

## 45th Annual Report of the Council

The Institute has continued to serve the interests of its members through its established programmes in the areas of education, professional development, meetings and publications, and by providing representation in areas such as the Engineering Council, Standardisation and International Affairs.

The Trustees confirm that in the exercise of their powers as charity trustees they have had due regard to the published guidance from the Charities Commission on the operation of the public benefit requirements, and the aims of the charity are carried out for the public benefit.

The strategic aims confirmed by Council remained as:

1. Advise public policy with regard to the impact and nature of acoustics
2. Increase public awareness of good acoustic design
3. Increase understanding of acoustics by other professionals
4. Developing tomorrow's professionals
5. Providing better support for members
6. Increasing members' professional understanding.

To achieve these aims Council agreed the following objectives against which progress in 2018 is listed.

Objective	Progress in 2018
To advise policy makers on acoustics	The PLG had face- to-face meetings with MHCLG and DEFRA, and also UKMusic and Music Venues Trust in relation to the implementation of Agent of Change as part of the NPPF. The result was some shaping of the final wording to avoid problematic conflicts. The Institute has cofounded with UKAN a study to identify the economic benefit of acoustics to the UK economy. This will be used to raise the importance of acoustics with policy makers.
Increase public awareness of good acoustic design	The Institute has recruited a marketer to raise the Institute's and acoustics profile through social media and improvements to our website.
Create opportunities for other professionals to gain a better understanding of acoustics and its interaction with their specialist field	The Institute continues to be involved in the joint working group on 21st Century PEIs

To develop links with undergraduate students	The recruitment of a marketer is in part to raise the profile of acoustics and the Institute with students. The number of student members remains around 420. Students continue to be given at cost rates for IOA events.
To support school children's understanding of acoustics	The Institute has continued to fund the Edinburgh Science Festival's outreach programme to schools using acoustics based science workshops.  A project to trial an expansion of the programme to one northern English city is being investigated.
To improve the operational efficiency of the Institute	The Education management system was commissioned and a new learning platform introduced. The new head office now also has excellent video/teaching conferencing facilities.
To develop mechanisms for supporting members' professional development	10% monitoring of members' CPD continued. A series of conferences and events was held during the year, including online events attended by groups across the UK. A learning platform was introduced and work is being undertaken to develop the platform for online teaching.

## **Standing Committees**

### **Education Committee**

The Diploma and Certificate courses have continued to provide education and training for both members and non-members of the IOA. The education programmes and courses introduce many working in acoustics and associated professions to the Institute and support the recruitment of new members.

The Diploma in Acoustics and Noise Control is now in its tenth year since its revision in 2008. As a result of grades obtained in 2017/18, the Diploma was awarded to 60 students from four Universities (University of Derby, Leeds Beckett University, London South Bank University and Solent University) and four distance learning (DL) centres (Bristol, Dublin, Edinburgh and Milton Keynes).

Kyriacos Demetriou (Solent University) won the prize for best overall performance and Dr Oliver Ryan (DL Dublin) for the best performance by an Irish student.

The Education Committee continued to monitor the effects of the changes in higher education funding on students and centres and is developing options for electronic delivery of learning

materials. The new AV tutorial facilities at Milton Keynes are being used and overseas and other tutored DL candidates are participating online.

IOA Classroom (Moodle) is used by Diploma DL Candidates for sharing materials. Further aspects being developed include self-evaluation tests, online assignment submission and online feedback.

Recently, the IOA has accredited the [Dubai Acoustic Research Laboratory](#) as a Centre for delivering the experiments and instruction required for the Diploma Laboratory Module. In January 2019, six students attended for the inaugural delivery. Thanks to Gerald Stewart, Paul Schwarz and Gary Seiffert for their work in enabling this.

In 2018, the numbers taking and passing the Certificate Courses were as follows: Hand-Arm Vibration, 12 students, six passes; Environmental Noise, 144 students, 134 passes; Building Acoustics Measurement, 22 students, 20 passes (lack of numbers meant that there were no presentations in Ireland); Workplace Noise Risk Assessment, 41 students, 35 passes. The Certificate of Proficiency in Anti-Social Behaviour (Noise) continues to be run in Scotland by Bel Noise Courses, 18 students, 16 passes.

Since 2011, IOA members or Diploma holders have been able, for CPD or other reasons, to register for additional specialist modules. One candidate took advantage of this opportunity in 2017-18 and passed both modules. There remains the possibility for professional updating through the *Regulation and Assessment of Noise Module*. Also, the committee is keen to work with groups and branches to support “formal” CPD, where there is a defined syllabus and assessment of learning outcomes. This may include online learning and topics for consideration include “sustainable acoustics”, new acoustic guidance (e.g. BS 4142:2014, BB93:2014, BS 8233:2014) and devolved guidance (e.g. Scottish and Northern Ireland Building Regulations).

The Committee continues to be indebted to the support of its members, course tutors and examiners, the work of the Education Manager Prof Keith Attenborough, supported by Education Administrator Edith Borowicz and other members of office staff.

## **Engineering Division Committee**

The Committee met twice during 2018 and held six Professional Review Interview (PRI) assessments. This resulted in five new registrants put forward to the Engineering Council. During these interviews trainee assessors observed proceedings and we now have three new trained assessors giving the Committee a wide pool of volunteers with various areas of expertise to draw on.

The move of the IOA office to Milton Keynes presented some challenges for the Committee, the usual mid-year Committee meeting had to be skipped, Jim Glasgow stepped down as Chair of the Engineering Division and Membership Officer Chantel Sankey was one of the IOA staff unable to relocate to Milton Keynes. Both Jim and Chantel have been key in keeping the Professional Registration process running smoothly for several years and the Committee is grateful for the work they have done.

Since the move, the Committee has held four of the six PRI assessments this year in the new offices, with James Hill taking over as Chair and Emma Lilliman joining the IOA as Membership & Engineering Administrator. Now that everything has settled and normal service has resumed, there is a healthy pipeline of candidates ahead for 2019. Blane Judd, IOA Engineering Manager moved with the IOA to Milton Keynes and continues to represent the Institute at the Engineering Council Heads of Membership Meetings, the Committee would like to thank Blane for his efforts during the transition in personnel this year.

At the start of the year, the Committee trialled new guidance for Individual Route Candidates (those without exemplifying qualifications) and work continues to be put in to improve the information available to candidates on the process. The Committee intend to record a series of videos talking through the application process for Professional Registration.

Finally, the year ended with Mike Swanwick conducting the internal audit of the Engineering Division and the Engineering Council carrying out their interim license review. The license review found no non-conformities and the recommendations for improvement put the IOA in a good position ahead of the full license review next year. This reflects on the hard work and valuable contribution of all the Division staff and volunteers who provide feedback and guidance on candidate submissions and carry out the PRI assessments.

### **Medals and Awards Committee**

The 2018 awards were made at various meetings during the year.

The Raleigh Medal was awarded to David Thompson at the Acoustics 2018 Conference and the Tyndal Medal was awarded to Fillippo Fazi.

The A B Wood Medal 2018 was awarded to Nathan Merchant. The Peter Lord Award was not awarded in 2018.

An Honorary Fellowship was awarded to William Egan for his exceptional service to the Institute.

Stan Simpson, Latha Vasudevan, John Pritchard and Tim South received awards for Services to the Institute.

John Vanderkooy was awarded the Peter Barnett Memorial Award.

Jill Crawford was presented with an award for the best performance in the IOA's 2017 Diploma and Adnan Shehabi received the Professor D W Robinson Prize.

### **Meetings Committee**

The Meetings Committee met four times in 2018.

