Current parliamentary and policy news

The start of the summer sees several consultations on planning policy impacting the marine environment – as the UK Government, Scotland and Ireland advance planning reforms intended to accelerate development of renewable energy – all of which have implications for aspects of acoustics. A much anticipated draft BS 8233 for sound insulation and noise reduction for buildings has also been published for comment – giving members with an interest in policy development plenty to get to grips with.

Above:
A draft revised National Policy Statement for Ports has been published for consultation, as part of the Government's ongoing reform of infrastructure planning

Consultation on BS 8233 – standard for noise reduction for buildings

BSi have published their redraft of BS 8233 standard for sound insulation and noise reduction for buildings. This standard gives guidance on levels of sound indoors and the type and character of the sound to provide internal acoustic environments appropriate to their functions. It deals with control of noise from outside a building, noise from plant and services within it and room acoustics for non-critical situations. The draft takes into account changes to the legislative framework since the current standard was published in 2014. Noted in particular are the Environment (Air Quality and Soundscapes) Act (Wales) 2024 and the 2018 World Health Organization Environmental Noise Guidelines for the European region. It applies to the design of new buildings, or redesign or refurbishment of existing buildings, and includes those undergoing a change of use. The IOA is convening a working group to respond to the consultation, which is open until 6 August 2025. **View and respond to the consultation by creating an account**. (See more on page 30).

Consultation: National Policy Statement for Ports

A draft revised National Policy Statement for Ports (NPSP) has been published for consultation, as part of the Government's ongoing reform of infrastructure planning. Announcing the consultation, the Department for Transport stated: '...updated proposals will more clearly outline how ports can meet obligations on noise and emissions, increasing the likelihood of achieving successful planning approvals and saving time and money during the planning process.' The statement applies to all ports in England, Milford Haven in Wales and associated road and rail links. As in the current NPSP, it covers principles for assessing noise and vibration. The consultation is open until 29 July 2025. Any members with experience in the sector are invited to contribute to our response by email at **parliament@ioa.org.uk**
https://tinyurl.com/NPSPamends

Scottish Government consulting on offshore wind

The Scottish Government are now consulting on a draft updated plan for the siting of offshore wind turbines. The impact assessments supporting the plan cover potential noise impacts of offshore wind development – including noise from transport, ports and impacts on marine life. The stated aims of the proposals are to '...use the latest data and scientific evidence to inform decisions on energy developments – such as how projects will impact wildlife and nature; ensure the environmental, social, economic opportunities and constraints from offshore projects are clearly set out to help inform decision making...' The consultation is open until 22 August 2025.
https://tinyurl.com/offshorewindenergy

Ireland: Consultation on marine planning policy

The Department of Climate, Energy and the Environment in Ireland have undertaken a public consultation on their first statutory Marine Planning Policy Statement (MPPS). This is a step towards formalising Ireland's marine planning framework under the Maritime Area Planning Act 2021 (MAP Act). Ireland's first MPPS was published in 2019, as a guiding document for marine planning until the MAP Act established a legal framework. The new draft MPPS aims to set out strategic principles for marine planning and highlight key priorities for managing maritime activities, including those

that generate noise. The Strategic Environmental Assessment covers aspects of noise and states that in European waters 'Underwater noise and other energy inputs (i.e. from shipping, renewable energy, hydrocarbon extractions and military activities)...are expected to continue increasing, due to the level of human activity, which is expected to increase as development continues.'

You can read the draft MPPS here **https://tinyurl.com/MPPSIreland**

Comments on consultation on energy infrastructure planning

In responding to the Government consultation on revisions to National Policy Statements (NPS) for energy infrastructure, the IOA have stated that the proposed changes to the NPSs look to promote good practice in the assessment of noise and vibration, with additions making a clear contribution where additional source specific requirements are provided. The consultation includes a new section covering onshore wind turbines, which on the whole, we welcome as clear and helpful.

We have proposed amendments on a few specific points. These include wording in 5.11 of EN-1, which we believe should be in section 5.12 (Noise and Vibration), which refers to 'ground-transmitted low-frequency noise from wind turbines'. We believe that this wording should include vibration and infrasound. A new footnote 116 provides the ability for the Government to update ETSU-R-97 in the future if policy needs amending, which is a pragmatic solution to future-proofing the document. An additional footnote 118 continues to support 'A good practice guide to the application of ETSU-R 97 for the assessment and rating of wind turbine noise by the Institute of Acoustics (2013)' as recognised government guidance, which is welcomed. We suggest that flexibility for an update is also provided for the IOA guidance. See our full response here **https://www.ioa.org.uk/publications/response-consultations**

Airspace changes aim to reduce noise

Changes were laid in Parliament in May, enabling a major redesign of UK airspace. One of the stated aims of this change is 'to increase capacity alongside reducing emissions per flight and the impact of noise.' Announcing the changes, the UK Government stated 'Redesigned 'skyways' could also allow planes to climb quicker during take-off and descend more smoothly, reducing noise and air pollution for residents who live along flight routes.' A new UK Airspace Design Service (UKADS) will be fully operational by the end of 2025 and run by NATS (En Route) plc (NERL). London's airspace will be the initial priority and over a longer timeframe, the UKADS could design routes supporting flight paths for technologies such as drones and flying taxis. Heathrow's Chief Operating Officer, Javier Echave, said: "As the UK's gateway to growth, we are committed to continue working with the government to unlock the economic benefits of an expanded UK airspace, while cutting carbon and noise impacts."

Inquiry into airport expansion, climate and nature targets

The IOA submitted evidence to the Environmental Audit Committee inquiry on airport expansion and climate and nature targets. In our evidence we support the continued application of the Noise Policy Statement England as set out in the National Planning Policy Framework, stating that in our experience the policy works well. We urged the committee to support its continued use with respect to any aviation-related expansion, but taking account of the further existing regulations and policy that necessarily relate to the complex national and international context of aviation noise. A number of the 54 submissions made refer to noise impacts, notably evidence from the Noise Abatement Society, UK Noise Association and groups representing residents around regional airports. In an oral evidence session in Parliament, the No 3rd Runway Coalition and The Noise Abatement Society put their views on the noise impacts of airport expansion policies.

Read the IOA evidence here **https://tinyurl.com/IOAevidence**

Read all submitted evidence here **https://tinyurl.com/allevidenceavailable**

Wales: Sound improvements suggested to improve school meal uptake

In their consultation on promoting healthy eating in schools, the Welsh Government acknowledge the importance of a suitable acoustic environment in encouraging children to eat school meals. One measure suggested to improve uptake is 'Reducing noise by introducing soft furnishings, sound absorption boards and playing music.'

Guernsey to introduce noise level for exhausts

To address long standing public concerns about noise from vehicles, the States of Guernsey are introducing legislation to prohibit alterations to vehicle exhaust systems that increase noise. Following agreement of the measure, new laws are to be drafted, including looking at introducing decibel limits and other potential measures to try and tackle noisy vehicles. The States committed resources towards investigating the feasibility and practicalities of using agreed decibel limits and will look at bringing in new regulations to create a criminal offence if someone were to drive a vehicle that exceeded any agreed limits, which would be measured by a stationary test.

Read more here **https://www.gov.gg/Noisyvehiclepolicylettermrl**

Questions on noise from vehicles in Parliament

Noise from vehicles and modified exhausts are a regular topic of questions from MPs in Parliament. In recent weeks questions have been asked about noisy cars and motorbikes and noise cameras by Gregory Stafford, MP for Farnham and Bordon, Lord Berkley, Callum Miller MP, Bicester and Woodstock and Lord Truscott. The Government response is that following roadside trials of noise cameras in 2022-23, they "continue to keep a keen interest in the technology. However, it is ultimately for local authorities and the police to consider what the most appropriate enforcement routes may be within their area, based on their knowledge of the issue locally. The Department has limited means for influencing local decision making on enforcement priorities."

About the author:
Mary Stevens supports the IOA to bring acoustics to the attention of policy makers

Reminder about continuing professional development

Although this is a potential time of change at the Institute of Acoustics, with the application for Royal Charter of Incorporation under consideration, one of the things that won't alter is the requirement for members of the IOA to undertake continuing professional development (CPD).

