

47th 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, Government Policy 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.

Whilst 2020 was dominated by the Covid-19 restrictions with few face-to-face meetings and staff working mostly from home, progress was made against the Council's aims. To achieve these aims Council agreed the following objectives against which progress in 2020 is listed.

Objective	Progress in 2020
<p>To advise policy makers on acoustics</p>	<p>In February the then President-Elect, Stephen Turner, Dr Fenech and Prof Barlow presented to the Parliamentary and Scientific Committee on the value of acoustics to the economy, policy matters related to acoustics, noise and health and acoustics education. The session was introduced by a short video to outline the nature, breadth and importance of acoustics to society. The session was very successful and key links were forged with some policy influencers.</p> <p>Members of the Institute also continued to liaise with the All-Party Parliamentary Group on Healthy Homes and Buildings having previously given evidence to them. Acoustics also became entangled in the scramble to legislate to address the Covid-19 pandemic. The Institute successfully liaised with Government regarding the proposed relaxation of rules regarding construction noise management, securing key changes to the proposed guidance. It also made representations to Government regarding limits on music levels in entertainment venues pointing out that the legislation enacted was unenforceable. The relevant clauses were repealed shortly afterwards. The IOA also liaised closely with the Scottish Government on how to re-open entertainment venues safely.</p> <p>Also in connection with the pandemic, the IOA liaised with the Association of Noise Consultants (ANC) to produce a series of guidance entitled “Practicality and Reliability of Baseline Sound Level Surveying and the Provision of Sound & Noise Impact Assessments”. This guidance reflected the effect of Lockdown on external sound levels and also the restrictions on making site visits. In total, 5 versions of this guidance were published in 2020, reflecting the changes that occurred in Government guidance.</p> <p>Members of the Institute also established The Quiet Project. This study aimed to quantify just how the external sound environment changed as a result of Lockdown.</p> <p>As a result of the EU exit now having occurred, the Institute remains in contact with European Commission officials through the President’s</p>

Objective	Progress in 2020
	<p>membership of the EC Noise Expert Group. Consequently, the IOA can monitor emerging issues and opportunities where acoustics can play a role in the future of the UK.</p>
<p>Increase public awareness of good acoustic design</p>	<p>The Institute agreed to continue its sponsorship of the John Connell Innovation Award however, due to Covid-19 this was cancelled in 2020. Members of the Institute continued to promote the Professional Practice Guidance on Planning and Noise for new residential development, published jointly by the IOA, ANC and the Chartered Institute of Environmental Health (CIEH) in 2017, especially as members of the Institute helped to secure this document's inclusion in revised Government planning and noise guidance in 2019.</p> <p>The IOA also jointly published with the ANC, the Acoustics, Ventilation and Overheating Guide in January 2020.</p>
<p>Create opportunities for other professionals to gain a better understanding of acoustics and its interaction with their specialist field</p>	<p>The Institute continues to liaise with the other professional Institutions, including the ANC, CIEH, the Royal Environmental Health Institute of Scotland (REHIS), the Institute of Licensing, the Royal Academy of Engineering and the British Standards Institute</p>
<p>To support school children's understanding of acoustics</p>	<p>The Institute has continued to fund the Edinburgh Science Festival's outreach programme to schools using acoustics based science workshops. Much of this work had to go online in 2020. A project to trial an expansion of the programme to Sheffield had to be postponed due to Covid-19. The IOA's own STEM work continued including the successful participation in virtual careers fairs including the Crawley STEMfest.</p>
<p>To improve the operational efficiency of the Institute</p>	<p>The Diploma GPA teaching videos were introduced and well received. Work on the other modules has slowed due to Covid-19 restrictions, but they are planned to go live in 2021 in time for the current course.</p>
<p>To develop mechanisms for supporting members'</p>	<p>An International Under Water Acoustics conference, Acoustics 2020 and Reproduced Sound 2020 were</p>

Objective	Progress in 2020
professional development	all held successfully online. In addition, numerous Branch meetings were held online and generated a greater attendance than face-to-face meetings. As a result of the pandemic, the Institute established both Refresher CPD and Members' Forum meetings to assist members who had been furloughed and risked feeling isolated. These proved to be very with attendance at each meeting ranging from 40 - 250. The 10% check of member's CPD was completed during the year.

Standing Committees

Education Committee

The IOA Diploma and Certificate courses continue to provide education and training for both members and non-members and thereby support recruitment of new corporate members.

The Diploma in Acoustics and Noise Control is now in its twelfth year since its revision in 2008. As a result of grades obtained in 2019/20, the Diploma was awarded to 110 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).

Rob Jinks [Derby] won the prize for best overall performance on the Diploma and the award for the best performance by an Irish student was gained by John Cullen (TCD).

Videos for the IOA Diploma produced through the blended learning project are being used by the current Diploma cohort. The AV tutorial facilities at Milton Keynes are being used regularly with overseas and other tutored DL candidates participating online.

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

The Dubai Acoustic Research Laboratory has delivered the Diploma Laboratory Module again to 6 candidates in 2020, and 11 candidates in 2021. The continuing pandemic restrictions have resulted in online and 'at home' experiments for the current Diploma cohort and 'at home' i.e. effectively open book but time-limited examinations last year and this year.

In 2020, the numbers taking and passing the Certificate Courses were as follows: Hand-Arm Vibration, 9 students, 6 passes; Environmental Noise, 37 students, 37 passes; Building Acoustics Measurement, 18 students, 16 passes (including alternate delivery for SITMA but a lack of candidates continues to preclude presentations in Ireland), Workplace Noise Risk Assessment; 21 students, 12 passes. The Certificate of Proficiency in Anti-Social Behaviour (Noise) was not offered in 2020. Currently led by John Grant, a WG is developing an advanced certificate in environmental noise impact and report assessment. Covid safety measures were introduced at accredited Centres to allow the presentation of these short courses in 2020. In 2021 the responsibility for these measures will remain with the Centre and not the IOA. The IOA will continue to seek assurances from Centres that the quality of the provision will not be adversely affected and that the Course delivery will provide a valuable learning experience.

Since 2011, IOA members, Diploma candidates and holders have been able, for CPD or other reasons, to register for additional specialist modules. Disappointingly, no candidates have taken advantage of this opportunity in 2019-20. In particular, the potential professional updating of members through registration for the Regulation and Assessment of Noise Module has not been taken up.

The Education and Learning Working Group created by Council in 2019 has proposed a strategy involving both informal and formal assessments. Proposals for formally assessed courses, to be investigated through a new membership survey, include revisions and additions to the current certificates portfolio to provide 1-, 3- and 5-day alternatives, higher level certificated CPD and end point assessment of level 4 and 6 Technicians. The Committee is keen to support “formal” CPD, where there is a defined syllabus and assessment of learning outcomes. Topics for consideration include “soundscapes”, “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 Professor Keith Attenborough, supported by recently appointed Education Officer, Helen Davies, Education Assistant, Caitlin Jesney and other members of office staff.

Engineering Committee

The Committee met three times during 2020 and held 12 Professional Review Interview (PRI) assessments. This resulting in the Committee hitting double figures for new Engineering Council registrants in 2020.

The number of assessors actively taking part in PRIs has grown and now the Committee has a wider pool of volunteers with various areas of expertise.