The membership of the Committee has changed slightly since last year's report. The Chair of the Committee remains as H Notley and C Turner remains as secretary. However, Chris has passed the mantle of Young Member to R Woodward. The Committee was delighted to welcome Kial Jackson to the team to support Robin as Kial is also lucky enough to still be "young". Chris Skinner, Martin Lester and Bridget Shield continue to be valued members of the team, whilst Peter Rogers' input ensures the meetings programme is designed with the aims of the Sustainable Development Task Force in mind at all times, and we continue to benefit from his role in the Parliamentary Liaison Group.

The Committee presided over the organisation of 15 events during the year covering a wide variety of topics. Special thanks are due, as always, to Linda Canty for her fantastic efforts in co-ordinating the organising committees resulting in events which were thoroughly enjoyed by delegates from across the acoustics spectrum. Acoustics 2018 in Cardiff was a notable event celebrating the relaunch of the Welsh Branch.

In addition to *Acoustics 2018*, there were 11 one-day events consisting of a mix of meetings and workshops. There were also three additional multi-day events: SAS/SAR in Italy, Auditorium Acoustics in Germany; and the annual Reproduced Sound conference, this year

held in Bristol, demonstrating the wide-reach of the Institute internationally. The feedback from the events' questionnaires in general continues to be very favourable and many of the proposals for future meeting topics are passed to the relevant specialist group.

The financial performance of meetings has continued to be closely monitored and we continue to review the accounts and learn from our experiences so that deficits may be minimised in the future and so that events overall continue to generate a moderate surplus. The surplus is often ploughed back into supporting more specialised events. This year the committee made a small deficit, although at the time of writing it is not possible to provide exact figures due to computer issues associated with a change of software during the move. Additionally, the Committee made progress on its aims to develop the digital meetings strategy and increase communication between the centre, the specialist groups and the regional branches. A reminder of the equipment available to enhance digital capabilities at meetings was presented at our annual strategic planning meeting to representatives from Regional Branches and Strategic Groups. This meeting also included a Q&A session with Council's equality and diversity representative. The equipment is already available to all Branches, some of whom are starting to trial it and we plan to extend its use to the Specialist Groups in due course.

### **Membership Committee**

The Committee met four times during 2018 (three under the chairmanship of Paul Shields and one with Paul Freeborn as chair because Paul was away).

Ellen Harrison resigned from the Committee as she wanted to focus on being chair of Young Members Group. The committee does not yet have a new Young Member's representative.

The CPD Sub-committee continued its work through the year meeting twice to assess member's CPD and to provide constructive advice where needed. Further work was undertaken in support of the provision of maintenance CPD guidance for members whose career position required them to maintain their current level of knowledge. CPD presentations were given at *The Art of Being a Consultant*.

Two new roles have been introduced to share the workload of the Committee. These are Vice Chair Code of Conduct (Paul Freeborn) and Vice Chair Continuing Professional Development (Richard Coleman).

There were five Code of Conduct (CoC) cases, three of which are ongoing.

We have introduced a monthly conference call with members of the CoC. The purpose of the meeting to maintain momentum on CoC cases and resolve them as quickly as possible. These meetings only take place on the months we do not have a membership meeting.

There were a couple of blips with the office move, mainly due to a new member of staff leaving after a short time in post, however Emma Lilliman has proved to be an excellent replacement.

During the year 304 membership applications were assessed by the Committee; slightly more than the previous year (300). Of these 266 were elected to membership of various grades, representing a small decrease/ on the previous year's figures. Current membership of the Institute now stands at just over 3,000 members.

2018	FIOA	MIOA	AMIOA	Tech	Affil	Sponsor	Total
<b>Applicants</b>	<b>6</b>	<b>117</b>	<b>149</b>	<b>23</b>	<b>9</b>	<b>5</b>	<b>309</b>
<b>Elected</b>	<b>4</b>	<b>100</b>	<b>135</b>	<b>18</b>	<b>9</b>	<b>4</b>	<b>270</b>
<b>New Members</b>	<b>3</b>	<b>33</b>	<b>130</b>	<b>17</b>	<b>6</b>	<b>3</b>	<b>192</b>
<b>Resigned</b>	<b>4</b>	<b>10</b>	<b>13</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>31</b>
<b>Deceased</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>4</b>

The Committee would like to thank Emma Lilliman who has done an outstanding job at taking over the running of Membership and CPD.

Focus for 2019 will be on improving consistency of application reviewing and decision making and improving guidance for CPD.

### **Publications Committee**

Warners Group Publications has been publishing the Acoustics Bulletin since the end of 2017. In that time there have been some design changes and the Editor has been replaced, it is now Nicky Rogers. Over the year Nicky has established stronger ties with the IOA office and contributors, and the quality of content has steadily increased. The Acoustics Bulletin continues to be overseen by the Publications Committee with regular meetings with the Editor. The Editor is supported by Alex Shaida and plans for a re-design and possible publication of supplements, to provide additional benefits for members are being discussed for 2019.

Alex Shaida joined the IOA in a marketing capacity in October and has been reviewing our digital and print marketing assets. Alex has set up and is monitoring our ongoing analytics for the IOA website, social, emails, and helps to benchmark and track future effectiveness of marketing activities. A website and overall communications revamp are planned for later in 2019; an ongoing social media push; plus, content development that includes videos, enhanced media relations, dedicated special Bulletins and more. Our first new marketing video went into production before the end of 2018 to promote our annual conference in May, with an entire series currently in hand for 2019.

Dennis Baylis continues to look after advertising with income up 4.1% in 2018. Many regular advertisers have booked for 2019 with a few new advertisers in the January/February issue of the Bulletin. Job adverts have also started well and look to be returning to 'normal' levels.

The Committee also continues to review the Acoustics Update, proceedings, style and format, library, and social media presence.

During the year the Committee has been joined by Terry Vincent, Charles Green, Lisa Jones and Shahram Taherzadeh. Jordan Mayes and James Hill have stepped down from the Committee.

Thanks are due to all Committee members for volunteering their time and enthusiasm throughout the year: Scott Castle, Daniel Goodhand, James Hill, Adam Lawrence, Mike Lotinga, Chris Middleton, Seth Roberts, Lisa Greenhalgh, Charles Green, Terry Vincent, Lisa Jones and Shahram Taherzadeh. Special thanks are due to Jordan Mayes for his three years of service on the Committee and James Hill for his five years of service.

Thanks are also due to IOA Office, Allan Chesney and Dennis Baylis. Thanks to everyone who contributes to the Bulletin and other publications with meeting reports, technical contributions, letters, book reviews, blog posts and everything else.

## **Research Co-ordination Committee**

In 2018, meetings of the Research Coordination Committee (RCC) were held in May and November at the Defra offices in London. Professor Abigail Bristow is the Chair of the Committee, Professor Kirill Horoshenkov is the Secretary.

RCC continued to work with the EPSRC UK Acoustics Network led by Prof Kirill Horoshenkov and Prof Richard Craster. Over the last year UKAN and RCC organised 30 joint meetings and workshops to bring together industry and academia working in acoustics. Together (UKAN and RCC) completed the *Value of Acoustics* exercise according to which there are over 700 companies in the UK working in acoustics. Their apportioned revenue is £4.6bn which is approximately 0.6% of the UK's GDP. These companies employ 16,000 people working in acoustics. The second part of this exercise, the *Cost of Noise to the UK*, is ongoing work.

RCC continued to monitor the research grants in acoustics through <https://gtr.ukri.org/>. The results from this exercise are available on <https://acoustics.ac.uk/resources/>. RCC worked with the IOA Parliamentary Liaison Group to monitor and to mitigate the impact of Brexit on the UK's academia and industry working in acoustics.