By Rachel Canham, CPD and Membership Committee

Under the current Rules of Conduct:
'**A1. Professional competence and integrity**

A1.1 Members shall avoid undertaking work which is beyond their capabilities. Therefore, members shall undertake to:

- *upgrade their professional knowledge and skill and encourage others to do so.*
- *maintain adequate awareness of technological developments, procedures, standards, laws and statutory regulations which are relevant to their field either by involvement in the Institute's Continuing Professional Development Scheme or by any other appropriate means.'*

Guidance about the IOA CPD Scheme is provided on the IOA website (**www.ioa.org.uk/professional-development-scheme**) including an introduction about the scheme, how to get started, a blank form in Excel and some example completed forms.

As members of the IOA, you are required to maintain your professional competence either by involvement with the IOA CPD scheme or by other appropriate means.

What is (and isn't) appropriate CPD activity

In broad terms any acoustic-related activities that help to maintain your competences as an acoustician can be considered as appropriate CPD activities. This would include:

- on-the-job training in acoustics;
- attendance at relevant training courses;
- attendance or presenting at conferences;
- preparing technical papers for relevant publications;
- attending technical meetings or webinars;
- reading technical publications;
- reviewing technical documents (regulations, standards, guidance etc); and
- learning to use new acoustic equipment or software etc.

Note that it is the learning aspect that makes an activity CPD – for example, attending a training course about noise mapping and learning to use it is appropriate CPD, however putting what you've learned into practice isn't (that's your job!)

IOA CPD resources

In addition to information about the CPD scheme, the IOA provides a wide range of resources that can help with CPD activities, including the bi-monthly Acoustics Bulletin publication, regular conferences and free to attend Branch and Specialist Group meetings, many of which are online as well as in-person. See **www.ioa.org.uk/events** for forthcoming conferences, meetings and webinars.

The IOA Acoustics Bulletin is available via the IOA website at **www.ioa.org.uk/publications/acoustics-bulletin**

From the members section of the IOA website (**www.ioa.org.uk/members/videos**), there is access to videos including:

- Branch and Group meetings;
- past 'Acoustics' and 'Reproduced Sound' conference presentations;
- refresher e-learning;
- members' update videos;
- CPD training videos; and
- event recordings.

IOA CPD Scheme summary

The IOA CPD Scheme comprises three sheets:

Sheet 1
(Profile of Competence and Needs) – this is the reference list for your development goals, based on the skills you need now and in the future.

Sheet 2
(Professional Development Plan) – using the same development goals and references from Sheet 1, you should set out how you intend to

"As members of the IOA, you are required to maintain your professional competence either by involvement with the IOA CPD Scheme or by other appropriate means."

Continuing Professional Development

address future goals and identify when they will be achieved or if they are ongoing. If an older goal is complete, please mark it as such on your plan.

Sheet 3 (Professional Development Record) – this is used to keep a record of activities that have contributed to your professional development, including information about the activity, what you learnt, the relevant goal reference and how you will use the knowledge. If the CPD activity relates to a previous goal that is no longer part of the plan, please mark it as such.

At present the IOA scheme guidance is in terms of a rolling scheme however if your preference is to prepare an annual scheme, you will need to prepare individual Sheets 1 and 2 for each year – however Sheet 3 (Professional Development Record) can be common to all years provided you make it clear which CPD activity refers to which goal from each year.

Although the IOA CPD scheme is goal-based, there is a requirement to undertake at least 20 hours of acoustic-related CPD per year. As your CPD plan and record may contain some goals and CPD activities that are not directly related to acoustics, you will need to separate the acoustic CPD from other CPD activities – please see the latest blank CPD form on the IOA website at **www.ioa.org.uk/professional-development-scheme**

Alternative schemes

Members are encouraged to work with their employers in planning their professional development. It is recognised that IOA members are often required to complete CPD plans for other organisations, or their employers. These can be submitted in lieu of the IOA forms; providing they demonstrate enough evidence of acoustic-related activity. Many IOA Branches use CPDTag (**www.cpdtag.com**). This web-based system provides an alternative method of planning and recording CPD activities.

Submitting CPD to the IOA

The IOA review a sample of members CPD plans annually – some of these are reviewed automatically by the Membership Committee as part of the application process for MIOA and FIOA and the remainder will be chosen (randomly) from the remaining members from the Institute – including AMIOAs, MIOAs and FIOAs. This has recently been expanded to include TechIOA members.

It is permitted to submit CPD records in a format that is different to the IOA scheme provided these records are clear and easy to follow. The records will need to easily identify the amount of acoustic-related CPD undertaken over the period requested by the IOA.

A DAY IN THE LIFE OF
Jamie Angus-Whiteoak

The UK population comprises people with many different backgrounds, creating a rich diversity of culture. Why then, is the acoustics profession and engineering more widely, not as diverse as the situations it faces?

Above: Jamie Angus-Whiteoak, Emeritus Professor of Audio Technology at Salford University

It is essential that the acoustics profession, and the IOA with it, strives for a membership representing everyone. The IOA does this by creating an environment in which people can openly be themselves and gain the support they need to achieve their full potential. We cannot improve the diversity of our profession by working alone – we need to work together to understand the challenges faced by our peers and how we can work together to overcome them or remove them entirely.

There are many benefits of inclusivity and diversity, and perhaps the most essential is the improvement of collective intelligence. More immediately, acoustics in the UK, like UK engineering professions generally, faces a skills shortage, and encouraging people from all social and ethnic backgrounds into the profession increases the pool of available acousticians.

In the first article of our planned EDI series we meet Jamie Angus-Whiteoak, Emeritus Professor of Audio Technology at Salford University. Her interest in audio, she says, was piqued after a school trip to the WOR studios in New York 1967 when she was 11. Occasionally and in very driven individuals, just dipping a toe into something new is enough to shape and inspire an entire life's course.

After a long and distinguished career Jamie has retired; she spent a significant amount of her career as male and feels that she had 'male privilege' all the way up to professor level. While preparing this article, she said: "I transitioned from a position of great privilege" but as far as this significant part of her life is concerned and the trauma she must have suffered for decades, it makes absolutely no difference to the way we approached this article. This isn't

to play down her bravery and determination to fix something that wasn't right in any way whatsoever, our focus is simply on Jamie's fascinating work in this interview.

Here she is:

What first sparked your interest in science and acoustics?
I have always been interested in science, but a popular electronics magazine triggered electronics, and Wendy Carlos' *Switched on Bach* triggered an interest in synthesizers and related acoustics. See here for more details: **https://www.youtube.com/watch?v=hYfWA57F09k**

How long have you been working in this industry?
Since 1980 when I joined Standard Telecommunications Laboratories (STL), inventors of pulse code modulation (PCM) and optical fibre, I ended up working in the Speech Group which did acoustics and digital signal processing (DSP)!

What gave you most job satisfaction?
Running/creating laboratories, student projects and teaching. Starting the UK's first music technology course in 1985 when it was a stupid idea, also, inventing modulated and absorbing diffusers.

Where did you go for advice in the early part of your career?
The library, and now the internet. Both the university at Salford and STL had great libraries!

What was the most challenging aspect of your job?
Working out ways of explaining acoustic and electronic concepts without using scary complex mathematics while still making it interesting to students. Also keeping up to date with all the changes in the field.

How did you get your job out of your hair?
I find switching off very difficult! Dance and drumming used to help but I've not done that for a while! Also reading science fiction and fantasy because they took me another world.

How much contact do you have with other acousticians?
Not much really now that I'm retired unless I'm at a conference.

What is your desert island book/film/luxury?
Ooh that's hard! Luxury: drums/percussion

Film: can I make it the Babylon 5 series?

Book: perhaps Lois McMaster Bujold's Vorkosigan series.

What made your day shine at work?
When any student I was teaching went further than I could possibly go, and therefore taught me something. It was like scoring a goal! Result! My job is to educate students for the future so they could outperform me – it was wonderful when that happened!

What is the most important quality an acoustician should have?
I think a wide range of knowledge, patience and the ability to listen.