The majority of PRI assessments held in 2020 were conducted using Zoom, following on from the Committee’s plan from 2019, multiple candidates have now been interviewed concurrently, enabling the Committee to deal with the increasing number of candidates looking to obtain registration with the Engineering Council.

Blane Judd, IOA Engineering Manager has been leading an effort to obtain a license to allow the IOA to award EngTech registration to candidates, in addition to IEng and CEng. A small group has been trialling the proposed process and new forms and procedures have been put in place. The IOA is targeting having this in place for 2023.

The Engineering Council has released Version 4 of the UK Spec at the end of 2020 for which registrants are assessed against. The Committee is currently reviewing the requirements with a view to implementing Version 4 for new candidates from the end of 2021.

Finally, as part of the license audit review with the Engineering Council which took place at the end of 2019. The Committee is working with the Membership committee on our CPD sampling of registrants. Currently the IOA conduct a CPD sample of 10% of members annually. Processes are being put in place to remove members who do not engage with CPD from the register, in line with new Engineering Council requirements.

Medals and Awards Committee

The 2020 awards were made at various online meetings during the year due to Covid restrictions.

The Raleigh Medal was awarded to Robin Langley at Acoustics 2020.

The A B Wood Medal 2019 was awarded to Louise Roberts, it is hoped to present her the medal at UAC Greece 2021.

The Engineering Medal was awarded to Peter Mapp.

The Sustainability Award was presented to National Grid.

At Reproduced Sound 2020 the Peter Barnett Award was presented to Wolfgang Klipple.

The Best Diploma and Irish Student was awarded to Robert Jinks (Derby University)

Meetings Committee

The Meetings Committee of the Institute of Acoustics met four times during the year. The membership of the Committee has remained constant throughout and consists of Mr C W Turner (Chair), Mr K Jackson (Secretary), Dr M Lester, Mr P Rogers, Mr C Skinner and Mr R Woodward (Early Careers Group Representative). The report from the Committee is split between the period prior to the national lockdown of 23 March 2020 and the period between 23 March 2020 to the 31 December 2020.

Pre-Covid (Period 01 January 2020 to 22 March 2020)

The meetings programme of the Institute ran as per any typical year prior to the national lockdown. Two one-day meetings were held including the annual rendition of the Art of Being a Consultant which was held at a new venue (The Little Ship Club, London). The feedback from these events was good. On 11 March 2020, the first hybrid event took place in Milton Keynes as a result of corporate travel restrictions introduced at the start of the Covid-19 pandemic. Some delegates attended in person and some delegates attended via Zoom.

During this period seven regional branch meetings were held across the country.

During Pandemic (Period 23 March 2020 to 31 December 2020)

Following the Prime Minister's announcement of Monday 23 March 2020, the remit of the Meetings Committee changed drastically into supporting the regional branches in organising virtual meetings. Lots of work had previously been carried out by Mr R Woodward (virtual meeting hubs) and Mr C Skinner (branch meeting topics). By working with the Executive Committee and Council the information collated by Meetings Committee were made available to all branches and support provided to branches not familiar with the technology by members of the Committee.

One of the major casualties of the pandemic and the restrictions was the annual conference (Acoustics 2020) which was scheduled to be held in Chester in May. Initially, the Committee

took the decision to postpone and a date was provisionally booked for October 2020. By the summer it was clear that we would not be able to physically meet and a virtual conference was organised.

This organisation was spearheaded by Dr M Lester who coordinated with the office and a successful virtual conference was held over four afternoons in October 2020. To maintain an openness the Committee agreed that the keynote Rayleigh Medal lecture would be available free-of-charge to all members - an offer which was taken up by many.

Due to the expertise inherent within the specialist group and organizing committee, Reproduced Sound was held in November again as a virtual conference with the exception that this was run by members of the group instead of a professional provider. Feedback for both events was encouraging and will be used when organizing similar events in the future.

The Committee would not function as well as it does without the hard work of Mr K Jackson who has stepped up to the role of Secretary to the Committee nor without the wise counsel of Mr P Rogers who has agreed to join the Committee as a full member.

Forward to 2021

As this report was being prepared, the Committee held their first meeting of 2021 jointly with the Executive Committee to look at the meeting strategy for the next few years and building on the Institute's five-year plan.

Membership Committee

The Committee met 4 times during 2020. The Committee had its second year without a Young Member's representative; however, this was resolved at the end of the year.

The CPD Sub-committee continued its work through the year meeting twice to assess member's CPD and to provide constructive advice where needed. The Committee is concerned at the lack of response from those selected to provide CPD evidence and seeking Council's guidance on what to do in these cases.

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. The CPD Committee has done some excellent work (largely by Rachel Canham) to update the forms and guidance. CPD presentations were given at *The Art of Being a Consultant*.

The new roles Vice Chair Code of Conduct (Paul Freeborn) and Vice Chair Continuing Professional Development (Richard Coleman) and Professional Standards Committee Vice Chair David Trew has helped to share the workload and increase the output from this Committee.

Code of Conduct (CoC) cases as follows:

–A long running investigation concerning a complaint about an environmental noise report continued through 2019 and 2020.

Two new case were received in 2020 - one of which was not progressed as it was subject of an active planning application. The other is currently being assessed. Both cases involved environmental noise reports.

We continued with conference calls with Committee members involved with the CoC cases to help 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 and when we have ongoing cases.

During the year 2019-2020 255 membership applications were assessed by the Committee; (2019 241, 2018 309, 2017 304). Of these 203 were elected to membership of various grades, representing a decrease (2019 270, 2018 277) on previous figures.

Current membership of the Institute now stands at 2988 (2019 = 3007, 2018 = just over 3,000) members.

There continues to be a number of challenges to the Committee's decisions which has taken up a considerable amount of time for IOA staff and the Membership Committee to address. This is not sustainable. To address this, we are and continue to produce guidance on process and lines to take with challenges.

The Committee would like to thank Emma Lilliman who has continued to do a great job in the running of Membership and CPD.

Focus for 2021 will be on continuing to improve consistency of application reviewing and decision making:

- improving guidance for Membership Committee and providing good feedback to unsuccessful candidates
- improving guidance for membership applicants for all grades.

We will continue to prepare for the new Acoustic Technician Apprenticeship.

The Membership (and CPD) Committee has worked well to overcome the challenges COVID has presented and have performed well during online meetings however we look forward to returning to face-to-face meetings.

Figures for last three years are included below:

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

2019	FIOA	MIOA	AMIOA	Tech	Affil	Sponsor	Total
Applicants	4	104	99	18	13	3	241
Elected	2	75	80	14	13	2	186
New Members	0	20	73	14	13	2	122
Resigned	0	3	5	2	1	0	11
Deceased	1	0	1	0	0	0	2

2020	FIOA	MIOA	AMIOA	Tech	Affil	Sponsor	Total
Applicants	5	106	116	15	9	4	255
Elected	3	78	100	10	9	3	203
New Members	2	25	101	12	9	2	151
Resigned	4	11	14	2	1	0	32
Deceased	4	2	0	0	0	0	6

Publications Committee

Warners Group Publications has been publishing the Acoustics Bulletin since the end of 2017. Overseen by the IOA Publications Committee and Alex Shaida, it continues to be edited by Nicky Rogers.

Two additional supplements have now been produced, one focusing on careers and the other on innovations in acoustics. Based on the success of these, an environmental supplement is planned for later in the year. Relevant technical articles continue to be resourced for each issue but in 2021 there is a need to expand the pool of authors and the Committee is calling for more contributors. Thanks are due to the specialist group chairs who are assisting in this.