Shahram Taherzadeh (Open University) agreed to be the RCC representative on the Publications Committee and the RCC as a group provided comments on the IOA proposals on peer review.

Georgia Rodgers of Public Health England joined the RCC in November 2018. Benjamin Fenech has stepped down as a RCC member.

## **Specialist Groups**

### **Building Acoustics Group**

The Institute of Acoustics Annual Conference took place in Cardiff on the 23<sup>rd</sup> and 24<sup>th</sup> April. The three venue conference centre located right in the heart of Cardiff had an excellent attendance and the Building Acoustics Group organized two sessions with eight papers in total. The Committee all think that the 2-day conferences with a conference dinner offers the best way on attracting attendees. We are already planning for Acoustics 2019 in Milton Keynes on the 13<sup>th</sup> and 14<sup>th</sup> of May.

Much work has been done on helping standards and guidance documents throughout the year. These include:

- Pro PG, BS EN ISO 12354 parts 1, 2, 3, 4 & 5
- BS EN ISO 16283 parts 1 & 2
- EN 15657 which relates to noise from building equipment
- EN 14336 which concerns noise from waste pipes
- ISO/DIS 19488 'Acoustic Classification of Dwellings'
- ISO 16283-1 'Field measurement of sound insulation in buildings and of building elements'
- Good practice guide on the control of noise from places of entertainment
- CIBSE Guide B4

Alex Krasnic, who is on the BAG Committee, was the principal organiser of a well-received 1-

Day meeting *Acoustics of Places of Entertainment and Sports Venues* on the 13 September 2018. Around 50 delegates assembled in the picturesque surroundings of the Pier Eight conference room at The Lowry, Salford Quays. Seven experienced acousticians involved in the field of sound management and noise compliance for a variety of entertainment and sports-led venues, both in the UK and globally, presented a series of informative case studies and reviews of current licensing (and planning) policy in the UK. With members of BAG actively driving a forthcoming revision to the IOA's *Good Practice Guide on the Control of Noise from Pubs and Clubs*, this meeting acted as a catalyst to promote a future, membership-led consultation on the revision of the GPG.

## **Electroacoustics Group**

As in previous years, the main activity of the group during 2018 has been the organisation of the annual *Reproduced Sound* conference. The organisational tasks were once again spread amongst the committee members, each of which had a defined role making this very much a team effort. The conference took place in November at the Bristol Hotel in Bristol. This is the first time that this venue has been used for an IOA conference and, although delegate numbers were slightly lower than we would have liked, the atmosphere and 'buzz' which are hallmarks of the RS conferences was very much in evidence. At the conference, the Tyndall Medal Award was presented to Filippo Fazi, who followed with a fascinating talk on loudspeaker arrays, and the Peter Barnett Memorial Award was presented to John Vanderkooy who unfortunately could not attend in person but was streamed 'live' over a video feed, first to introduce his pre-recorded talk, and then after the talk to take questions. This arrangement was considered to have worked extremely well and special thanks should go to committee member John Taylor for putting it all together. The conference dinner was held on board the SS Great Britain, which proved to be a popular venue. To supplement the wide range of technical presentations, delegates were also treated to a demonstration and buffet on the Tuesday evening, organised by d&b audiotechnik, an after-dinner talk by Philip Newell, and a tour of a new concert hall foyer by Charcoal Blue on the Thursday evening. The conference is planned to remain at the Bristol Hotel for 2019.

In addition to the conference, on 28<sup>th</sup> April, the Electro-Acoustics Group joined with the Association of Sound Designers for a visit to the Barbican to see *The Encounter*. This show, produced by Complicité and written and performed by Simon McBurney, makes fantastic use of binaural recording and production to tell the story, with the experience delivered to each seat in the house through a combination of headphones and in-room sub-bass units. The Sound Design team was led by Gareth Fry, who has presented at *Reproduced Sound*. The afternoon started with a brilliant behind the scenes tour by Gareth and his team, and following the tour, the group assembled in the Barbican Theatre for the matinee show. The binaural effect proved a revolutionary tool in the storytelling experience, and this was something that Simon McBurney was very much part of developing from his original devising of this show.

There have been a few changes to the EAG Committee this year: Stan Boivin-Champeaux and James Allen have both left; the Committee is grateful to them both for all their efforts. At the AGM in Bristol, the committee was pleased to welcome a new member, Graeme Littleford, into the role of Young Persons' Representative. The Committee met on three other occasions during 2018. In January we met to carry out a review of *RS2017* and to draft the call for papers for *RS2018*, the abstracts were reviewed, and the programme was mapped out in June and the details of the conference were finalised in September.

## **Environmental Noise Group**

The Environmental Noise Group held a well-attended session at the Annual Conference in



Cardiff in April 2018. Over 100 members attended and the focus was on the assessment on industrial noise with a balanced set of presentations from the Environmental Agency, consultants and researchers.

At the Annual General Meeting Bernadette McKell left the Committee and we would like to thank Bernadette for her contribution over the years. Bernadette is replaced by Somayya Yaqub, Head of Corporate Health and Safety at the London Borough of Ealing. Somayya worked on the Committee writing the Professional Practice Guidance (Pro-PG) for New Residential Development, where her contribution from a local authority perspective was invaluable.

It is now one and a half years since the publication of the Pro-PG, and in the latter part of the year the Committee began collecting information on its use in local planning. We aim to continue reviewing the application of the Pro-PG, as the pressure on local authorities to consent new housing continues to grow, and the need for good acoustic design becomes even more important.

In April, a meeting was held on the consultation draft of the National Planning Policy Framework (NPPF), with discussion focussing in particular on the proposed new *Agent of Change* policy. Comments from members attending that meeting were forwarded to Ministry for Housing, Communities, and Local Government and influenced the final wording of the NPPF.

In October 2018 the World Health Organisation published its Environmental Noise Guidelines for the European Region. The guidelines in part replace the *1999 Community Noise Guidelines*, and augment the *Night Noise Guidelines 2009*. A conference was organised for January 2019 with speakers invited to provide insight into how the guidelines were developed and what they mean, followed by debate on the strength of the evidence base and the possible implications to the assessment and management of environmental noise in the UK in years to come.

### **Measurement and Instrumentation Group**

During 2018, the Group has organised two one-day meetings, and a one-day session at the Annual Conference.

Initially planned for Autumn 2017, the first one-day meeting was held in Northampton on 14<sup>th</sup> March this year, entitled *Sound Power Workshop : Theory & Applications*, organised by Ian Campbell. Some excellent speakers from education and industry were lined up, and the workshop format in the afternoon provided plenty of discussion on this complex topic. Live measurements of sound power were performed, using sound intensity and sound pressure measurements, and the results were remarkably good, given the time available. This drew from our experience with previous live workshops, which generally are well received.

The second one-day meeting was held on 16 October 2018 at the Royal Society, entitled *Ground borne vibration*, and organised by Steve Cawser. Another well-attended meeting, this covered all aspects of measurements and interpretation of this perennial subject.

The group also provided one day of papers and presentations at the Annual Conference in Cardiff on 24 April 2018, organised by Simon Bull and James Tingay, based on our successful Instrumentation Corner series of articles for the Bulletin. The success of this will be built on, by running a new series at the 2019 conference in Milton Keynes.

Over the past year, the Group's Committee members have continued to contribute to Instrumentation Corner in the Bulletin, the latest being No 57 in this issue, which has

produced some interesting discussions and articles, and these are scheduled to continue for the forthcoming year.

All available articles have now been edited and made available on the Members' Page of the Group on the IOA website.