What is the best bit of professional advice you have been given?
Not to simply follow what I had done before I started working at university. I wish I had acted on it sooner!

What piece of advice would you pass on to someone new to the industry?
You are far better than you realise and you know more than you think, yes you need experience, but don't let that stop you from making suggestions. Oh, and be prepared for change!

How do you manage your stress levels, i.e. how do you relax?
Dancing, playing music, being with people, reading books and going down YouTube STEM rabbit holes!

What did you dislike about your job?
The administration and management, it's an area I don't find easy to navigate.

Who has been the most influential person in your life?
This goes back to Wendy Carlos, who awakened my desire to make synthesizers and electronic musical instruments and get involved with audio.

What keeps you awake at night?
I worry that today's students do not have the same opportunities I had at their age. I was given funding by the government to do a PhD. Without it I would not have been able to do one, and my career and contributions would not have happened...It's a lot tougher now!

How did your career evolve as time passed?
I moved from being a very hands-on designer to having a more supervisory role. Both were good but I think the balance got skewed. I wish I had been able to keep doing more of the hands-on stuff...I was good at it.

What do you see as your next steps professionally or are you enjoying your retirement too much?
My retirement started just before the pandemic and then I got diagnosed with pancreatic cancer, so to date, I have been focused on living for the next day. I get my first annual check soon so we shall see...

If you had the chance, what would you change about your career – have you taken any wrong turns?
Honestly, I'm not sure what I could have done differently. I have mostly enjoyed my career but do wish I had been more confident at the beginning. I waited for eight years after I had started in academia to publish my first international paper – there were ideas I had that were ahead of their time and I published them locally, but looking back, they were certainly good enough to put out more widely, I just didn't have the confidence!

What would you consider to be the biggest advancement in this industry during your career or even since you retired?
The ability to do real time DSP on normal computers, something I predicted and suggested in my PhD work in 1977 to 1984. (It was actually part of the thesis statement!)

What question would you like to put to the next acoustician in this series of articles?
I have two: how did you navigate the huge changes in the profession in the past 40 years and how will you manage future changes?

If you know someone who might like to take part in this 'Day in the life' series of articles, please contact the editor at **nickyr@warnersgroup.co.uk**

An introduction to the IOA Meetings Committee

Throughout the year, the IOA hosts a wide range of events for members, varying from local Branch meetings and full day events to the annual conference. But how do they come about?

By Kial Jackson

Meetings serve to provide members with opportunities to learn about new concepts, discuss recent industry developments and to meet fellow practitioners from all corners of the world of acoustics.

A lot of the credit for the hard work in organising these events must go to the Groups and Branches, but have you ever wondered who helps coordinate these meetings and reviews your feedback?

Well, dear reader, please allow me to introduce you to the Meetings Committee.

Meetings about meetings?

At first glance, the Meetings Committee may sound like a punchline from 'Yes Minister', however it serves an important role. Currently comprising eight members, the Committee meets each quarter to review the feedback from delegates, coordinate the upcoming programme of events, and provide Groups and Branches with centralised support on how to host and schedule meetings. Successes and challenges are recorded and used to inform future events.

Sheema Ali, the IOA Events Officer, collaborates closely with the Meetings Committee to support their goals. She is the driving force behind the events organised by the Groups and Branches, making everything happen and turning ideas and plans into reality.

Impacts and achievements

The IOA delivers a full calendar of meetings each year, highlighted by last year's 50th anniversary, which saw each Group and Branch host a celebratory event.

Notable annual events include the *Art of Being a Consultant*, which provides valuable industry insights to those in the early stages of their career. Additionally, the annual conference serves as a valuable forum for practitioners and exhibitors to reconnect with old friends, meet new ones and discuss emerging guidance and key topics.

From the introduction of the buddy system at the annual conference, to avoiding venues with poor catering (a surprisingly common source of complaint!) the Meetings Committee helps organisers to respond to membership feedback and continuously improve the IOA's delivery of events.

Future strategy

The past decade has seen significant changes in how the IOA delivers meetings and engages with its membership. The pandemic prompted a rapid shift to virtual meetings, leading to greater engagement from members who might not regularly attend due to personal commitments or geographic restrictions. This new format was particularly successful during the Acoustics 2021 annual conference, which was co-hosted in-person in Bristol, London, Manchester and Milton Keynes with local hubs across the UK and Ireland, allowing members to dial in and engage with presentations as a group.

As we move forward, the Meetings Committee is reviewing the IOA's meeting strategy to balance in-person networking opportunities with improved access to content. Branches are encouraged to host in-person meetings and networking events to foster regional identity and connections. They may also offer hybrid attendance options to benefit their regional members. Meanwhile, Groups will focus on delivering technical content specific to their specialism, providing virtual access through live broadcasts or recorded sessions. This will be complemented by in-person discussions and networking opportunities.

The goal is for each Group and Branch to host at least one in-person event a year, potentially in coordination with each other if appropriate.

Any other business?

While the Meetings Committee plays a crucial role in coordinating the IOA's event schedule, its continued success is reliant upon you. We invite all members to engage with the Committee and contribute to the ongoing improvement of our events by providing constructive feedback. If anything within this article has inspired you or if you have ideas for future presentations, please reach out to Sheema with your ideas at **sheema.ali@ioa.org.uk**

The next Committee meeting will be on Thursday, 30 October 2025. The membership of your Meetings Committee currently comprises:
Robin Woodward (Chair)
Kial Jackson (Secretary & ECG rep)
Martin Lester (Chair of the Annual Conference)
Josie Nixon
Peter Rogers
Chris Skinner
Matthew Torjussen
Academic liaison (role to be filled)

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Regulator irritates competent consultants – the Regulator responds

By Chris Steel, Principal Specialist Inspector (Noise and Vibration) Health and Safety Executive, Specialist Division, and Sue Hewitt, HM Specialist Inspector of Health and Safety (Noise and Vibration)

LETTER TO THE EDITOR

Regulator irritates competent consultants

By Tim Britton BSc (Hons) MIOA

Right: From Acoustics Bulletin September/ October 2024

FEATURE

Regulator cracks down on rogue consultants

By Dr R M van Besouw, HM Specialist Inspector of Health and Safety (Noise and Vibration)

Content warning: The following story is fictional but contains examples of failings taken from real reports that may be disturbing to the readership of Acoustics Bulletin.

The September/October 2024 issue of Acoustics Bulletin included an article by the Health and Safety Executive (HSE) titled *Regulator cracks down on rogue consultants.* This piece seemed to deflect blame onto the likely audience of the magazine, even though the issues it highlighted stem partly from the HSE's own regulatory shortcomings.

The article pointed out that some consultants are conducting occupational noise assessments that are not up to standard. This revelation is hardly surprising to those of us who adhere to the IOA Code of Conduct, ensuring our work meets good practice and relevant standards, who have been undercut for years by consultants who do not invest in qualified staff, high-precision equipment and robust quality assurance processes. It is somewhat hypocritical for the HSE to criticise poor practices when their own lack of regulation has allowed such an environment to thrive.

The real issue: lack of accreditation

The title 'noise consultant' is not protected, meaning only the HSE can effectively regulate the quality of these assessments. Asking employers to judge is a shirking of responsibility and akin to letting the fox guard the henhouse. Many of us have spent countless hours crafting cost-effective proposals for occupational noise assessments, only to lose out to competitors offering significantly lower prices. This disparity drives competent consultants away from this field and provides little incentive to improve standards. These budget assessments are also less likely to recommend improvements, saving clients further money unless they face prosecution.

Where are the prosecutions?

A quick internet search reveals that the last known prosecution of a noise consultant by the HSE was in 2020, resulting in a mere £1,400 fine. There is no indication that the consultant was barred from continuing their services. If poor assessments are as widespread as the HSE suggests, one must wonder where all the prosecutions are and whether the fines are sufficient deterrents.

Where do we go from here?