The Committee is continuing to review and assess the balance of technical articles, membership information and current topics in the Bulletin. Articles have been published relevant to Covid-19 and the implications this has on the acoustics industry and it is planned to publish further articles and technical contributions in 2021 addressing this.

During 2020, Alex Shaida, the IOA's Head of Marketing, continued to lead the development of several videos and maintained and refined ongoing digital advertising campaigns. There remained a focus on online platforms such as Google AdWords and Facebook, as well as maintaining trade advertising and expanding some new forms of engagement communications such as Instagram along with managing two engagement-oriented Facebook groups. In 2020 a new IOA look was rolled out which helped to provide a consistent brand experience across all forms of IOA communications, overseen by an experienced creative director. Improvements continue to be made to the monthly newsletter, Bulletin, trade ads, social media activity, and other forms of communication to IOA members and beyond. A dedicated campaign was activated from March running to September across both digital and traditional media channels to help promote the IOA Diploma in the UK and internationally, which has led to a marked increase in international registered candidates for the 2020-21 cohort. More emphasis continues to be placed on metrics to measure reach and engagement, especially across digital channels, with detailed tracking data being regularly provided to Exec and Council.

Dennis Baylis continues to ensure advertising space is sold in the Acoustics Bulletin and other publications. Overall, 2020 advertising revenue was down 10% on 2019. This was partly due to the impacts of COVID-19. Most of this returned to normal levels by the end of the year. The job market has slowed down and additionally the IOA made a free of charge offer for job postings to help during the COVID crisis, which reduced revenue from job adverts. For 2021, the outlook for advertising revenue looks like there will be no growth. The bulk of regular advertisers have renewed with potentially two regulars cancelling and one potential new advertiser starting in the May/June issue. Future job advert revenue is uncertain due to the COVID-19 crisis although the job market is becoming more active.

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

During the year the Committee has been joined by Alec Korchev, Charles Greene, David Sproston and Nikhil Banda.

Thanks are due to all Committee members for volunteering their time and enthusiasm throughout the year and all those IOA members who are part of the Editorial Board for the Bulletin who review the technical contributions prior to publication.

Thanks are also due to IOA Office, Allan Chesney, Alex Shaida, Nicky Rogers 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 2020, virtual meetings of the Research Coordination Committee (RCC) were held in May and November through the Zoom App. Professor Stephen Dance is the new Chair of the Committee, Professor Kirill Horoshenkov is the outgoing Secretary. Professor Abigail Bristow was the previous Chair.

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 50+ joint meetings and workshops, mainly online to bring together industry and academia working in acoustics. Together (UKAN and RCC) completed the impact of COVID on Acoustics Consultants report (John Lincoln) involving feedback from more than 200 companies and individuals. In addition (UKAN and RCC) created the Quiet Project to monitor the effect of Lockdown on the environment (KSG Acoustics and Professor Stephen Dance).

UKAN currently has 1146 members and runs 15 Specialist Interest Groups (SIGs). The RCC committee has three ambitions: UKAN SIGs will need to be aligned with the eight IOA Groups; second; to incorporate UKAN members into the Institute to increase engagement and reach; and thirdly, to create a National Centre for the Coordination of Acoustics Research (NC CAR).

The RCC worked with UKAN to develop UKAN+ which was fully funded by EPSRC to commence in March 2021. UKAN+ has £1.4m of funding (2021-2025) with an additional £0.5m+ of pledged direct support from industry. The original UKAN project timeframe was extended from November 2020 to March 2021 to allow a seamless transient between projects. The focus of UKAN+ is on the four Grand Challenges faced by the UK and how acoustics can assist in the delivery of solutions. Input from the industrial members of the RCC was invaluable in this process with multiple letters of support supplied.

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/>.

New members of the RCC include: Dr Jordon Cheer (ISVR), Dr Jonathan Hargreaves (University of Salford), Mrs Jenifer Taylor (Amey).

Shahram Taherzadeh (Open University) has decided to stand down from the RCC. Shahram made a great contribution to the RCC (publication specifically) and will be missed. Thank you Shahram

Specialist Groups

Building Acoustics Group

What a strange year it has been with Covid-19 and Brexit - but who would have predicted that we could all remain productive without meeting each other in person. Teams, Zoom, Starleaf, Webex and other programs have allowed us to meet virtually and share screens to enable us to continue our professional lives. And we feel very fortunate for this when so many other professions have not been able to continue in the same way.

The IOA's annual conference was no different in being affected. It was initially postponed until October and then turned into a virtual conference using GloCast as the company that managed the process. Presentations were pre-recorded and I think that helped with the content and impact of the talks. The BAG session was on Tuesday afternoon the 9th October, all of the seven presentations were well received – so a big thank you to all who contributed.

We have continued our work to advise and comment on standards and guidance documents. These include:

- Draft ISO/DIS 10848-5 Acoustics — Laboratory and field measurement of the flanking transmission for airborne, impact and building service equipment sound between adjoining rooms — Part 5: Radiation efficiencies of building elements
- ISO 717-1 and -2: 2020 Acoustics – Rating of sound insulation in buildings and of building elements – Part 1: Airborne sound insulation and Part 2: Impact sound insulation
- The Future Buildings Standard is currently out for consultation and it includes amendments to:
 - Approved Document F (ventilation) Volume 1 (dwellings) and Volume 2 (buildings other than dwellings) – with both volumes containing a section on requirements for noise from mechanical ventilation systems;
 - Approved Document L (conservation of fuel and power) Volume 1 (dwellings)– now containing advice that a less demanding U-value is permitted where party wall sound insulation issues are important; and
 - Approved Document [X] (Overheating) – this is a new document containing requirements on the control of overheating for residential buildings and contains clauses for acoustic provision.
- The ANC Acoustics, Ventilation and Overheating Guide – with its launch in January 2020 it has been a driving force to get to the new proposed Approved Document of the Building Regulations (referred to above)
- Draft Good Practice Guide – Control of Noise in Places of Entertainment
- Low Frequency Group – members of BAG are part of this group which intends to develop guidance on low frequency noise down to 20Hz – especially for lightweight structures.

We all hope that we can meet again in person at some point soon, hopefully in 2021.

Electro Acoustics Group

Once again, the main activity of the Electroacoustics Group during 2020 was the organisation of the 36th annual Reproduced Sound Conference. As with most similar activities, the conference was affected by the global pandemic and was run, for the first time, as a virtual, online conference. Two of the Electroacoustics Group committee members, John Taylor and Ludo Ausiello, volunteered to take on the responsibility for the technical running of the conference, rather than the expense to the Institute of employing an external contractor for this. Judging by the feedback received from the delegates, John and Ludo did a fantastic job and the whole conference ran smoothly and efficiently from beginning to end. RS2020 took place over three afternoons from 17th to 19th November, with pre-recorded video presentations and live Q&A. This format seemed to be very successful and most agreed that the real-time, live Q&A gave the conference a sense of presence, without the risks associated with real-time online presentations. A total of 88 delegates were recorded, which is lower than is usual for our in-person conferences. As in past years, each member of the EAG committee has a defined role in the organisation of the conference and the fact that this is a real team effort is acknowledged here. As well as John and Ludo, the Committee would also like to acknowledge the considerable help with the running of the conference afforded by Seb Duran and Panis Tsagkarakis of Solent University.