Two long-standing committee members stood down in 2018; Ian Campbell has been on the Committee since its inception, and Liz Brueck, who has now retired from HSL. They have both contributed articles, meetings and support to the group, for which we are grateful, and I hope that the new members will be able to fill the hole left behind.

My thanks go, as ever, to all members of the Committee for the active roles they take in all aspects of the Group's activities.

### **Musical Acoustics Group**

The Group has continued to make progress with October seeing the sixth consecutive annual meeting and AGM. This time the meeting was held at the beautiful St Celica's Hall, Edinburgh and was the most successful yet, covering topics on measurement and modelling of both performance spaces and musical instruments. Earlier in the year the Group also contributed to the IOA Spring Conference held in Cardiff in April. It was evident that the subjects discussed at the two meetings covered a diverse range of topics which were both presented and demonstrated through musical performances. To give a few examples refurbished halls were discussed, novel noise control solutions unveiled, new measurement sensors presented, new computer simulations demonstrated, and acoustic analysis of both new and old musical instruments performed. In July a joint half day visit was organised with the Yorkshire and North-East Branch to Cavendish Pianos where a talk, a guided workshop tour, and a performance was held. The management committee of the Group has been active with regular meetings using internet conferencing facilities (phone, smartphone, tablet and computer), thereby avoiding any unnecessary travelling. At the AGM, Jimmy O'Donnell joined the Committee, and Dr Stephen Dance was elected as the Chair of the Group. The Group expects to be represented at *Acoustics 2019* and plans to hold its seventh annual meeting in November 2019. Finally the AGM closed with a special vote of thanks to Mike Wright for his hard work and dedication as Group Chair over the past seven years.

### **Noise and Vibration Engineering Group**

Three full Committee meetings were held during 2018, plus a number of sub-group meetings to focus on planning for the two events that were organised. After a period transition on the Committee, with many members changing jobs, this year has been far more stable which enabled a higher level of participation in planning meetings.

The first event was participation in *Acoustics 2018* in Cardiff, where an all-day session took place with talks on a wide variety of topics – testimony to the diverse interests of the members of NVEG. Topics included vibroacoustic of domestic appliances, the application of acoustic metamaterials and noise from curved railway tracks.

The second event was a one day meeting in Southampton on the topic of Sustainable Engineering, the aim of which was to gain new perspectives on how to rise to the challenge of sustainable noise and vibration engineering: low energy consumption, choice of materials and recycling lifecycle, improved robustness for longer life, use of virtual methods to minimise prototyping and improve overall design, reduced pollution or any other positive sustainable impacts. The event itself was successful, with a good level of informative discussion. However, getting sufficient attendees was a major effort, which highlighted the

need for wider marketing of events which are outside the interests of the core membership of the Institute.

Planning for a number future events is also underway. The first commitment for 2019 is a session for the spring conference. A repeat of the 'Quiet Design' for noise at work in collaboration with HSE is planned for September; the aim will be to demonstrate the benefits of considering low noise design from the outset in reduced noise emission so there are no additional costs required to ameliorate noise issues.

### **Parliamentary Liaison Group**

The Parliamentary Liaison Group continues in its second year to focus on the way the IOA interfaces with decision makers at Parliamentary level. The year has been preoccupied with preparations for Brexit, and attempting to keep pace with the best way to achieve a meaningful intervention to protect acoustics regulations. Nevertheless other opportunities presented themselves to get the IOA visible at decision making level.

The quick revision of national planning policy led to a well-attended workshop and attended by MHCLG to discuss the wording changes and identify challenges. From this the IOA consultation response was forged and submitted by PLG. Face-to-face meetings then resulted with MHCLG and DEFRA, and also UKMusic and Music Venues Trust in relation to the implementation of Agent of Change as part of the NPPF. The result was the there was some shaping of the final wording to avoid problematic conflicts. A briefing note submission on Soundscaping did not manage to get its inclusion, but it is hoped this laid a marker down for the future.

In Wales however the inclusion of the term in the national strategy was plentiful, and the PLG provided a supportive consultation response on behalf of the IOA . The policy has now been adopted, making Wales the first place to embrace soundscaping.

Ending the year with the Government's uncertainty over Brexit, but with PLG having encouraged the IOA to provide match funding to UKAN to carry out a piece of work on the Value of Acoustics to the UK Economy has returned its first headline results. With an estimated 4.6 Billion value the commercial acoustics industry is being valued for the first time. This is intended to assist PLG to be able to follow up the work around Brexit with a report to get Government attention and traction for maintaining, protecting and celebrating the work of acousticians in the UK and maintaining links worldwide.

### **Physical Acoustics Group**

Following the revival of the PAG by Mike Swanwick in 2014, the now better established group, has contributed to the Institute's programme of events in 2018 in two ways: Firstly, by holding a well-received session at *Acoustics 2018* in Cardiff, comprising of nine academic papers, hosted in the spectacular venue, the Council Chamber.

We shall continue our endeavour's to represent the PAG at *Acoustics 2019* with a similar, well-represented Physical Acoustics Session at the IOA's flagship conference.

The group also held a dedicated one-day event *Acoustic Materials and Metamaterials*. Organised by the IOA Physical Acoustics Group, and co-sponsored by the recently established UK Acoustics Network (UKAN). The meeting brought together many recognised specialists in acoustic materials and metamaterials from academia and industry. Delegates were provided with a comprehensive programme of both theory and practice to understand the terminology used for absorbing, scattering and the diffusing of sound with a well-balanced programme including; general methods, and presentations that will focus in on various applications and recent case studies. Sonobex Limited also sponsored an *early stage*

researchers poster competition, which was won by Joseph Beadle of Exeter University. We shall continue to provide a representation for physical acoustics within the IOA as this has been recognised as being fundamental to the requirements of what is the foremost-learned society for acoustics in the UK. Albeit we remain to communicate with our sister PAG within the Institute of Physics to avoid duplication of effort, and are looking to develop this relationship further and co-organise events.

Mike Swanwick has now handed over the reigns of Chair of the PAG to Daniel Elford; with Mike remaining as the PAG secretary. We offer our warm thanks to Mike for keeping the PAG together during a challenging period and keeping the PAG afloat.

In addition to the above, we welcome our new members to the Committee but we are still in need of people who can help with finding conference papers or speakers who would like to present their work during PAG sessions as part of future conferences. The group will also consider supporting ideas and requests for regional evening meetings, and collaboration with other specialist groups and institutes. Please contact the chair via the link on the PAG page of the IOA website.

### **Senior Members' Group**

The Senior Members' Group held only one Meeting this year, on 2 October 2018 at Sound Technology Limited (STL), Letchworth Point, Letchworth Garden City. The day started with a Committee Meeting which discussed at length the possibilities for future meetings, venues and potential dates in 2019 to avoid winter months and the peak summer months, including the cost and duration of travel to potential meeting venues taking into consideration where SMG members reside. The Committee agreed to continue to provide support to the IOA CPD programme.

Despite the disappointing turn-out, Members' were given two excellent presentations by the Sound Technology Ltd Applications Team. The applications team explained the features of BSS by HARMAN Audio equipment and the state of the art developments in audio signal processing. They also gave a talk on the latest transducer technology developed by JBL the D2 Dual Diaphragm Dual Voice Coil Compressor Driver. Finally, there was a demonstration of Sound Technology's Professional Audi Demo Facility.

The day ended in the AGM which re-elected Michael Forrest as SMG Secretary; and with agreement to focus on identifying speakers and venues for future meetings which would appeal to a wider range of SMG members than has previously been achieved, and with potentially open future meetings to other IOA members.