While the HSE's new Workplace Noise Intervention programme may address some issues, it feels like a case of closing the stable door after the horse has bolted. The buyer's guide mentioned in the article allows consultants to *'show that they have a suitable level of experience',* but workplace health and safety managers may not be qualified to assess this, especially when pressured to justify higher costs. A more effective solution would be a paid registration process, similar to the ANC's register of accredited sound transmission testers. This would provide a straightforward enforcement mechanism for the HSE to ensure employers use accredited consultants. Although this might increase costs for employers, it would guarantee high-quality consultancy, compliance with legislation and protection for employees from hearing damage. Until the HSE implements proper regulation or enforcement, the problem will persist, and no amount of articles in Acoustics Bulletin will change that.

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The article *Regulator cracks down on rogue consultants,* published in the September/October 2024 issue of Acoustics Bulletin, caused some irritation to competent consultants, as evidenced by the letter from Tim Britton in the March/April 2025 issue.

The crackdown article itself drew attention to the IOA Certificate of Competence in Workplace Noise Risk Assessment course. At the very beginning of the article was a content warning to IOA members that it included some 'disturbing, but all-too-common examples of failings taken from real reports' – the implication of this warning was that these were failings that would not be committed by competent consultants. The article alerted readers to the fact that HSE are striving to take action against poor-performing consultants. 'Irritation' was not an expected outcome, but shouldn't this news be welcomed by competent consultants? Also, the HSE programme of work is not restricted to noise consultancy, it applies to the provision of consultancy for many health topics.

Where are the prosecutions?

HSE does more than just recommend prosecutions, it issues enforcement notices, letters and verbal warnings to secure compliance with the Regulations. Poor consultants do not always break health and safety laws and HSE does not always have to take people to court to improve workplace noise competency. Prosecuting a consultant requires evidence of the consultant increasing the risk to others. For example, if they told the duty-holder that noise levels were lower than they are and workers stopped using hearing protection, or earmuffs were specified that made it impossible to hear warning signals. HSE has no control over the size of fines, or of the duration of any conviction and receives no money from the fines, they are determined by the court according to the 2016 sentencing guidelines.

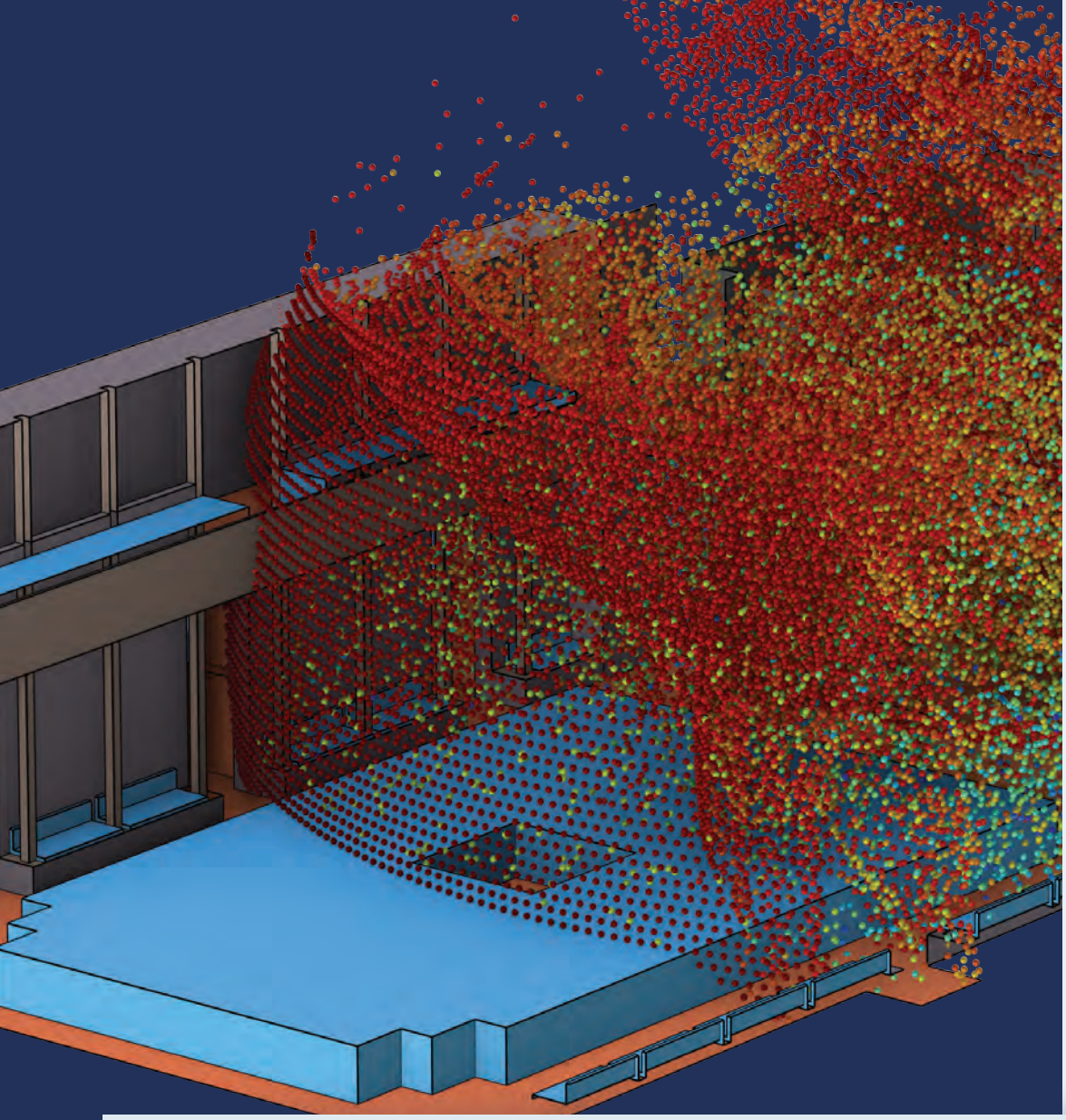
Where do we go from here?

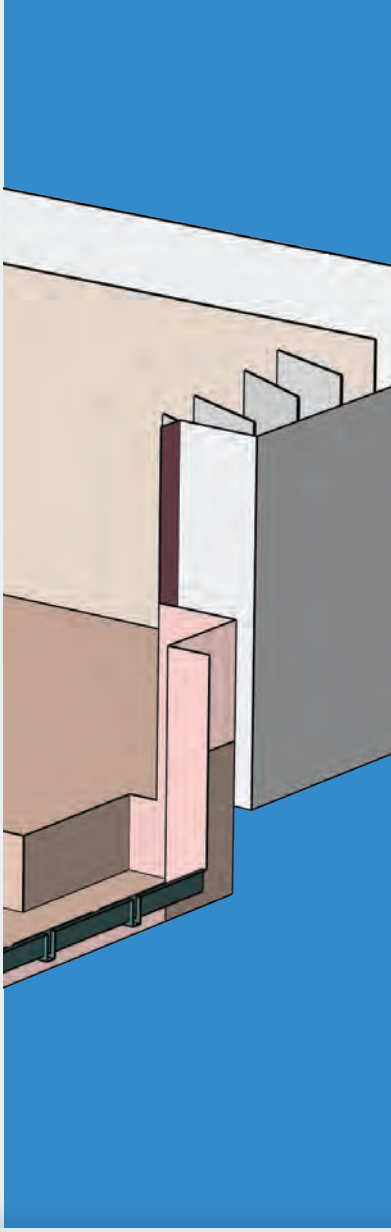
IOA has access to the Workplace Noise Outline Report and the Buyer's Guide and members can take advantage of the Certificate of Competence in Workplace Noise Risk Assessment and the Advanced Certificate Course in Report Evaluation.

With very specific exceptions, HSE is not a licensing body and cannot operate a registration scheme for acoustic consultants. However, we would encourage the development of a registration scheme and would be prepared to work with any relevant association. Meanwhile, HSE will be gathering workplace noise reports as part of its routine work and following up poor consultants when appropriate.

IOA members have helped HSE review web guidance on competency for hand-arm vibration measurements and when this is completed, the intention is to then review HSE web guidance on competency for workplace noise.