Apart from an in-person meeting at IOA HQ in January, all the other meetings of the Committee in 2020 were carried out online. The Committee met more regularly this year than normal due to the complexities of organising the online conference. Meetings were held once a month from May to September. After a few years' absence, Nick Screen has re-joined the Committee in 2020 – welcome back Nick – and we bid farewell to Emma Bigg who has been a member of the Committee for many years with responsibility for the conference exhibition and sponsorship – thanks Emma.

Early Careers Group

The Group Committee meets quarterly with three meetings by telecom and one meeting in person. In 2020, however, the face-to-face meeting was replaced by another remote meeting due to lockdown rules.

To promote the benefits of IOA membership to students a comprehensive presentation on the range of careers in acoustics was given to students at an acoustics careers fair at the University of Southampton. We are reaching out to other Universities to arrange further talks.

ECG elected a new chair (Tomasz Galikowski – June 2020) and a new secretary (Adam Woolley – December 2020) who will serve 2 year terms each.

The ECG has been pro-active in responding to Covid-19 impact by engaging with the IOA and its members. In September, we have also attended a productive meeting with the IOA Executive Committee and were encouraged to see that the Committee shares our concerns on impact on Early Careers Professionals in areas such as employment, networking or continuous development. One of the points raised has already been actioned by the IOA which we believe will help in addressing some of these issues.

We have also designed and carried out a survey among the members aimed at understanding the impact of the pandemic and associated lockdown on the Early Career Professionals. A survey was issued to all ECG registered members with over 100 responses so far. The results of the survey were reported at the end of November. The meeting was attended by a cross-section of the membership as well as a panel consisting of the IOA President - Stephen Turner, the IOA Chief Executive – Allan Chesney and the President-elect – Alistair Somerville.

Due to Covid-19 social-distancing restrictions it was not possible to organise any in-person events this year. Together with the UK Acoustics Network Early Careers Group, we hosted an Early Careers Session at the virtual IOA Acoustics 2020 Conference. The topic was to encourage stronger connections between practitioners (i.e. consultants, industry) and those in academia. We have also organised a virtual pub quiz.

Following the change of name to the IOA Early Careers Group, we continued to promote the new name on social media and during events.

We have premiered a new section in the Acoustic Bulletin dedicated to Early Careers members. This allowed us to publish relevant content including updates on our activities, results of the Covid-19 survey or profiles of some of our members.

In 2021 we will continue engaging with UKAN+ and have already begun outreach with other organisations to exchange experience and ideas. We will be focusing on our ECG webinar series and Acoustics 2021

We will also continue monitoring the impact of Covid-19 on our members.

We have also started engaging with organisers of Internoise 2022 in Glasgow and this work will continue throughout 2021.

The ECG will be hosting the Art of Being a Consultant in Autumn 2021 as well as a series of panel talks in the Spring aimed at building on the themes usually discussed during the conference.

We will be stepping up our marketing activity by engaging with the IOA Marketing team in creating content for members and general public. This may require co-opting a dedicated person from the ECG membership who would coordinate this work.

In 2021, we would like to support IOA activities associated with the postponed International Year of Sound 2020 and are also hoping to hold in-person social events later in the year (regulations permitting), details of which will be provided on the events page of the IOA website.

Environmental Acoustics Group

2020 was a quiet year for meetings and consultations. In August 2020 the government published a consultation on The Future of Planning and the ENG committee prepared a response in October. In October the Independent Commission on Civil Aviation Noise (ICCAN) consulted on The Future of Aviation Noise Management, and the ENG committee provided a response.

During 2020 the IOA Refresher Training featured a number of environmental noise training sessions by ENG members who we would like to thank for their contributions.

In October the IOA Annual conference included a lively session of 6 papers on a wide range of environmental noise topics from planning law to psychoacoustics. The ENG committee met and elected two new members to support its activities: Gianluca Memoli from Sussex University and Jason Evans from AECOM.

Measurement and Instrumentation Group

As with many of the specialist groups, the activities of the M&I Group were significantly curtailed during 2020.

A one-day meeting was planned for the autumn covering 'Acoustic Imaging', but the pandemic has made that impossible, and we are investigating the possibility of incorporating the event into the Annual Conference this coming autumn..

Over the past year, the Group's Committee members have continued to contribute to Instrumentation Corner in the Bulletin, the latest being No 69 in the January/February 2021 issue, covering noise measurement and levels during lockdown, as well as previous articles on sound sensing in smart cities, new technologies in acoustic and noise measurement, and calibrating instrumentation, which have 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.

The Committee is continuing to work on the project which will entail laboratory testing selected low-cost sound level meters to the IEC61672-3:2013 standard, for report in a future Bulletin. Again, the pandemic has made it difficult to programme the necessary measurements, but the results should be available shortly.

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 been heavily affected by COVID over 2020, however meetings have been held virtually and the eighth consecutive Annual General Meeting held during the IOA Virtual Conference in October 2020. Each of the planned physical events was delayed by one year to allow the pandemic to clear. The first event was to be held at the Royal Academy of Engineering during early April 2020 and was to joint event with the newly formed Hearing Conservation Association with the focus on music and the sound of performance. This was supported by UK Acoustics Network through two special interest groups: Room Acoustics and Communication and the Biomedical SIG. The second meeting was due to be held at Birmingham City University in mid-October 2020 and covered all areas of music and acoustics. At the Virtual Annual Acoustics conference, a special session was successfully held jointly with Musical Acoustics, Speech and Hearing, and Biomedical Acoustics. Earlier in the

year the first Virtual Inaugural Lecturer was presented, by Professor Stephen Dance on the subject, 'Facing the Music- Music and Sound Exposure'. This was held over Zoom and had 77 participants. The management committee of the Group has been active with six regular virtual meetings using internet conferencing facilities (phone, smartphone, tablet, and computer), thereby avoiding any unnecessary travelling and, more importantly, being safe in these concerning times. We expanded our ranks with a new Early Career Representative Celia Diaz Brito joining the committee. Our thanks go, as ever, to all members of the Committee for the active roles they take in all aspects of the Group's activities. We hope that 2021 brings Musical Acoustics back to the fore with the support of the new UKAN+ EPSRC grant.

Noise and Vibration Engineering Group

The year started well, with a full session for the planned Acoustics 2020 conference organised by February. Plans were soon overtaken by the Covid crisis however, and very little happened in the Committee until summer when discussion of arrangements for the deferred conference started.

The NVEG session for the online conference that eventually took place in early October was a great success. There were seven high quality presentations on a wide variety of topics, with a good level of attendance and lively discussion following each talk.

The Committee had in recent years lost a few members through retirement, so a call for new blood was sent out in time for the AGM that was held in late October. There was a good response, with five new members joining. The Committee is now up to full strength and has been significantly rejuvenated.

Following the success of the online conference, the first full meeting of the enlarged Committee in November decided that the Zoom meeting format had considerable advantages over traditional one-day events. As a result, a programme of talks throughout 2021 and into 2022 has been planned. This will hopefully enable us to significantly raise the profile of the group, both within the IOA and externally.

Physical Acoustics Group

Following the revival of the PAG back in 2014, and activities now being driven by the Chairman Dr Daniel Elford, the now better established group, has contributed to the Institute's programme of events in 2020 by holding another well-received dedicated Physical Acoustics session at the IOA's online conference Acoustics 2020.