### **Speech and Hearing Group**

The Speech & Hearing Group hosted or co-hosted four events in 2018. The first was a talk by S & H group committee member Graham Frost entitled *Audiology for Acousticians*, jointly hosted by the London Branch, given in March. Graham's talk was also delivered to a meeting of the Eastern Region Branch in Colchester in June. In October 2018 the group, in conjunction with the Yorkshire and North-East Branch and the UK section of the Audio Engineering Society, hosted a screening at the University of York of the film *In Pursuit of Silence* by director Patrick Shen. The other group event was a talk, held immediately after the group's AGM in June, entitled *A life in headphones: working as a forensic speech analyst* given by Dr. Jessica Wormald of J P French Associates and the University of York.

At the group's AGM, all Committee members who were due for re-election were duly reappointed. During 2018, David Canning chose to stand down from the Committee after some nine years of service, whilst Dr. Amelia Gully (University of York) was co-opted onto the

Committee. There are vacancies for two further ordinary members of the Committee, and nominations are currently being sought for these posts.

The group has a session planned for the Institute's Spring Conference in Milton Keynes in May 2019, and Professor Michael Ackeroyd (University of Nottingham and MRC Institute of Hearing Research) has kindly agreed to give a talk in June 2019. Further events are being planned for later in 2019.

The Group Committee met three times (in January, June and September) during 2018. The group continues to liaise with other professional bodies (such as the British Standards Institute, the Royal College of Speech & Language Therapists and the British Society of Audiology) and also other specialist groups (including the Building Acoustics Group and Musical Acoustics Group) and local branches of the Institute regarding topics of mutual interest. Joint meetings in collaboration with some of these are being planned for the future. The Group's Committee is hoping to circulate a questionnaire to members during 2019 in order to better discern what the membership would like and need from the group in terms of activities, events and services.

### **Underwater Acoustics Group**

The Underwater Acoustics Group Committee has been undertaking or planning the following conferences:

- The SAR and SAS conference in Sept 2018.
- A bioacoustics conference in Loughborough in August 2019.

Several members of the Committee are on the ISO TC43 SC3 sub-committee working groups who are developing new ISO Standards. Members have commented on the second iteration of the Draft International Standard of ISO 17208-2 *Underwater acoustics — Quantities and procedures for description and measurement of underwater noise from ships — Part 2: Determination of source levels from deep water measurements*. Members have commented on two IEC standards - parts 1 and 2 of IEC 60565 (Calibration of hydrophones and transducers).

The IOA have suggested that the IOA Diploma is extended to include underwater acoustics. Some diploma candidates have asked for underwater acoustics as part of the Diploma, and in particular, the impact of underwater noise. Options for this include, a module on current diploma or endorsement of an external course. Council are happy for a workshop to be run with external stakeholders to discuss the options. The UAG agreed to lead this workshop with the relevant stakeholders.

The Committee recommended Nathan Merchant for the AB Wood Medal and this was awarded at the UK Acoustics Network Conference In Oxford in December 2018.

Overall, the UAG has had a quiet year. An important issue that requires attention is trying to increase the interest in the AB Wood medal amongst European candidates.

### **Young Members' Group**

The Group Committee meets quarterly with three meetings by telecom and one meeting in person. In 2018 our face-to-face meeting was held in December in London, which was then followed by a social gathering of the Committee.

The fourth Inter-Professional Networking Event in London was another successful event with Engineers and Architects from nine professional bodies attending. The event used the same

format as previously with participants playing *networking bingo*, i.e. seek out as many individuals as possible that fit the descriptions on the bingo card. Drinks and nibbles were provided.

To promote the IOA to students we gave a presentation at the University of Southampton, Heriot Watt University, and the University of Cambridge for their students and those from Anglia Ruskin University. The presentations promoted the benefits of IOA membership and Chartership.

Members of the IOA, including some young members, managed a stall at the Edinburgh International Science Festival again this year.

A proposal was submitted to the London Science Museum to be involved in their Engineering *Lates* Events. Unfortunately, the proposal was unsuccessful due to a high number of applications received by the museum.

The South West Branch organised two very popular visits to the St Mary Radcliffe bell tower in Bristol, which had 40-50% young member attendance.

In 2017 the YMG had a good dialogue with the Early Careers Group at the UK Acoustics Network, who offered heavily subsidised places at their summer school, and is keen on organising future joint events.

Other events hosted by the YMG included a Pub Quiz in London, YMG social events after the Musical Acoustic Group one-day meeting and the joint Building Acoustic Group and Environmental Noise Group Places of Entertainment meeting.

In 2019, the YMG will be hosting another mock planning inquiry, inter-professional networking events in London and Birmingham, and a visit to the New Royal Birmingham Conservatoire. We are also hoping to hold a number of social events throughout the year, details of which will be provided on the Events page of the IOA website.

## **Branches**

### **Central Branch**

The following meetings were held in 2018

1. *Predicting and Controlling Noise from High Energy Impact*, Adam Fox
2. Launch of the *ANC Guide to Acoustics, Ventilation and Overheating*, Nick Conlan and James Healey
3. *The Perfect Expert Witness Report* Mark Thomas
4. An afternoon visit of the Schueco Facility at Milton Keynes, Stephen Newell
5. *Forensic Analysis of Speech & Sound*, Dr Jessica Wormald
6. *Uncertainty in Environmental Noise Measurements*, Dr John Fenlon
7. *Noise Control in Consumer Products*, Nathan Thomas

A good mix of topics and venues. For 2018, the Central Branch has moved around covering our traditional home of Milton Keynes with the fantastic facilities at Leica as well as BRE in Watford, Bedford Football Club and Biggleswade Baptist Church. The flexibility to use different venues has resulted in higher expenses than previously with the benefit of venues

attracting more and different members to attend. Thanks to all involved. Expenses for 2018 events was £603.60.

The most popular presentation was one not directly related to acoustics but of great interest to acousticians. This was arranged with the East Anglian Branch of the Chartered Institute of Arbitrators. Thanks to Rachel Canham for arranging this.

### Proposals for 2019

Much of the same as 2018 based where practicable on IOA Memorandum & Articles of Association objects and IOA Strategy below (which will be reviewed in 2019):

- Advise public policy with regard to the impact and nature of acoustics
- Increase public awareness of good acoustic design
- Increase understanding of acoustics by other professionals
- Developing tomorrow's professionals
- Providing better support for members
- Increasing members' professional understanding.

### Eastern Branch

The Branch has had one more meeting than in 2017 and tried to focus on key topics. As a branch so much more can be done and we will be increasing communication through IOA HQ to encourage new, existing and budding members from this region to attend the meetings.

Details of the meetings held are given below;

### Eastern Branch Meetings 2018

Date	Subject	Speaker	Attendance
8 February	Sound Intensity and how to measure it	John Campbell	22
15 March	Protecting Music Venues – Agent of Change	Kieran Gayler & Alex Mann	18
12 April	Launch of ANC guide to Acoustics Ventilation and overheating	David Trew	16
17 May	Predicting and controlling noise from high energy impact	Adam Fox	17
14 June	Audiology for Acousticians	Graham Frost	14
11 October	Uses and abuses of sound power in noise assessments	Simon Scott	26

Our average attendance is at 18 members per talk which is up on 2018. However for a region so densely populated by acousticians leaves significant room for expansion. We just don't seem to get the uptake we should have given the number of members in close proximity to the meeting venue most used last year which was Colchester United's stadium.

In general we find the selection of topics and speakers quite a challenge as we mainly wish to stay away from commercial presentations, as this seems to drive a relatively low interest. Members seem to wish to attend talks which have a strong technical content or where a new

piece of legislation is available.