We would encourage anyone who has encountered poor-quality workplace noise consultancy that has created a credible risk to email either **chris.steel@hse.gov.uk** or **susan.hewitt1@hse.gov.uk**





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Noise nuisance

There are two recent legal cases discussed in this article, the first concerns the resolution of an ongoing dispute between the operator of a wind turbine and a close neighbour, and the second, another neighbour dispute arising from noise and inconvenience generated by footballers using a primary school's all-weather play area.

By Dani Fiumicelli

Noise-related legal cases have been relatively scarce over the past few months; however, two interesting cases have been decided recently.

Wind turbine noise part two

Firstly, there is the Irish case of *Webster & Anor v Meenacloghspar [Wind] Ltd; Shorten & Anor v Meenacloghspar [Wind] Ltd [No.2] (Approved) [2025] IEHC 300 (27 May 2025).*

This is round two of an earlier case reported in Acoustics Bulletin where the Irish High Court found that noise from a wind farm was a legal nuisance.

The case was reopened after the wind farm trialled the potential mitigation of operating the offending turbine (T2) in a lower power mode with reduced noise emissions. The residents maintain that this lower power mode has not abated the nuisance and sought an order directing the shutdown of T2 during sensitive periods.

The wind farm's principal counter argument is that the T2 does not pose a nuisance even in its 'full' power mode and that no mitigation is therefore required. The wind farm sought to adduce new evidence to persuade the Court to revisit the finding of nuisance by arguing that this shows that, even allowing for amplitude modulation (AM), the WTN levels are lower than the noise limit fixed by current Irish planning guidance on wind energy developments (WEDG 2006).

A couple living next to a primary school were awarded £1,000 in damages after the High Court decided that the weekend community use of the AWPA amounted to a nuisance

The Court firmly rejected the wind farm's argument. The judge determined that this new evidence could, with reasonable diligence, have been obtained for use in the first hearing and rejected the argument that a new technical specification on noise measurement techniques provides scientifically robust guidance on what level and nature of wind turbine noise causes unacceptable interference with residential amenity. She also concluded that the wind farm's new evidence does not comprise a useful or complete baseline assessment for the purposes of crafting abatement measures; and that, even if admitted, the new evidence would not substantially impact or alter her finding on liability.

On the basis that renewable energy production is of benefit to the wider public the judge issued an injunction requiring a 5 dBA reduction in day time noise emissions from T2, but was not convinced that this was sufficient at night and therefore ordered the turbine to be shut down during night periods for windspeeds of 5 m/s to 11 m/s inclusive in those wind directions associated with high AM values and thump AM. The full judgement can be seen here **https://tinyurl.com/fulljudge**

Noise from an all-weather play area

The second case is *Bakhaty & Anor v Hampshire County Council [2025] EWHC 1175 (KB) (14 May 2025)* concerning noise from an all-weather play area (AWPA). A couple living next to a primary school were awarded £1,000 in damages after the High Court decided that the weekend community use of the AWPA amounted to a nuisance. The judge did not grant an injunction to prohibit the use of the facility but found that its operation outside of school hours failed to give 'proper consideration' to the interests of the neighbours.

The school built the AWPA, which is mainly used as a five-aside pitch, in 2021. School children used the pitch during the week and the local community use it at weekends. The claimants, who live in a property directly adjacent to the play area, complained about noise and footballs entering their garden over the fence. They issued a claim against the council in October 2022, alleging that the activities on the AWPA in terms of noise and the escape of footballs amounted to a common law nuisance.

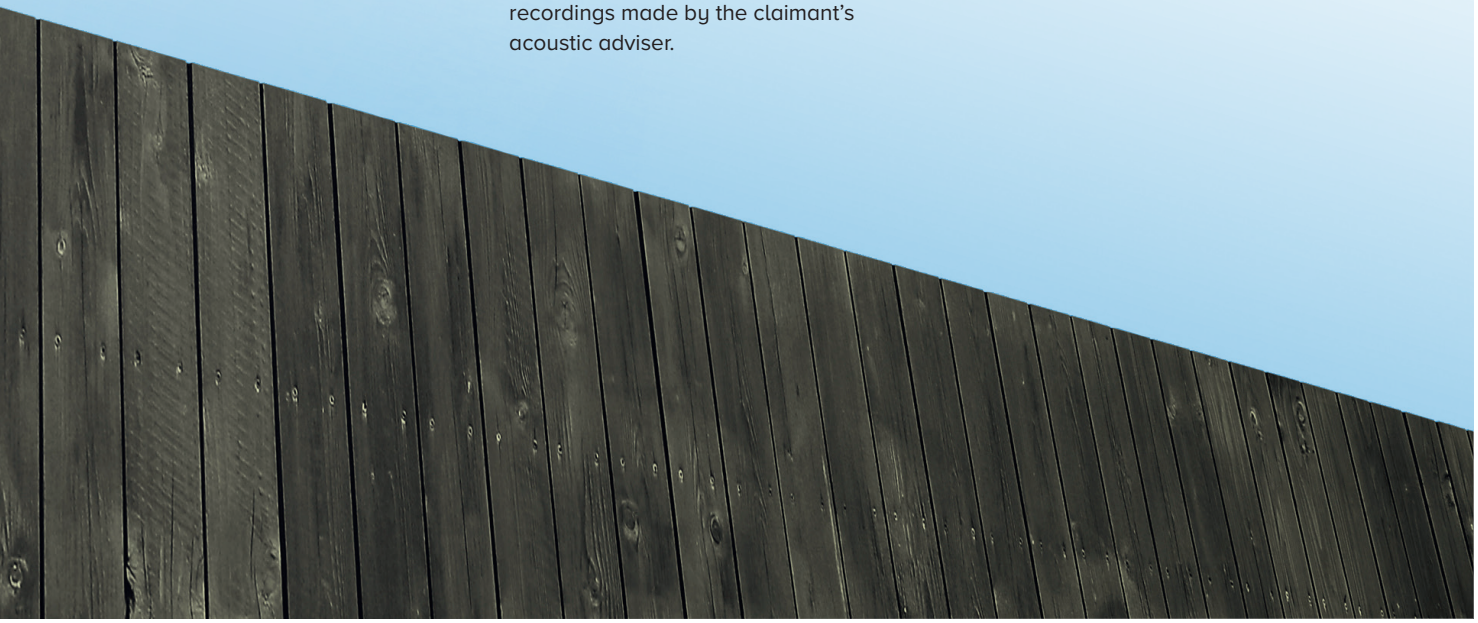
The case featured evidence from acoustic consultants for both parties. As there is no specific guidance on noise from AWPAs each side crafted assessment criteria from sources such as the WHO Community Noise guidelines, the CIEH clay pigeon shooting guidelines, 'Artificial Grass Pitch (AGP) Acoustics – Planning Implications' published by Sports England, and speech interference guidelines. The pros and cons of these sources of advice were discussed, for example the use of guidelines outside of the intended scope and time averaging periods longer than the duration of the noise, and the judge heard audio recordings made by the claimant's acoustic adviser.

The judge ultimately made the following conclusions relating to the nuisance claim:

- the installation and use of the AWPA does not *per se* give rise to actionable nuisance;
- having regard to all the circumstances, the use of the AWPA by third parties outside of school hours was not done 'conveniently' and was therefore a nuisance;
- similarly, the frequent projection of footballs over the boundary from the AWPA was a nuisance;
- the mitigations put in place in July 2022 were such as to prevent a further actionable nuisance from arising. The occasional ball over the fence since that time (something common to many gardens), whilst annoying, is not at a sufficient level to be a substantial interference with the claimant's use and enjoyment of their property; and
- in his judgment, use of the AWPA by children during school hours (including any pre-school or after school provision) does not give rise to an actionable nuisance, provided that the net to prevent escape of footballs over the AWPA is maintained.

The judge did not grant an injunction to stop use of the AWPA but awarded £1,000 in general damages to the claimants.

The judgement can be read here **https://tinyurl.com/AWPAHampshire**



The logistics of floating floor installation

Installation of a Mason UK floating floor

In theory floating floor installation is quite straightforward, in practice things can be more challenging. The two key issues usually relate to how you are going to get the steel and concrete into the building, but having a supplier who can assist in this process can save contractors a lot of hassle, explains Tom van Dongen, Senior Project Engineer with floating floor specialist, Mason UK.