Topics ranged from the damaging effects of acoustic shock waves during demolition to the increasing applications of acoustic metamaterials for the use of noise control. We shall continue our endeavour to represent the PAG at Acoustics 2021 with a similar, well-represented Physical Acoustics Session at the IOA's flagship conference and hopefully look forward to meeting face-to-face in 2021.

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. We remain in communication with our sister Physical Acoustics Group within the Institute of Physics to avoid duplication of effort, and are looking to develop this relationship further and co-organise more events in the future. Our activities will also align with the objectives of the UK Acoustics Network and wider acoustics community.

In addition to the above, we are continuing to look for new members to the Committee to help shape and deliver activities ongoing.

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

In spite of these challenging times the Senior Members' Group held a number of virtual meetings including its AGM in May 2020. There are 116 Senior Members and 735 members of the IOA eligible to join including overseas members.

There was agreement to focus on identifying speakers and venues for future meetings in 2020/21 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.

The AGM was followed by a presentation by Stephen Turner, IOA President "Institute of Acoustics – Current Challenges and Opportunities. The excellent presentation covered many aspects of the Institute's activities and also included some clips from recent videos. SMG (Chair) confirmed the Group's willingness to participate in Institute activities, including the IOA CPD programme.

Two virtual meetings were both very successful. Carlos Abrahams gave an interesting presentation in July 2020 which covered many aspects of using bioacoustics, the study of animal ecology and behaviour through the use of sound for field surveys. A blog on Carlos Abraham's presentation was posted on the IOA website. The second meeting in November 2020 which set an all-time-record attendance for an SMG meeting of over one hundred persons, including a number of overseas attendees. The speaker for this meeting was Raf Orłowski who highlighted the key parts of a book for which he is author of, entitled 'Acoustics in Architectural Design'. The book traces the influence of the theatres of Classical Greece on subsequent designs. He also discussed the research of Sabine and his successors and their contribution to the design of concert halls of the 20th and 21st centuries. Raf's talk also gave an overview of the development of architectural acoustics – where it has failed and where it has succeeded.

Speech and Hearing Group

The Speech & Hearing Group hosted two events in 2020. The first was an online talk in June 2020 entitled “The Social Life of Voices: Studying the perception and production of vocal identity and traits” was given immediately after the Group’s online AGM by Professor Carolyn McGettigan of UCL. The second event was a session on “Speech, Hearing and Bio-Acoustics” at the Institute’s “Acoustics 2020” online Autumn Conference.

At the group’s AGM, all committee members who were due for re-election and wished to stand again were duly reappointed nem con. During 2020, Graham Frost chose to stand down from the Committee after many years of service, including several as Group Secretary. Dan Doherty took over as Group Secretary, whilst Christian Sumner (Nottingham Trent University) and Zachary Simcox (Azymuth Acoustics) became co-opted members of the Committee. There are vacancies for 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 “Acoustics 2021” Conference in October 2021, assisted in the planning of the UK Acoustics Network’s “Hear for Tomorrow” event to be held in early Autumn 2021, and hope to have a guest speaker (to be confirmed) to give a talk on the evening of the group’s AGM in May or June 2021. Further events are being planned for the latter part of 2021.

The Group committee met two times (in January face-to-face, and in June online) during 2020. The Group continues to liaise with other professional bodies (such as the British Standards Institute, the UK Acoustics Network, 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 now has a questionnaire ready to circulate to members during 2020 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 main event for the Underwater Acoustics Group was the International Conference on Underwater Acoustics 2020 (ICUA2020). This was originally intended as a physical conference at the University of Southampton but, because of Covid 19 restrictions, was held as a virtual one day conference with 46 presentations held in two parallel sessions. There were 280 registered delegates. A special AB Wood Medal video was produced to celebrate the 50th anniversary of the medal (now on YouTube). We are now embarking on planning ICUA2022.

We were also involved with organizing the UK Acoustics Network (UKAN) Underwater Acoustics PhD Symposium at Bath University in December. The event was a great success and well attended. Planning is underway for the next occasion in December 2021.

It has not been possible to present the 2020 AB Wood Medal this year and the recipient, Louise Roberts has said she would like the presentation at the Underwater Acoustics Conference & Exhibition (UACE2021) in June 2021. We are still trying to increase the interest in the AB Wood Medal amongst European candidates.

Members of the Underwater Acoustics Group Committee are involved in various Standards committees and were influential in the publication of ISO TC43 standard for ship noise in shallow water as well as IECT2087 standards on calibration. A member of the UAG Committee has been approved as chair of the ISO TC43/SC3 committee.

Finally, following the success of the ICUA2020 virtual conference, we are considering organising a virtual workshop on radiated noise.

Branch Reports

Central Branch

The following meetings were held in 2020:

1. Low-vibration design and performance validation of high-end buildings: expectations and realities, Dr Christos Karatsovis, ISVR Consulting Booked in for 31.03.20 but cancelled due to lockdown. To be rearranged when live meetings happen again.
2. *Open plan offices: advances in acoustic design*, Jack Harvie-Clark - Apex Acoustics combined Eastern and Central online meeting 08.07.20 15:00. Attendance 123
3. *ANC 2020 Technical Note on BS 4142:2014* – Members of the ANC working group combined Central and Eastern online meeting 29.09.2020 15:00. Attendance 118

An interesting year for the central branch. The number and variety of events was poor at only 2 events. Although interesting to compare the method of delivery, i.e., online compared to live meetings. In 2019 we had 7 live meetings in Milton Keynes and Watford with a total number of attendees of 127 across the 7 talks. In 2020 in our first single virtual meeting arranged with Eastern branch we almost matched this at 123. For a year of online meetings, the concept of a “local” branch is a challenging and maybe unnecessary one. We look forward to getting back to meeting in person again.

The use of the Eventbrite platform allowed more analysis of members who attended central branch meetings. In addition to the peaks in event registration triggered by the IOA e-mails sent twice from head office there were further peaks triggered by adverts on social media, primarily LinkedIn and Twitter. The reminders on the week of the event resulted in a surprisingly high second wave of registrants.

Thanks to all involved. Expenses for 2020 events was £0.

Plans for next year are to arrange and host considerably more events and to co-operate more with other local professional institutions and organizations.

Eastern Branch

This is a review of the branch activity over the past year. We had to curtail face to face meetings and during periods of lockdown activity has been limited.

Meetings have been via zoom and organised well with the help of the IOA as licence holders.

Meetings 2020

Title	Speaker/Topic	Date Held
Joint Meeting Southern and Eastern Branch	AVO Residential Design Guide	7/05/2020
Eastern Branch	John Pritchard Dog Kennel noise	27/05/2020
Joint Meeting Central and Eastern Branch	Jack Harvie-clark open plan offices	8/7//2020
Joint Meeting Central and Eastern Branch	ANC Good Practice Technical Note on BS4142	29/9/2020

We greatly look forward to a time when we can hold face-to-face meetings, it's not just about the topic being discussed, it's a great forum for socialising and sharing knowledge.

My thanks to all of our attendees over 2020 and I look forward to seeing you again in person in 2021 for the first meeting and AGM.