We are holding regular Committee meetings with the first of the year scheduled for 6 February 2019 and we would wish to delve into the ideas catalogue held within the IOA and other branches to get talks booked in for 2019.

We have yet to hold an evening to show the DVD issued by the IOA called *In pursuit of silence* which explores our relationship with silence and how noise affects our lives. As a branch we will canvass opinion as to whether to stage a 'movie night' meeting with associated goodies of course.

At the risk of sounding like a broken record a social event and day conference have been talked about for some time now and it is hoped that with a more involved Committee, that one or even both may come to fruition. It's our intention to bounce ideas around with the Committee with suggestions always welcome from any other members or attendees of the branch. Then we shall hopefully commence planning, and keep the branch members informed via IOA communication.

My thanks to all of our attendees over 2018 and I look forward to seeing you again in 2019 for the first meeting and AGM.

## **Irish Branch**

During the year the Irish Branch held just one event:

The Branch AGM was held at the AWN Consulting Offices in Dublin, on 22 August 2018, and was followed by a talk by David Dodd of the Environment Advisory Unit of the Irish Department of Communications, Climate Action and Environment (DCCAE), on *Noise Policy and END Review*.

At the AGM Committee Members Damian Brosnan and Damian Kelly were at the end of their 3 year terms, and were re-elected. In addition, Eugene McKeown of RPS Group stood down and was replaced by Paul McCullough of Armagh City, Banbridge and Craigavon Environmental Health. The role of Young Members' Representative was filled by David Coon of Ulster University.

The talk by David Dodd covered many relevant aspects of noise policy in Ireland, and was well received by those that attended. It led to a good question and answer session.

The Branch Committee also provided input to the Irish *Draft National Planning Framework 2040*, on behalf of the Irish Branch of the Institute of Acoustics.

As with other years, it is planned to have a greater number of meetings this year.

## **London Branch**

Following on from the success of previous years, the London Branch has had yet another very busy year. The year's activities included a staggering 11 London evening meetings, a half day conference followed by a social event plus our annual evening event.

As usual, we endeavoured to showcase an array of topics regarding general issues within acoustics, noise and vibration as well as some looking into alternative methodologies and new technologies.



The year commenced with Ben Dixon and Stuart Goodbun presenting their IOA Diploma Student Projects. These covered looking into an abbreviated impact sound insulation testing method, and an investigation into scheduled train services and the noise impact on residents.

February saw Adam Fox & Martin McNulty discussing methods for predicting and controlling noise from high energy impact sources such as weights and other gym equipment, which is being more commonly proposed in office and residential developments.

This was followed by Graham Frost talk on *Audiology for Acousticians* which revisited the acoustics of the ear itself and the use of acoustic stimuli in the assessment of hearing function.

Also in March was a London Branch Half Day workshop event on *Building Isolation* which took place at the Royal Society and was well attended. This was following by an evening social event sponsored by Mason UK.

In April we welcomed Lorenzo Picinali who presented his Binaural audio research and applications to create 3-dimensional audio along with some research into acoustic augmented reality.

Dani Fiumicelli then joined us to update our Branch on *ProPG: Planning & Noise – New Residential Development* which was then followed in June with two presentations. The first on *Overheating and Noise: New ANC Guidelines* presented by Max Fordham and David Trew. Then Wilson Ho visited us during a trip to the UK from Hong Kong to discuss *Can Half Installation of Rail Dampers Be as Effective as Full Installation?*

Over the summer we welcomed the London South Bank Students who presented their student projects covering the Acoustics of Bolivar Hall and an Analysis of a new Musical Instrument: the Yaybahar.

Benjamin Fenech kicked off our autumn series with a talk on *Positive sound and health: An introduction to pathways, evidence and practical applications* during which he discussed potential pathways through which sound can improve health.

In October Grant Waters & Doushiant Mohith presented an interesting talk on Forensic Acoustics which were used to look at a historic shooting incident which unearthed gaps in the police investigation.

Our evening annual event was held again in November this year at the Admiralty in Central London.

The year was then completed by Ken Marriott who provided us with an update on *Acoustic Design for HVAC (Engineering)*.

We are now in our tenth year of holding London Branch meetings at WSP | Parsons Brinkerhoff and I would like to thank them for allowing us to use their Chancery Lane offices as our meeting venue for another year. I would equally like to thank all the members who have attended the presentations and events during the year.

After far too many years of being Chairman of the London Branch, Jim Griffiths decided to step down this year (2019) and let someone else provide the guidance, energy and leadership that is required to run this exciting and long established London Branch. Jim would like to thank everyone on the Committee over the last +15 years that he has been Chairman, for their outstanding contributions and support.

## **Middle East Branch**

The IOA Middle East Branch was formed in March 2018 and we were very honoured to have Graham Parry in attendance to open and present at our inaugural meeting. This was a fantastic opportunity for all of the IOA members in the region to get together and Graham gave a fascinating presentation on *Noise and Vibration from High Speed 2 and Crossrail*. Committee members were also elected during this meeting: Sarah Huskie of WSP was nominated as Chair; Andreas Lejholm of Ramboll was nominated as Vice Chair; and Safa Al Gburi of WSP was nominated as our young member representative.

We held our second meeting in September at the Dubai Acoustic Research Laboratory where Gerald Stewart of InHabit Group gave a presentation on *Modern Road Traffic Assessment Methods*.

It has been a great start to newly established Branch and we are looking forward to more meetings and presentations over the year ahead.

## **Midlands Branch**

The Midlands Branch had another successful year in 2018, holding ten evening meetings with an average attendance of 24 (maximum 51, minimum 12). Although the number of meetings was slightly down on past years, the level of attendance was very similar. The branch's programme included talks on a range of environmental and building acoustics topics as well as a couple of more bespoke talks.

Our first meeting of the year, joint with the Faculty of Arts at Wolverhampton University, attracted the highest attendance of 51 people who had all come along to hear Chris Watson provide a fascinating account, brought alive by sound recordings and images, of the journey he made to Antarctica and the South Pole as sound recordist for the BBC television series 'Frozen Planet'. This was followed in March by a talk from James Healey on the ANC draft document 'Guide to Acoustics, Ventilation and Overheating' followed by a lively discussion. In April, we enjoyed a talk (and lots of lovely pictures of dogs) on *Dog Kennel Noise Impact and Methods of Assessment* from Dr John Pritchard of Derby University. May and June saw talks being given by two members of Arup; firstly, Colin Cobbing on the recently published *Professional Practice Guidance on Planning and Noise* and subsequently Charlotte Clark on *National Noise Attitude Surveys*. In July, Jon Tofts and Tony Clayton of the Environment Agency presented an informative talk on *How the Environment Agency Regulates Noise Pollution*. Our next meeting was in September when we held our traditional annual IOA Diploma presentation evening, featuring three of the best IOA Diploma projects from the 2017/2018 intake at the University of Derby. We rounded off the year with talks on *Architectural Acoustics – Special Considerations for Gymnasiums and Swimming Pools* (Louie Mitrevski), *Practical Considerations and Experiences with Sound Masking* (Charles Edgington) and culminating in our December lecture (joint with the Audio Engineering Society) on *Sound Design in Our Sound Environment: Soundscape Design, Auralisation and Evaluation in Environmental Acoustics* by Professor Damian Murphy.

Meetings were held at five different venues predominately in the West Midlands with just three held in the East Midlands. The Branch Committee would like to thank the many speakers for their excellent technical contributions.

Thank you also to the various venues that provided the meeting facilities and refreshments: Atkins Birmingham, WSP Birmingham, Arup Solihull, Derby University and Wolverhampton University, Walsall Campus. Finally, thank you to the Branch members who have supported the Branch again this year.