Steel reinforcement sheets are used in concrete floating floors to provide structural integrity to the floor. They can be quite large and it is not uncommon to encounter situations where the mesh cannot be transported via a lift or stairwell, either because they are too large or simply because there is no lift access. For a new structure, it is worth contractors being aware of these issues at the outset, as correct sequencing can make the installation process easier. Although not always possible it's best to get materials into a building in advance while it is still an empty shell.

Concrete is arguably a greater challenge. Perhaps the most obvious issue is carrying out a concrete pour for a high storey building. The most common solution is a boom pump, but this can become very expensive the higher you go. Getting concrete to a lower-level basement is generally not as difficult as the scenario described above, but despite the aid of gravity it can still present challenges.

The importance of sequencing

An important factor to bear in mind when considering the sequencing for a project is how much weight the acoustic floating floor can take. With a formwork system, even a concrete one, think carefully about what you are going to put on the floor once it is installed. It is not a solid deck and while the resilient elements that support it can take a substantial overload, too much weight could damage them.

The jack-up system has the advantage that you can first pour the floor and then return to jack it up later, depending on project requirements.

The jack-up system can also make it easier to respond to unanticipated design challenges. For example, during the installation of a floating floor for Norfolk House, a building that once served as Allied headquarters during World War II, Mason UK could move the edge of the floor to accommodate the site welfare and accommodate additional penetrations for pipes that were not reflected in the original drawings. By adapting the solution, they moved the jacks around to overcome these challenges, returning later to finish the floor when the welfare area was no longer required.

If contractors are aware of these potential challenges, and the practical demands and limitations of different systems, then close coordination with the vibration control experts and good sequencing can overcome most challenges.

Glass doors just got quieter

Door seal specialist, Norseal, is expanding its range of door seals with a new family of modular drop seals for hinged glass doors that combine standout acoustic insulation with fast, no-fuss installation and true on-site flexibility.

The Schall-Ex® family of seals includes the GSA seal, a face-fix drop seal that makes retro-fitting acoustic seals on glass hinged doors possible for the first time.

Designed for both toughened (8mm and 10mm) and laminated safety glass (10.76mm, 12.76mm, and 17.52mm), the system features five easy-to-configure variants that can be assembled quickly on-site. Thanks to a specially developed adhesive tape, there's no need for wet bonding or mechanical fixings – just a clean, secure fix with immediate load-bearing capability.

The GSA seal is a game-changer for sealing existing glass-hinged doors on-site with minimum fuss and disruption to operations. The same fixing tape works quickly to fix the seal to the face of the door, achieving sound insulation values up to 37 dB without having to remove the door. It's a fit-and-forget solution that is more cost-effective than replacing doors when a retrofit solution is required to bring the door up to the required standard in situ.

Achieving sound insulation values of up to 51dB with 7mm of floor clearance in testing, the new Schall-Ex® seals deliver levels of noise reduction that were previously unattainable for glass doors. Ideal for offices, meeting rooms, healthcare environments and education settings, they bring discretion, quiet and calm to rooms where it is needed most.

Above:
Norseal's new glass door acoustic seal

Vicoustic wins Red Dot Product Design Award for VicShape 3D

Vicoustic's innovative product, VicShape 3D, has won the Red Dot Award 2025 for outstanding product design.

The Red Dot Award is a renowned international design competition that recognises outstanding achievements in product design, innovation and functionality. This year's competition attracted thousands of entries from around the world, with VicShape 3D standing out for its unique 3D geometry, sustainable material composition and architectural versatility.

César Carapinha, CEO and founder of Vicoustic said: "VicShape 3D exemplifies our philosophy of creating solutions that are as visually compelling as they are technically advanced."

"The idea behind this new panel was to create an acoustic solution that fulfils its technical role while elevating the aesthetics of the space," said Nuno Andrade, the Product Design Manager at Vicoustic, who led the team involved in the creation of VicShape 3D. "It was designed to seamlessly blend in, or stand out as an art piece. Whether in homes, hotels, or restaurants, it brings acoustic comfort without the cold, technical appearance of traditional acoustic solutions."

The VicShape 3D line is part of Vicoustic's High Density Polyester (HD PET) fibres acoustic panels range, crafted from up to 70% recycled materials and is fully recyclable, making it a sustainable choice for green building projects. This relief art panel

comprises three layers of PET HD for sound absorption framed in a high-quality premium frame in natural oak veneer. The 3D artwork of these geometric wall sculptures adds a contemporary touch to any setting with its abstract art lines. Its sculptural design enhances both sound clarity and visual impact, making it ideal for offices, hospitality environments and residential spaces.

The Red Dot Award jury praised VicShape 3D for its forward-thinking approach to acoustics, sustainability and integration into modern interiors.

NEWS

Dani Fiumicelli joins RBA Acoustics

RBA Acoustics is delighted to announce the appointment of Dani Fiumicelli as an Associate in its London office.

Above: Dani Fiumicelli, Associate at RBA Acoustics

With more than 35 years' experience in the field of environmental acoustics, Dani brings a wealth of knowledge, leadership and innovation to the team.

Dani is widely respected across the industry for his contributions to planning and environmental noise control, with particular expertise in environmental impact assessments, infrastructure planning and implementation and expert witness services. His career has spanned both the public and private sectors, including advisory roles for local authorities and central Government.

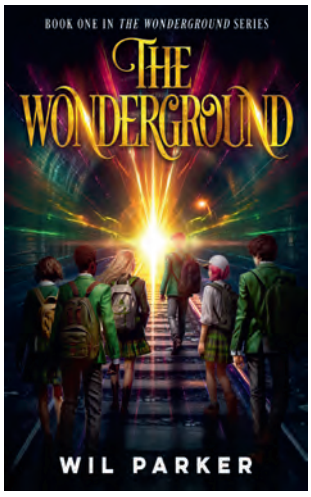
Throughout his career, Dani has advised on a wide range of high-profile projects and worked with local authorities, developers and government bodies. His contributions to environmental noise policy and sustainable planning practices have earned him a respected reputation across the industry.

"We are absolutely delighted to welcome Dani to the team," said Torben Andersen, Director at RBA Acoustics. "His deep technical understanding and strategic insight will be invaluable as we continue to support our clients with increasingly complex acoustic and environmental challenges."

Speaking about his new role, Dani said: "I'm excited to be joining such a forward-thinking team and contributing to projects that have a real impact on people's lives and the environments they live in, coupled with the agility to act quickly, to provide innovative solutions for clients."

Debut novel

Graeme Parker, senior acoustic consultant for RSK in Leeds, has had his debut novel, *The Wonderground*, published under his pen name, Wil Parker. His day job involves work within the residential/commercial/renewable sectors (BESS, solar, wind) for planning and occupational noise/vibration. He also provides expert witness testimony (noise induced hearing loss NIHL and vibration white finger claims), so nothing to do with kidnapping, mystery, alternate worlds and danger lurking around every corner that form the backbone of his thriller.



Above: The Wonderground, by acoustician, Graeme (Wil) Parker

You can find out more at **http://www.wondergroundbooks.co.uk/**

'The Listening Society' online community

Julian Treasure is a top-rated international speaker and trainer on the critical communication skills of listening and speaking and the effective use of sound in business. Collectively, Julian's five TED Talks have been viewed more than 150 million times. His *How to speak so that people want to listen* is the sixth most-viewed TED talk of all time.

Julian's latest book *Sound Affects* is reviewed on page 31 of this issue and he has just launched a new online community *The Listening Society*, designed purely for people who care about listening or are interested in sound.

https://listen.thelisteningsociety.community/1wk

Tinnitus UK's transformation continues with new Chair and trustees joining the board

Above: (L - R) Emily Ducker, volunteer and Support Group Officer; Greg Hewitt, Fundraising and Events Administrator; Lewis Budden, Marketing Manager; Laura Hine, Operations Manager and Pete Byrom, audiologist

Tinnitus UK has undergone a significant transformation recently, creating a new strategic plan created with the UK's tinnitus community, and will be further bolstered by new expertise joining a refreshed and rejuvenated board of trustees.