Irish Branch

The Irish Branch held three events during the year, all online. The first was held June 24th 2020, when Paul McCullough, Environmental Health Manager (Environmental Protection) with Armagh City, Banbridge and Craigavon Borough Council gave a lunchtime presentation on the draft kennel and dog-daycare noise guidance document prepared by Northern Ireland Environmental Health Officers. The document aims to ensure that the noise impact of new kennel developments is controlled and nuisances prevented from occurring, and includes a draft assessment procedure. Given the absence of any other kennel guidance document, there has been much interest in the NI document, as evidenced by the lively question and answer session afterwards. Many thanks to Paul for giving his time and circulating the draft.

On 22nd July 2020, James Mackay, Director with TNEI, presented an overview of the December 2019 draft update to the Irish Wind Energy Development Guidelines. Originally issued in 2006, the guidelines have been undergoing a protracted revision process for several years by the Department of Housing, Planning and Local Government and the Department

for Communications, Climate Action and the Environment. The 2019 draft has proved somewhat controversial, with several deviations from conventional guidance, one of which is an attempt to reconcile the guidelines with WHO L_{den} criteria. Following release of the draft for consultation, a group of acousticians who act for a range of stakeholders (including Developers, Councils and resident groups) prepared a joint response setting out a number of technical concerns with the guidelines which was submitted to DHPLG and DCCEA in January 2020. James kindly presented a brief overview of the draft, set out some of the key issues raised by the group, and answered attendee's questions afterwards. The review process is still underway.

Jack Harvie-Clark of Apex Acoustics is one the main authors of the long-awaited Acoustics Ventilation and Overheating: Residential Design Guide which was launched January 2020 by the IOA and ANC. On 21st October 2020, Jack gave a presentation to the Branch on the guide, touching on issues including façade sound insulation and ventilation strategy, mechanical services noise, and that old chestnut – opening windows to assist cooling. The guide provides a resource for practitioners and designers to balance the interdependence of noise, ventilation, and overheating in the acoustic assessment of new residential developments, and the branch is grateful for Jack's time in providing his insight and answering questions.

On October 12th 2020, Irish Branch members were treated to a webinar by Dr. Simon Jennings of Limerick City and County Council, and Dr. Antonella Radicchi of the Technical University of Berlin. The Hush City project seeks to identify, assess and then protect quiet areas through an innovative mobile phone app.

The 2019 Irish Branch AGM was postponed to 2020 to allow certain election matters to be resolved, chiefly in relation to the introduction of electronic voting for members. The AGM was eventually held online on 22nd April 2020. Outgoing Chair of the Irish Branch (Martin Lester) was at the end of a three year term and chose to not stand again. Two Branch Members were proposed for the role of Chair: Diarmuid Keaney and James Mangan. Following an electronic voting window in March, the latter was duly elected to the post of Branch Chair. Outgoing Chair Martin was subsequently co-opted to the Committee. The Branch is grateful for Martin's time as Chair and is delighted that he has kindly given more of his time in his new role on the Committee.

Three members of the Branch Committee had reached the end of their three year terms: Heather Armstrong, Diarmuid Keaney and Sarah Middleton. Prior to the AGM, Heather Armstrong indicated that she did not wish to stand again and was subsequently replaced by new member Siobhan Maher. Prior to the AGM, Diarmuid Keaney and Sarah Middleton indicated their intention to stand for re-election and were both proposed by the current Committee.

London Branch

It's been a less active year for the branch when compared to previous years, purely due to the competing demands that COVID has placed on us.

We started the year with two face-to-face meetings then switched to virtual meetings for the remaining four. In January we had our annual London Southbank University (LSBU) student presentations which always attracts a good number and it's great to see the London Branch

membership supporting this. February resulted in a packed lecture theatre of people who turned out to hear Geoff Leventhall speak about infrasound perception.

We were provided with our venues for talks by WSP and LSBU and this support is very much appreciated. Hopefully it won't be too long until we'll be using those venues again.

In August we switched to Zoom meetings and Jake Ward from NPL presented on the Joint Monitoring Programme for Ambient Noise in the North Sea which was a fascinating talk and something a bit different to learn about. We had an interesting and nicely informal question and answer session at the end of that meeting. In September, we had the pleasure of Dr Peter Mapp presenting on Ultrasonic devices and Audibility and he also received the IOA Engineering Medal presented by Stephen Turner in recognition of his outstanding contributions in the field of engineering. In November we had another well attended talk, this time from Jack Harvie-Clarke presenting on Open Plan Offices. It was lovely to finish the year in December with our 2020 Christmas quiz, including fancy dress and virtual drinks!

A sincere thank you to all of our 2020 speakers for their informative presentations and support of the London branch.

Thanks are also extended to the London branch committee members who make their contributions in their own (or work) time, to their employers for their support and our members for their ongoing support of the London branch.

Midlands Branch

The Branch ran a total of 10 meetings covering a broad range of topics from building acoustics, hearing, environmental and other general topics as well as a couple of bespoke topics.

We kicked off with a presentation from Allan Derbyshire and Gary Swift, Zehnder Group UK Limited speaking about Ventilation & Cooling Strategies in Homes at WSP offices in Birmingham. This was followed in February by a fascinating talk by Professor Michael Akeroyd of Hearing Sciences at the University of Nottingham. He examined how we locate sounds, what happens when other sounds occur concurrently and shared his latest results for laboratory studies. Our next (and last) face-to-face meeting was an excellent talk by Rob Harris on The Developments in Auditorium Acoustic Design. This was held at Birmingham City University which is a relatively new venue for the Midlands Branch, but one where we're building good relationships and hope to hold many meetings in the future.

Lockdown at the end of March didn't stop our programme continuing. We were one of the first to use the Zoom platform allowing the wider membership to subscribe. It was pleasing to see our attendance figures increase from previous years (26), our average attendance was 44. Our meeting in May on the Use and Abuse of Sound Power Levels by Simon Scott of the Air Quality and Assessment unit of the EA attracted the highest attendance of 109 people. A new record for the branch.

The Zoom format seems to have worked well providing members more opportunity to partake. Not having to fight the Birmingham or Nottingham traffic, instead it is possible to join from work or the comfort of home. It even allowed Michel Batista of Subsonic Designs, a

former Derby Masters Student, to present from his home in South Africa speaking on the challenges facing acousticians designing the acoustic environment for open-plan offices. We recognise that the format isn't for everyone and many have missed out on securing and expanding their network. We look forward to being able to arrange face-to-face meetings, hopefully in the not-too-distant future.

Thank you to all our speakers Allan Derbyshire & Gary Swift, Zehnder Group UK Limited, Professor Michael Akeroyd, Hearing Sciences, School of Medicine, Nottingham University, Rob Harris Director of Rob Harris Design Ltd, Adam Fox Director of Mason UK Ltd, Simon Scott EA, Dr Nikhil Mistry, National Oceanography Centre, Blane Judd IOA, Daniel Hall, Technical Manager – Christie & Grey Limited, Michel Batista, Subsonic Designs and Jonny Robinson, Lead Curator, Spoken English at the British Library. Thank you to our hosts WSP, Nottingham University and Birmingham City University and to all the committee and our members.

Our AGM preceded our last zoom meeting of the year in December.