The Committee continues to aim to appeal to the wide range of members' interests in the region and CPD certificates were provided at all meetings. In 2019 we will aim to provide a better balance of meetings between West and East Midlands and generally ensure that meetings are accessible to all.

At the branch AGM held in January 2019, Chris Bradley stood down as the Young Members' representative and Chris Humphreys retired under the three year rule and decided not to stand again. The Branch Committee would like to thank both Chris's for their valued contributions to the running of the branch over the past few years. We were delighted to elect Rob Bungay of WSP as the new Young Members' representative and Philip Hainsworth as an Ordinary Member of the Committee having formerly been co-opted for one year.

### **North West Branch**

The North West Branch held six meetings this last year. In January David Hiller described his experiences in addressing noise issues in relation to a planning application for two proposed shale gas exploration sites in Lancashire. The planning procedure was aimed at using the sites to investigate the viability of hydraulic fracturing, commonly known as *fracking*. The presentation briefly described the hydraulic fracturing process and then went on to describe and discuss the assessment approaches taken. The presentation was well received with IOA members attending whom have had different levels of involvement with the process. An open and honest discussion followed that our membership benefited from.

Adam Thomas and Steven Swan of Arup's acoustics team gave a talk and tour of The Stoller Hall at Chethams school of Music. The hall is located within the new Chethams School of Music.

In March we held the AGM in which we set out our aims for the year and asked our membership for their input. On the same evening we welcomed back Jack Harvie-Clark of Apex Acoustics to present the draft publication of *The ANC Guide to Acoustics, Ventilation and Overheating ('AVO' Guide)* which was released for consultation. The meeting was well attended by acoustic consultants from the region.

In the summer we co-hosted two related talks at the same event about BS4142 assessments of noise characters. Rahiel Ghani (Wood) and Matt Torjussen (Noise.co.uk) gave talks on their research titled *Perceptual testing of BS4142:2014 character corrections* and *A study of the reference method for evaluating tone audibility in BS4142:2014* respectively.

In the autumn we welcomed Charles Edgington who discussed his research into the practical effects of sound masking and highlights various subjective experiences. We finished the year's programme with Jim Smith (AECOM) who gave a sneak preview of the PAVA design for the redevelopment of the formerly known Waterloo International Terminal (WIT).

### **Scottish Branch**

This year has been a reasonably busy one for the branch, with a mixture of individual and collective activities taking place.

#### **Meetings**

**In Pursuit of Silence.** On 25th January the Branch held a Burns Night supper and screening of the thought provoking film *In Pursuit of Silence*. The evening was hosted at the Robin Mackenzie Partnership offices, Edinburgh Napier University, with 22 members attending.

**AGM.** On 7th November the branch held the AGM at Napier University, Edinburgh, which was attended by 22 members.

**Acoustic Classification of Buildings and Registration for Sound Insulation Testing.** The AGM was followed by two presentations. The first by Sean Smith on the Proposed ISO Acoustic Classification of Buildings and then a presentation on the operation of the IOA's Sound Insulation Testing Registration Scheme by Alistair Somerville.

### **Members STEM activities**

**Presentation to Heriot-Watt undergraduate students.** In view of developing links with undergraduate students, Cesar Bustos (Arup), presented to 5th year MEng students in Architectural Engineering at Heriot-Watt University on the 19 March 2018. The presentation showcased work that a young acoustic consultant typically carries out. The feedback obtained from the students was excellent, and this presentation will be repeated in coming years.

**Edinburgh International Science Festival - promoting acoustics to schoolchildren.** A strong team of IOA volunteers took part in an education project, entitled *Careers Hive*, which aimed to spread 'the acoustics message' to thousands of secondary pupils in Scotland and open the eyes of 11 to 14 year olds to the wealth of opportunities available to those who opt for STEM subjects when choosing what to study. This is a very successful on-going IOA supported initiative. Unfortunately, this year's event was significantly affected by the 'Beast from the East' and the National Museum of Scotland was forced to close from Tuesday afternoon onwards. At the start of *Careers Hive 2018* there were 3,273 pupils from 44 different schools booked in to visit – the highest number yet. However, the final numbers were still significant at 1,148 pupils from 18 different schools. The Museum reopened on Saturday for the family open day which provided the opportunity for us to engage with parents and families about potential career routes for their children in STEM.

**Careers Hive Engineering Panel.** Our member, Emily Tilbury (New Acoustics), was a member of the Career Hive Engineering Panel. This was a panel of 10 engineers from a wide variety of industries and backgrounds which was recruited to create brand new, interactive activities for pupils aged 11-15. This was funded through a Royal Academy of Engineering Ingenious award. Emily also gets involved in various STEM events in Secondary schools and serves on Education Committee.

### **Scottish Audio and Acoustics Network (SAAN)**

Following an initial meeting on 24 January, throughout the year there have been several discussions with, in particular, the Audio Engineering Society (AES Scotland), but also other groups (Engineering Scotland; International Games Developers Association (IGDA); MusICA of Edinburgh University). This has resulted in the setting up of a networking forum for all professionals, organisations or indeed any parties or individuals interested in all areas of acoustics. The forum is the Scottish Audio and Acoustics Network (SAAN) but is still at a very early stage of development. Thus far its use has been limited to sharing upcoming meetings; however, it is hoped to arrange a Scottish Branch meeting in collaboration with AES Scotland early in 2019 to take views on and explore how best to develop this forum.

### **South West Branch**

The South West Branch hosted four events during 2018. In January Dani Fuimicilli of Temple Group presented to the branch on *ProPG New Residential Development*. At the well-attended event, Dani presented his views and partook in discussion with branch members on the IOA published guidance document. Talk also turned to the forthcoming ANC guidance, leading to

this being selected as the next meeting topic.

In March Dr Anthony Chilton of Max Fordham presented on *Acoustics, Ventilation and Overheating - The ANC Guide*. Another well attended event saw Anthony presenting on the recently published document, pulling out key sections, cross referencing with *Approved Document F – Ventilation, dealing with overheating, risk levels, and on the assessment procedure*. This event was recorded for members unable to attend.

This was followed by the Branch AGM, in which the Committee remained close to its previous incarnation, with Dan Boote and Martin Chan being voted on as new members and Sam Garne joining as Young Members' Group representative.

In July the previous year's site visit to the St Mary Redcliffe bell tower was repeated for members unable to get spaces last time. A tour of the bells and of the ringing chamber was provided followed by a demonstration of bell ringing and a short talk by one of the bell tuners.

IOA President Jo Webb joined us for this trip and presented an IOA Award for Services to the Institute to SW Branch member, and previous branch secretary, Stan Simpson, for his role as tutor on the IOA diploma course at the University of the West of England since 1983.

In November Lisa Lavia of the Noise Abatement Society visited the Branch to present on *Soundscape Standards Development and Application in Practice, BS ISO 12913-1:2014 Part 1: Definition and Conceptual Framework and ISO/TS 12913-2:2018 Part 2: Data Collection and Reporting Requirements*.

Lisa, a member of ISO Working Group 54, showed that the standards are not prescriptive tools that should be used but provide a selection of tools that practitioners can select from and explain why that tool was picked for a specific application. One key phrase used was that, "Noise is not an acceptable state for progress, we don't accept that with any other form of pollution."

This event was also webcast for members unable to attend in person and was listened to live in locations all over the branch's large geography. This element was considered a success and it is aimed to repeat it for future events.

The year was not as busy as some previous years for the SW Branch, so we enter 2019 with renewed appetite to put on more fascinating talks and unusual site visit, with the IOAs new webcasting abilities to be utilised to better reach and serve our members.