The new Chair of the board of trustees, Pierre Espinasse, is a former chief executive of a medical research funding foundation and brings extensive experience of charity governance and strategy development, he has been learning to live with tinnitus over the past few years.

Pierre said: "Tinnitus is an insidious, hidden condition which affects many people in many different ways.

"I am fortunate in that I am gradually learning to live with tinnitus but I am acutely aware that for many, tinnitus has a huge impact on their life and their mental wellbeing. Together we can work to alleviate that burden and strive towards a world without tinnitus."

Pierre is joined by two other new trustees. Pete Byrom who has over 20 years' experience in the NHS as an audiologist and Emma Stone, an FCA Chartered Accountant who supports the board on finance, governance and risk. Alex Brooks-Johnson, Tinnitus UK CEO, said: "Tinnitus UK continues to forge ahead with our transformation plans, led by a new strategy created together with the tinnitus community".

Eastern Branch

By Jody Blacklock and Sam Riley

Location sound and audio post-production

On 21 May, Ben Dixon of Create Consulting Engineers, delivered a fascinating presentation on location sound recordings and post-production processing.

Ben also works in film sound animation and brought a collection of his toys (microphones) and spoke passionately about the variety, specifications and their particular uses. He described the physical and logistical challenges of obtaining comprehensive recordings to cover every scenario the client may want. Ben showed how the collected recordings were used to generate different sound effects and how he created his own everyday sounds (foley) to enhance recordings. He talked about how clients' requirements differed from what may have resulted in a more optimally reproduced sound, but due to client audio perception and legal restrictions, the end results can be compromised. Interestingly, if you want to generate the sound of an eagle squawking – use a red hawk, who knew!

Unfortunately, the numbers for the evening were somewhat diminished due to a clash with the Europa League final but here were still many questions which Ben answered, bringing up real life experiences and some humour.

Above:
Ben Dixon presenting to IOA Eastern Branch members

Future events

On 18 September 2025 the Eastern Branch will host a talk by the HSE on noise at work. Also planned are talks from a local authority environmental health officer on their perspective, and a talk on kennel noise, with other events later on this year, so keep your eyes peeled for more information on these events and for other topics.

If you would like to present or have a topic suggestion please get in touch with either Jody Blacklock or Joise Nixon at **jody.blacklock@createce.co.uk** or **Josie.Nixon@HA-Environmental.co.uk**. We are also open to suggestions for venues across the region, so please let us know if you have any suggestions or are able to host a Branch meeting.

Make sure you have registered with the Eastern Branch to find out about all upcoming events or keep an eye out on the IOA event website page.

Irish Branch

By Diarmuid Keaney, Chair of the Irish Branch

Talk by Dr Jeffrey Parnell at the joint meeting with Engineers Ireland

In collaboration with Engineers Ireland, the IOA Irish Branch hosted a highly engaging and informative event on Tuesday 3 June 2025 at the Alice Perry Engineering Building in Galway City. The evening featured a compelling presentation by Dr Jeffrey Parnell, who shared expert insights into the evolving methodologies used in the acoustic assessment of wind farms, drawing on his extensive experience within the Australian energy sector.

The meeting was well attended, attracting a diverse audience from across the acoustics and engineering communities. The strong turnout reflected the growing interest in renewable energy and the technical challenges it presents.

In addition to wind farm acoustics, Dr Parnell addressed the acoustic implications of battery energy storage systems (BESS) and broader issues related to power distribution infrastructure. His discussion highlighted the critical role of acoustics in the planning and development of modern energy systems, sparking a Q&A session that underscored the relevance of his insights.

The Irish Branch of the IOA extends its sincere thanks to Dr Parnell for his valuable contribution and to Dr Eoin King of the Galway Sound Lab at the University of Galway for organising this fantastic event. Thanks also go to all who attended and supported the evening.

Above: (L-R) Diarmuid Keaney (Chair of the Irish Branch of the IOA), Dr Jeffrey Parnell and Dr Eoin King of the Galway Sound Lab, University of Galway

Events such as this highlight the importance of ongoing collaboration and knowledge sharing in advancing best practices across the acoustics and engineering professions.

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London Branch

By Shaliny Denardi Vattathara

The London Branch has had a busy few months, with some great talks and a one-day event that brought together professionals from across the acoustics community.

May Branch meeting

On Wednesday 14 May, the London Branch hosted an evening talk on Noise Network Plus, a new initiative supported by the UK Engineering and Physical Sciences Research Council (EPSRC). Professor Mark Plumbley, Project Lead for Noise Network Plus, covered the broad impact of noise – from health issues such as sleep disturbance and heart disease to effects on wildlife and interference with technologies such as AI systems and sonars. He explained the network aims of bringing together people from different disciplines to work on fresh ideas and to support pilot projects. The hybrid event had a good attendance online and in-person and the talk sparked some great discussion on how the acoustics community can contribute to reducing noise and its negative effects.

We host monthly hybrid events, so no matter where you are, you can still join us! If you were unable to attend the past meetings, you can check our next presentations on the IOA website.

Above: Professor Mark Plumbley at the May London Branch meeting

June one day conference on acoustic challenges of air source heat pumps

On 11 June, we hosted a one-day conference at London South Bank University on the acoustic challenges of air source heat pumps (ASHPs). As ASHPs become a key replacement for gas boilers, the event focused on the noise issues this type of equipment can raise – especially for neighbours and building occupants. Speakers from across the field shared practical insights, case studies and ideas on how to manage these challenges while still meeting sustainability targets. It was a full and engaging day. Further details will be featured in the next issue of Acoustics Bulletin.

The committee sincerely thank all the presenters for their excellent and important contributions.

North West Branch

By Dave Logan

On 7 May 2025 members of the North West Branch were given a tour of some of the studio and performance spaces at the Liverpool Institute for Performing Arts (LIPA). The tour was facilitated by Pete Philipson, Lecturer in the Sound Technology department, and started with an explanation of how the institution came into being in 1996, which brought the derelict Liverpool Institute building back into use. A brief description of the current layout was given and while the old auditorium became the main performance space, a new multi million pound building was built physically separate from the old to house the various studios, smaller theatre space and, more recently, a film making studio.

First stop on the tour was Studio 2, which is primarily used for film audio post

(L-R) Pete Philipson and final year student, Dylan Williams, in the George Martin Studio

production-related work and the field of immersive audio. This allows mixing in various formats including Dolby Atmos, with a 7.1.4 speaker configuration. All the studios are available 24/7 for students during term time and Studio 2 was in use at the time of our tour by a student working on a final year post production portfolio project.

Next up was the spacious George Martin Studio, so named after the legendary producer who was instrumental in the formation of LIPA. The shape and surface finishes of this room were discussed as they aim to prevent early reflections from affecting the listening experience. The space available in the control room makes it very suitable for teaching by staff or visiting practitioners. Two live recording spaces, suitably isolated, have line of sight to the mixing desk and one of these was also included in our tour.

Built around a 48 channel SSL Duality analogue console and control surface, Pro Tools and other software is available, as well as a wide range of outboard equipment. A 24 track analogue tape deck is still available for use nearby for those who prefer to keep things more traditional. A third year student kindly allowed us to hear a final edit of one his music productions, with playback being changed between various speakers used for near field monitoring to demonstrate the subjective differences. Those on the sound technology course are taught about the need to protect their hearing, whether achieved by control over sound levels, or, if appropriate, by the use of personal protection. For the latter there is close contact with a custom earplug manufacturer.

View across the George Martin Studio with members visible in one of the recording spaces

As the visit took place during the annual two week-long music festival, access to the main performance space (the former school hall, now the Paul McCartney Auditorium) was limited to a break between performances. There is no fixed sound reinforcement system in this area and the equipment deemed appropriate for each performance, be this music, dance or theatre, is set up as required. A brief visit was made to the Sennheiser film and TV studio, which was also operational at the time. One of the key aims of LIPA is to teach co-operation and teamwork and this collaboration automatically takes place during the course by virtue of the wide range of performing art disciplines promoted at LIPA.