Fiona Rogerson outlined our plan for the year with the first meeting set for 20/1/2021 by Mike Breslin, Groundborne Noise and Vibration – Instrumentation and Data Processing , other suggested topics include Noise/vibration impact on ecology receptors, Sound for film & television, STI Variance - lecture theatres, A Mock planning inquiry, Bioacoustics, Road and Rail noise modelling, Vibration and Harshness measurements - AVA consulting in Stratford, Hospital Acoustics, Annual IOA diploma project talks – Derby, Signal processing / coding & automation and Planning decisions implementing agent of change.

The Committee for 2021 remains unchanged with Fiona Rogerson (Chair), Mike Swanwick, Mike Breslin and Aglaia Foteinou all re- elected for a further 3 years.

North West Branch

At the end of 2019 the North West Branch committee selected Mark Hinds as branch Chair and planned to propose this at the AGM in early 2020. Due to the pandemic, the North West Branch were unable to run any physical or online meetings this year and so the required AGM did not take place. Given the high accessibility of zoom calls now available to all members, the Committee is making plans to propose a different approach to meetings to provide a focus on in person Networking opportunities to its members in 2021 as Covid allows for the easing of restrictions. The NW branch plan to run an AGM in the coming months to reboot regional activities using the IOA Zoom account.

Scottish Branch

Although this year has been a quiet one in terms of dedicated Branch meetings, it has been a busy one in terms of availability for all Members of our Institute to attend a wide range of meetings and conferences with relative ease and at low or no cost. Certainly, there have been many occasions when Scottish Branch Members mentioned to me that they took advantage of and appreciated this. Particularly mentioned were Acoustics 2020, RS2020 and the Noise Forum meetings.

Once again our Members took part in *Careers Hive* at the National Museum of Scotland, Edinburgh. This took place on 24-29 February and gave us the opportunity to engage with thousands of secondary pupils from 11- to 14-year-olds and get across to them the wealth of opportunities available in acoustics related careers.

This has been an extremely challenging year for many of our Members in terms of both their professional and domestic lives. All are looking to a return to some semblance of normality but probably accept that, when it comes, it will be a new normality with limited expectations of returning to what things were like pre-COVID19.

Despite the difficulties that the pandemic lockdowns have created (or perhaps more correctly because of these difficulties) the Institute and its members have taken opportunities to remain engaged with each other, with other agencies and with acoustics COVID-related issues. This has helped the IOA to promote acoustics and the aims and objectives of our Institute to other professions and Government. Particular thanks are due to Lindsay McIntyre (KSG Acoustics) for co-ordinating the 'Quiet Project' and her work for the Hospitality Sector related to assessing COVID transmission risks related to background music in hospitality. The Chair of IOA Scottish Branch sat on the Scottish Government '*Background Sound Expert Advisory Group*': these meetings resulted in government guidance and an IOA briefing note being available through the Scottish Government website.

Southern Branch

Despite the challenges forced upon us by the pandemic, the Committee has had an active year with a healthy offering of entirely virtual events.

The Southern Branch started its 2020 schedule with the first regional branch to provide a virtual meeting later than normal in May. We were delighted to welcome back David Trew who was a member of the Working Group for the *ANC's Acoustics, Ventilation and Overheating Residential Design Guide*. David had previously presented to Southern Branch in April 2018 during the consultation period and provided Southern Branch members with an overview of the guidance following its publication in January 2020.

This meeting was preceded by the Southern Branch AGM where we welcomed two new committee members, Jack Richardson (Hilson Moran) and Conor Tickner (AECOM). The Committee also thanked Matthew Simpson (Subacoustech) who stepped down at this AGM following 6 years of service.

In June, Grant Waters, Co-founder and CEO of Tranquil City, explored the recent radical changes to our sound environment in his presentation '*Urban soundscapes, before, during and after COVID-19*'. This provided a useful insight into the positive and negative implications that these changes may have on the way we live and behave in cities.

Dr Peter Mapp joined us in August to share his extensive knowledge and experience in the design of '*Sound Systems in Acoustically Challenging Environments*'. Peter was able to

illustrate the techniques he has employed in the design of over 700 sound systems in a 40-year career.

The year culminated in a Southern Branch Social Christmas quiz with Prof Chris Barlow in the chair, and festive fun was had by all.

The Committee has strived to continue to provide meetings in these strange times and feel confident that we have provided members with interesting, varied and high-quality offerings.

The Committee can feel very proud of our achievements in the last year which have continued to offer access to branch meetings for all members of the IOA.

Sincere thanks are given to all the Committee members who have worked so hard this year and to all the presenters who have given up their time for the benefit of the membership.

A programme of events for 2021 is being developed which it is hoped will continue the high standard of events held in 2020.

South West Branch

South West branch spent 2020 in furlough and did not run any events or meetings. Having returned to work in the autumn we have co-opted three new committee members to jointly represent the Early Careers Group for the branch. We are now reconvened and are planning events, initially virtually, for 2021.

Welsh Branch

The activities of the Welsh Branch were understandably limited due to the Covid-19 pandemic.

May 2020: Call for evidence by Welsh Government: 'Review of Technical Advice Note 11 Noise to Incorporate Air Quality & Soundscape' – A response was issued to Martin McVay/Welsh Government May 2020 following consultation with the IOA board.

June 2020: The Branch was able to have a virtual meeting during the summer for a technical presentation on the AVO Guide and continued to have correspondence with Welsh Gov following on from 2019's discussions around the TAN11 revision and WHO Guidelines.

06 June 2020: A virtual branch meeting was held with a presentation from Jack Harvie-Clarke of Apex Acoustics. The presentation was split into two sessions; one explaining the background of the AVO guide, including gaps in current guidance and how the new guide fits into current government policies for planning; and the second on the application of the guide. The meeting was attended by both EHOs and planners, and Welsh Branch members.

A discussion followed on the implications of the guide on ventilation strategies and acoustic constraints, in particular implications for overheating and sustainability. There was general agreement for the need to include an assessment of overheating as early as possible in the design process, but often this is limited by the fact that detailed overheating assessments often come later in the design process. A close relationship between the acoustics

consultant, M&E engineers, architects and planners should be established early during feasibility studies. The attendees agreed that there was a good opportunity to incorporate the guidance into Welsh Noise Policy given the close relationship with Welsh Government.

Plans for 2021:

David Hunter has stepped down as the Chair of the Welsh Branch Committee, as of the AGM held on 11 Feb 2021. Thomas Jones of Ramboll Acoustics has taken over as Chair of the Committee, Paul MacGrath of Hunter Acoustics has joined the Committee, and Chris Duffill was elected as the Early Careers Group member (taking Thomas’ place). Paul Driscoll will remain as Secretary, and Gwyn Mapp to remain as ordinary member.

As part of the first meeting of 2021, Paul Astle, Structural Engineer from Ramboll gave a presentation on embedded energy in buildings with a particular focus on how acoustic materials can impact on CO2 equivalent emissions during their manufacture, construction and after the end of the building’s life. The presentation raised awareness of an issue which is often not considered when specifying acoustic products and which needs to be more to the fore as we move towards a net zero carbon society. Pertinent issues which were discussed included the recycled content of materials, sequestered carbon, the need to design to facilitate easy demolition/future recycling and the implications that low carbon structures can have on acoustic performance of building elements.

The Welsh Branch will continue to support Welsh Gov by responding to requests for consultation. In particular, feedback is sought on the White Paper for a Clean Air bill with respect to vehicle idling noise. This consultation will be held during the first half of 2021.