## **Southern Branch**

The committee has had another strong and active year with a busy programme of engaging events.

The February meeting last year saw a packed house at Winchester Guildhall to hear Rupert Taylor present on the *Mysteries of Groundborne Noise* which was as always well received.

March's joint event with the *Audio Engineering Society's Southern Region [AES]* entitled *Designing Sound Studios* was provided by Eddie Veale who amongst other A-listers worked for John Lennon on the home studio where the *Imagine* record was made.

This was closely followed in early April at Basingstoke's Council Chambers by the launch of the Draft *ANC Acoustics, Ventilation and Overheating Guide*, where David Trew of BAP, as a working group representative, guided the audience through the document and offered his

insight into the determination of the assessment methods therein. This was key for members in providing consultation responses before the May closing date.

At the end of May, Mason UK and Hoare Lea's representative's Adam Fox and Martin McNulty joined forces to offer their paper on the *Prediction and Control from High Energy Noise Impact in Gyms*. The IOA Working Group looking at Gym design was borne out of this meeting.

In October, Phil Tidridge, Environmental Practitioner from Winchester City Council and Peter Rogers, Southern Branch Committee Member presented the Acoustic Report Framework - a local IOA/CIEH initiative to improve the standard and consistency of planning reports.

The working group, made up of environmental health officers and consultants in the Southern Branch area, had together devised the format which we hope will be of mutual benefit to practitioners whether they are preparing the assessment or providing consultation responses. This is available in the Southern Branch Members Page on the IOA website.

Solent were again our host in December for wine & mince pies and a showing of *Sonic Sea* in Dolby Atmos with Alex Brooker of Clarke Saunders offering an introduction to the film and its underwater acoustic themes. As ever, this was a great way to finish off a busy year.

We have strived to move meetings around the region, and feel confident that we have provided members interesting, varied and high quality offerings.

The Branch has a programme of events for 2019 being developed by Committee which already includes *Auditorium Design and High Speed Trains in China*.

### **Welsh Branch**

In January the inaugural AGM re-activating the Welsh Branch of the IOA elected the board, and was followed by presentations on *BS4142 2014; The EHO's view* by Gwyn Mapp (Neighbourhood Services Officer – Shared Regulatory Services Cardiff/Bridgend/Vale of Glamorgan). *The Consultant's view* by David Hunter, Hunter Acoustics. We took the opportunity to invite local EHO's to this joint meeting, which generated lively and useful debate.

*Acoustics 2018* the annual IOA conference was held in Cardiff, giving an opportunity for members young and not so young from across the Country to visit Wales.

May saw a Branch Meeting with Presentation and site tour, held at Rockwool's Bridgend Factory. The level of sound absorption across the factory floor was noticeable to all members – but perhaps that is not surprising. Rockwool have been a cornerstone of the acoustic hardware industry, and this visit gave members the opportunity to see how the products are made, with an informative presentation from Rowan Green and Luke Morgan about Rockwool's various acoustic products. We also took the opportunity to discuss the latest draft planning guidance PPW10 with Martin McVay (Welsh Government).

We are looking forward to another joint meeting with Welsh EHO's in January 2019 to discuss BS4142 2014 reference methods for assessing tonality and impulsivity.

### **Yorkshire and North East Branch**

The Branch was busy during 2018 with six meetings throughout the year.

Our first meeting was in January with Dr Amy Beeston presenting *Affordances, Constraints and Conventions in Developing Technologies to Assist Human Listening* at the University of Sheffield.

In April, Jack Harvie-Clark of Apex Acoustics presented the *ANC Guide To Acoustics, Ventilation, Overheating* at Arup Leeds. The discussion was followed by IOA President Jo Webb presenting the *Services to the Institute Award* to Dr Tim South FIOA, a former Yorkshire & NE Branch chairman. This was in recognition of Tim's life time contribution to acoustics including management and teaching of the IOA Diploma in Acoustics and Noise Control at Leeds Beckett University since 1995.

In July a joint meeting of the IOA Musical Acoustics Group and Yorkshire & North East Branch was arranged to visit Yorkshire Pianos where Adam Cox of Cavendish Pianos gave a presentation on piano craftsmanship and the elements which influence their sound, including a workshop visit.

In September, Matt Torjussen of noise.co.uk presented a study of the reference method for evaluating tone audibility in BS4142:2014 at the University of Sheffield.

In October the Branch joined forces with the AES UK and IOA Speech and Hearing Group for a screening of the film *In Pursuit of Silence* at the University of York.

In November, Charles Edgington of Acoustic Comfort presented *Practical Considerations and Experiences with Sound Masking's Latest Technology* at the University of Sheffield which also included a demonstration of a sound masking system.

We are thankful to all who have participated in our meetings this year, including our meeting organisers, attendees, and presenters. The branch covers a large geographical area and we aim to spread meetings as wide as possible, although arranging speakers and venues remains challenging. We thank the University of Sheffield and Arup Leeds for their continued support in providing excellent venue facilities as well as AES UK, IOA Musical Acoustics Group and IOA Speech and hearing Group for their valued assistance in organising the joint meetings. We have an enthusiastic Committee and look forward to continuing the progress of our branch this year.

## **Statistic and Information Tables**

**TABLE 1: Membership**

<b>Grade</b>	<b>2018</b>	<b>2017</b>
Hon Fellow	34	35
Fellow	1760	165
Member	1852	1846
Associate Member	813	785
Affiliate	69	61
Technician Member	135	138
Student	420	467
Totals	3483	3497
Founding Key Sponsor	2	2
Key Sponsor	1	1
Sponsor	48	48

**TABLE 2: Group membership**

<b>Group</b>	<b>2018</b>	<b>2017</b>
Building Acoustics	1699	1646
Electroacoustics	521	497
Environmental Noise	1960	1907
Measurement & Instrumentation	868	807
Musical Acoustics	572	502
Noise and Vibration Engineering	1375	1323

Physical Acoustics	401	339
Senior Members	126	128
Speech & Hearing	368	310
Underwater Acoustics	319	291
Young Members	355	396



**TABLE 3: Branch membership**

<b>Branch</b>	<b>2018</b>	<b>2017</b>
Central	279	260
Eastern	291	295
Irish	144	142
London	990	960
Midlands	486	466
North West	492	459
Overseas	311	323
Scottish	208	205
South West	335	333
Southern	580	556
Welsh	85	89
Yorks and North East	274	266

**TABLE 4 Details of employment (interests)**

<b>Employment Category</b>	<b>2018</b>	<b>2017</b>
Architectural Practice	448	406
Consultancy	2163	2071
Education	517	683
Industry/Commerce	706	683
Public Authority	422	425

Research & Development	783	727
Retired	104	112
Other	225	210

<b>TABLE 5: EVENTS AND ATTENDANCE IN 2017</b>	
<b><i>Topics, Date &amp; Venue</i></b>	<b>Attendance</b>
The Art of Being a Consultant 22 February London	50
Sound Transport Modelling 14 March Manchester	70
Aviation Noise - Key Developments 11 May, London	50
ProPG: Planning and Noise: New Residential Development Launch Event 22 June Birmingham	226
ICSV 2017, London 24– 7 July London	1,050
Dry Wall Construction Workshop for Acousticians 27 September Watford	33
Noise Management & Assessment of Crossrail 8 November London	97
21 <sup>st</sup> century Musical Sound Production, Presentation and Reproduction 21 November Nottingham	22
Reproduced Sound 2017: Sound Quality by Design 21-23 November, Nottingham	94
UK Acoustics Network 27 November London	150