Thanks to LIPA and to Pete Philipson for a very interesting and informative tour.

Southern Branch

By Conor Tickner

Sonar and tomography: using acoustic data to estimate the underwater sound speed profile

The Southern Branch welcomed Adam Woolley from Thales for an engaging online lunch-time presentation on 30 April. The presentation was recorded and uploaded to the members area of the IOA website. The session provided fascinating insights into how advanced acoustic techniques are used to enhance naval defence capabilities and to improve our understanding of the ocean acoustic environment.

Adam began by outlining Thales' significant role in the UK defence industry and the company's involvement in various acoustic applications. As a major defence contractor, Thales develops sophisticated sonar systems and underwater acoustic technologies that are critical to modern naval operations.

The presentation delved into the concept of underwater sound speed profile (SSP), the various methods used to measure them and the range of parameters and factors that affect the SSP, leading to a wide spatial and temporal variability. This variability presents ongoing challenges for naval operations and demonstrates the value of real-time sound speed profile estimates as acoustic systems must constantly adapt to changing underwater conditions to maintain effectiveness.

The session then explored ocean acoustic tomography, a sophisticated technique that uses multipath arrival time data to reconstruct underwater sound speed profiles. Adam explained how, by analysing the arrival times of these multiple ray paths, it becomes possible to estimate the sound speed profile of the intervening water mass.

Adam then explained how empirical orthogonal functions are employed and how the number of these functions, along with the number of ray paths used in the analysis, directly affects the accuracy of the resulting estimates. This analysis revealed how the approach might be optimised to derive the most accurate sound speed profile estimates in the shortest time possible, using the minimum amount of available data.

The presentation concluded with discussions about practical implementation challenges and the ongoing research aimed at improving these techniques to enhance situational awareness for naval forces and improve our understanding of ocean acoustics.

The talk generated considerable interest among attendees with further interesting discussion during the Q&A session (not recorded).

The Branch committee extends its thanks to Adam Woolley and Thales for sharing these cutting-edge developments in underwater acoustic science, providing valuable insights into how acoustic data is being used to map and understand our ocean environments.

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Scottish Branch

By Chris Steele, HSE

Above: Adam Fox of Mason UK, presenting to Scottish Branch members

On 23 April 2025 Scottish Branch members met for their AGM at RES offices in Glasgow.

The meeting was well attended with a total of 40 participants (25 in-person and 15 online) and following the AGM, Adam Fox of Mason UK, presented on 'controlling noise and vibration in existing buildings', looking at the environmental, cultural and commercial benefits of re-using existing buildings even when isolation problems are significant and complex.

Re-using existing structures limits carbon emissions but vibration isolation usually requires mass which can impact on the CO2 emissions. Cement in concrete products tends to be the main source of embodied carbon so careful selection of cement sources can reduce carbon emissions, however lower carbon concretes can take longer to cure.

Existing buildings often exhibit lack of stiffness, have more reverberance and lack load capability. Space limitations also reduce options for isolation and mass so isolation designs usually have to be to tolerances that are tighter than was achieved in the original construction.

The first case study Adam presented showed an entire historic building being sliced through to isolate it from underground rail noise. The second showed how rooms with partial isolation from horizontal and vertical loads within a building reduced underground rail noise. The next showed how isolation of a gym floor was achieved even when it was discovered that the floor was timber and not concrete, as suggested by the drawings and the final case study showed how a room within a home for a child with special needs was isolated to reduce the transmission of noise disturbance and vibration to the neighbours.

The Chair gave a vote of thanks to Adam for a great presentation and for answering the questions from the group so well and members attending in-person then headed off for an AGM post meeting social and networking event at a local Italian restaurant.

Post meeting networking

Electroacoustics

Reproduced Sound 2025: Passion, processing and perception

By Ludovico Ausiello

Organised by the IOA Electroacoustics Group, the Reproduced Sound 2025 41st anniversary conference and exhibition will be held 18-20 November 2025 at The Old Swan Harrogate, Swan Rd, Harrogate HG1 2SR.

It will focus on all aspects of electroacoustics and will bring together practitioners, educators and students in an atmosphere with a friendly and enthusiastic 'buzz' – a hallmark of past RS conferences.

Reproduced sound buddy scheme

Attending a conference for the first time or as a new member of a scientific community can feel daunting, so to offer support and to aid a smooth integration, we will operate an informal buddy scheme and mentoring initiative at the conference. Buddies will be recognisable by their red lanyards and will answer questions, provide information about the conference and help with general integration into the community. This scheme should provide a great opportunity for delegates to meet new people and the organisers hope that it makes the conference an enjoyable experience for all. Meet the buddies on the Tuesday evening during the workshop.

https://reproducedsound.co.uk/

diary

COMMITTEE MEETINGS 2025

DAY	DATE	TIME	MEETING
Tuesday	15 July	10.30	Membership
Thursday	17 July	10.30	Meetings
Thursday	7 August	10.30	Diploma Moderators Meeting
Thursday	14 August	11:00	Publications
Thursday	21 August	10.30	Executive
Thursday	**4 September**	**10.30**	**Council**
Tuesday	7 October	All Day	Engineering Interviews
Thursday	9 October	11.00	Publications
Thursday	16 October	10.30	Engineering Meeting
Thursday	23 October	10.30	Membership
Tuesday	28 October	10.30	Research Co-ordination
Thursday	30 October	10.30	Meetings
Tuesday	4 November	10.30	CCWPNA Examiners
Tuesday	4 November	13.30	CCWPNA Committee
Wednesday	5 November	09.30	CCBAM Examiners
Wednesday	5 November	10.30	CCENM Examiners
Wednesday	5 November	13.30	CCENM Committee
Thursday	6 November	10.30	Diploma Tutors & Examiners
Thursday	6 November	13.30	Education
Tuesday	18 November	10.30	ASBA Examiners (Edinburgh)
Tuesday	18 November	13.30	ASBA Committee (Edinburgh)
Tuesday	25 November	11.00	CPD Committee
Thursday	27 November	10.30	Executive
Thursday	**4 December**	**10.30**	**Council**

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Courtesy Luis Gomez-Agustina

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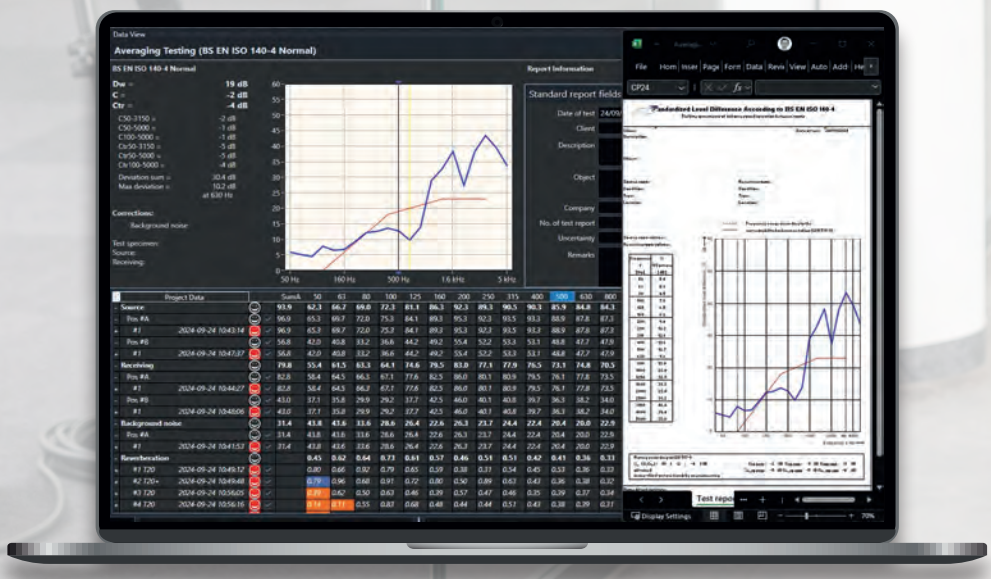

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