Yorkshire and North East Branch

Meetings in 2020

Date	Subject	Speaker	Attendance
13/01/2020	Open office acoustics	Jack Harvie-Clark	25
03/02/2020	Soundscape design/engineering	Jian Kang	8
09/04/2020	Overheating in homes – Ventilation & Cooling Strategies	Allan Derbyshire	42
13/04/20	Bioacoustics for field survey	Carlos Abrahams	90
28/05/2020	Acoustics and Ventilation ANC Guide	Jack Harvie-Clark	50
03/062020	Noise impact from gyms	Martin McNulty and Adam Fox	30
15/07/2020	Uses and Abuses of Sound Power Determinations in Noise Impact Assessments	Simon Scott	57
30/07/2020	“Noise control” in restaurants	Dr Evert Ph. J. de Ruiter	34

In 2020 we had eight branch meetings, two were held face-to-face (January and February) and six online (from April onwards). The attendance at the online meetings was 34 – 90 participants, which was a noticeable increase compared to an average attendance of 17 people in the previous year. The face-to-face meetings were hosted by the Aecom Newcastle office and the University of Sheffield. The Sheffield “Soundscape design” meeting and also the online talk “Bioacoustics for field survey” were both organised in collaboration with the UK Acoustics Network.

At the AGM Committee Meeting in December 2020 Julija Smyrnova and Owen Downey were re-elected as the chair and secretary of the branch, respectively. The role of Young Members’ Representative is still carried out by Nathan Green.

Our Committee members also include Donald Angir and Kirill Horoshenkov (both former branch chairs) and Charlotte Swain – a manager of the UK Acoustics Network.

This year talks covered various topics of acoustics. The first talk by Jack Harvie-Clark of Apex Acoustics was dedicated to Open Office Acoustic design – the topic is critical not only for acoustic consultants and interior designers, but also to many of those who work in open-plan offices and experience daily problems with noise brought about by this modern form of workplace.

At the second meeting, Prof Jian Kang from the University College of London presented a Soundscape Design Framework for urban open public spaces. The potentials of designing methods for the four key components, namely sounds, space, people and environment, were also explored.

The third talk was the first online meeting held by the branch. Mark Syddall and Allan Derbyshire of Zehnder Group UK Limited discussed the reasons for overheating in homes and thermal modelling examples and the benefits of using ventilation and cooling to combat overheating in homes and the acoustic implications.

The fourth talk, by Carlos Abrahams of Baker Consultants Ltd. was dedicated to the application of Bioacoustics for field survey that can be useful for tackling conservation issues, generating new data that could support the protection of rare species, and better understanding of the environment. This talk was also advertised on the International Year of Sound 2020-2021 website and was attended by participants from many countries, including USA, Brazil, Italy and others.

At the fifth presentation, Jack Harvie-Clark of Apex Acoustics introduced the long-awaited Acoustics Ventilation and Overheating: Residential Design Guide (AVO Guide) that had been officially launched at the end of January 2020. Mr. Harvie-Clark was one of the major authors and promoters of the AVO Guide.

The sixth talk, by Martin McNulty (Hoare Lea) and Adam Fox (Mason U.K.) was dedicated to predicting and controlling noise from High Energy Impact in new and existing structures. The most common sources being gymnasias free weight zones and treadmills. The presenters discussed the results of the research that had been carried out on this topic, what was learned, and how the information could be used to inform project work.

At the seventh talk, “Uses and Abuses of Sound Power Determinations in Noise Impact Assessments” Dr. Simon Scott of The Environment Agency discussed the simple equations for

point source type propagation and their conditions of validity with respect to source dimensions and distance from source. The talk considered the erroneous use of these equations in calculating sound power and sound pressure level and subsequent underestimation of noise impact, particularly with regard to assessments submitted to the EA for permitting purposes.

The last presentation of the year delivered by Dr Evert Ph. J. de Ruiter from The Netherlands was dedicated to noise control in restaurants. Dr. de Ruiter presented a feedback model to illustrate the relationship between Lombard effect, speech intelligibility, signal to noise ratio (SNR), and sound absorption with respect to acoustic design of restaurants.

This year we also published reports in the IOA Acoustic Bulletin from the first, fourth and eighth meetings delivered to the branch in 2020.

Plans for next year

2021 year is again going to be busy for the Branch. We have already held a presentation on "Acoustics of Schools for SEN" and have recently conducted an online survey of our members. The aim of the survey was to gather the branch members' opinion on what could be improved and how our members could engage better in the work of the Branch. We have received very valuable comments and suggestions from the respondents that we will try to implement where possible. The outcomes of the surveys are published in the 2021 March/April issue of the Acoustic Bulletin.

We understand that we may still have to wait until face-to-face meetings are possible and therefore will continue with the online meetings for now. When face-to-face meetings are permitted again, our primary goal is to continue our progress in holding meetings in different cities in our region - the branch covers quite a large geographical area and for some members it may take over two hours travel to attend a meeting (if happening on the other side of the area). The outcomes from the online survey also showed this was an issue raised by members. Over recent years efforts have been made to hold meetings in other places, and several meetings were organised in Leeds and Newcastle in 2019-2020. We encourage our members with access to suitable facilities for meetings in different venues to get in touch. We also consider the possibility of combined face-to-face/online meetings as this was also one of the major points picked up in the survey.

We have already agreed with one presenter to deliver the following talk this year:

- ANC Good Practice Technical Note on BS 4142 that will be led by several ANC members who have developed the guide. The meeting is planned for 9th March 2021.

We are following up on the topics proposed by the respondents of the online survey to find suitable presenters, particularly for those that gathered the highest interest in the survey. As always, we encourage anybody with suggestions for presentations, or would like to deliver a presentation, to please get in touch.

Statistic and Information Tables

TABLE 1: Membership

Grade		2020	2019
Hon Fellow		33	34
Fellow		150	156
Member		1861	1854
Associate Member		789	791
Affiliate		59	70
Technician Member		122	129
Student		320	340
Totals		3334	3374
Founding Key Sponsor		2	2
Key Sponsor		1	1
Sponsor		51	49

TABLE 2: Group membership

Group		2020	2019
Building Acoustics		1729	1276
Electroacoustics		539	525
Environmental Noise		1954	1942
Measurement &		882	866
Musical Acoustics		609	588
Noise and Vibration		1403	1367
Physical Acoustics		436	408
Senior Members		123	120
Speech & Hearing		398	384
Underwater Acoustics		336	324
Young Members		450	412

TABLE 3: Branch membership

Branch		2020	2019
Central		283	278
Eastern		292	285
Irish		142	136
London		992	990
Midlands		466	467
North West		483	481
Overseas		309	309
Scottish		204	196
South West		337	337
Southern		575	566
Welsh		93	84
Yorks and North East		272	265

TABLE 4 Details of employment (interests)

Employment Category		2020	2019
Architectural Practice		477	463
Consultancy		2127	2127
Education		528	747
Industry/Commerce		711	697
Public Authority		382	394
Research & Developmen		792	769
Retired		100	102
Other		233	224

Table 5: EVENTS AND ATTENDANCE IN 2020	
Topics, date and Venue	Attendance
The Art of Being a Consultant 12 February London	31
Noise Modelling Workshop 12 March Milton Keynes	51
ICUA 2020 9 September Virtual	228
ACOUSTICS 2020 5-9 October Virtual	151
Reproduced Sound 2020 17-19 November Virtual	90