

48th 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 2021 continued to be 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 2021 is listed.

Objective	Progress in 2021
To advise policy makers on acoustics	<p>The Institute was approached by DLUHC to draft competence frameworks for those conducting sound testing in buildings and those reading the subsequent reports. The intention is that the Institute will in time manage a database of those licenced to conduct testing. This work is ongoing.</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.</p> <p>Informal liaison also occurred with policy officials in central Government and the Institute provided responses to consultation documents.</p>
Increase public awareness of good acoustic design	<p>The Institute funded its first Secondary Schools competition which proved to be a success raising the profile of acoustics with school children and teachers. The winners of the 2021 competition were students from St Oscar Romero Catholic</p>

Objective	Progress in 2021
	<p>School, Worthing. The 3 winners, one each of their parents, teacher and headmaster all attended the John Connell Awards at the Houses of Parliament (courtesy of the Noise Abatement Society) to receive their award. The Institute also again sponsored the John Connell Innovation Award .</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. Members participated in various working groups with the ANC and CIEH addressing particular issues including noise from outdoor events and noise from gymnasia.</p>
<p>To support school children's understanding of acoustics</p>	<p>In addition to the Secondary Schools competition, 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 2021.</p> <p>The trial expansion of the programme to Sheffield was undertaken in 2021 but using online learning.</p> <p>The IOA's own STEM work continued including the successful participation in virtual careers fairs .</p>
<p>To improve the operational efficiency of the Institute</p>	<p>The Diploma Course teaching videos were available to students starting in the Autumn of 2021.</p> <p>The Office changed from Access to MS Nav as the accounting package.</p> <p>The Institute began the process to obtaining Chartered Status in 2021.</p>
<p>To develop mechanisms for supporting members' professional development</p>	<p>The Institute established an Equality, Diversity and Inclusion group in 2021. The importance of this issue to the Institute can be seen from the fact that there is now a regular report to Council on this topic.</p> <p>The Annual conference was a hybrid event. A number of hubs were established throughout the UK in compliance with the then COVID requirements.. The hubs were connected online</p>

Objective	Progress in 2021
	with presentations being given from different hubs during the conference. Members had the option of meeting physically at one of the hubs or joining online from home. The format was very successful but did require considerable volunteer support. In addition, numerous Branch meetings were held online and generated a greater attendance than face-to-face meetings. Online refresher CPD and Members' Forum meetings were held during the year. The use of online facilities meant that many members felt more in contact with the Institute than pre covid restrictions. 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 who thereby may eventually become new corporate members.

2021 was the thirteenth year since the Diploma in Acoustics and Noise Control was revised in 2008 and the second year operating during the COVID pandemic. The Diploma was awarded to 63 students from four Universities (University of Derby, Leeds Beckett University, London South Bank University and Southampton Solent University) and four distance learning (DL) centres (Bristol, Dublin, Edinburgh and Milton Keynes). Staffing problems at Leeds Beckett University prevent them from offering Diploma and certificate courses currently. Southampton Solent University ceased to offer acoustics courses including the IOA Diploma and certificates. However Positive Acoustics (now KP Acoustics Research Labs) in Southampton have been accredited and involve former Solent University tutors.

Frances Taylor [University of 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 Sean Rocks (DL Dublin).

The AV tutorial facilities at Milton Keynes are being used regularly with overseas and as a result of COVID, other tutored DL candidates participating online.

IOA Classroom (Moodle) is used by Diploma DL Candidates for shared and sharing materials. As well as past papers and assignments it offers links to supplementary resources, the blended learning videos (each of which have been used by up to 60 DL candidates) and recordings of tutorials.

The Dubai Acoustic Research Laboratory has delivered the Diploma Laboratory Module again to 11 candidates in 2021, and 9 candidates in 2022. In November 2020, January 2021 and February 2021 the Laboratory sessions at Liverpool and Dublin were replaced by 'virtual' and 'at home' experiments. While face-to-face laboratories have been possible in January 2022, a

result of the continuing pandemic restrictions means that online (virtual) and 'at home' experiments are offered as an option for the current Diploma cohort. Moreover 'at home' i.e. effectively open book but time-limited examinations were held in June 2021. Regular written examinations at Centres are planned for 2022.

In 2021, the numbers taking and passing the Certificate Courses were as follows: Hand-Arm Vibration, 12 students, 6 passes; Environmental Noise, 113 students, 99 passes; Building Acoustics Measurement, 41 students, 35 passes (including alternate delivery for SITMA), Workplace Noise Risk Assessment; 13 students, 7 passes. The Certificate of Proficiency in Anti-Social Behaviour (Noise) was not offered in 2021. The syllabi for a certificate course and an advanced certificate course on Report Writing have been developed. Chris Barlow of KP Acoustics Research Labs, is leading activity towards first delivery of these in 2022.

Since 2011, IOA members, Diploma candidates and holders have been able, for CPD or other reasons, to register for additional specialist modules. One Diploma candidate has taken advantage of this opportunity in 2020-21. But the potential for IOA members CPD through the Regulation and Assessment of Noise Module has not been taken up.

An online CPD course on Environmental Noise Measurement is being developed by KP Acoustics Research Labs and they plan another on Measurement Uncertainty. Online refresher courses that reuse and reconfigure Diploma blended learning videos are being developed on Transport Noise, Outdoor Sound, Room Acoustics and Sound Insulation.

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 Helen Davies (Education Officer), Caitlin Jesney (Education Assistant) and other members of the office staff.

Engineering Committee

The Committee met three times during 2021 and held 10 Professional Review Interviews (PRI) assessments. All the interviews were conducted remotely during 2021 using zoom.

Three new volunteers were welcomed to the committee, including an Early Careers Group (ECG) representative. The new committee members will go through the PRI assessor training program in 2021.

The Engineering Council released Version 4 of the UK Spec at the end of 2020 and the Committee has trialled assessing candidates against the new standard this year, particularly with regards to the new competency requirement that registrants should 'have an awareness of diversity and inclusion'. The new standard will be implemented going forwards in 2022.

An internal audit was held in November, following on from the license audit review with the Engineering Council in 2019. The audit concluded that the Engineering Registration process continues to serve the IOA engineering community well, with only three minor observations noted at this time.

Blane Judd has led a trial group through the proposed process to obtain EngTech registration. The IOA was initially targeting to have this in place for 2023 but the application with Engineering Council for the EngTech license has been put on hold whilst the outstanding audit actions are closed out.

Medals and Awards Committee

The 2021 awards

The Rayleigh Medal was awarded to Michael Vorländer at Acoustics 2021

The A B Wood Medal 2021 was awarded to Megan Ballard and will be presented at ICUA2022

Presentation of the following awards delayed due to Covid-19.

The R W B Stephens awarded to Voichita Bucur

Young Persons Award for Innovation awarded to Eric Ballestero

HonFIOA awarded to Marion Burgess – will be presented at Inter Noise 2022

Best Diploma Student was awarded to Francis Taylor

Best Irish Student was awarded Sean Rocks

D W Robinson Prize awarded to Catherine Morsley

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, Mr R Woodward (Early Careers Group Representative) and welcomed Ms J Smyrnova.

The Committee's focus during 2021 was to support the specialist groups and regional branches in maintaining the meetings output for the Institute.

As Covid-19 restrictions relaxed during the year it was seen to be increasingly possible that Acoustics 2021 and Reproduced Sound 2021 could be 'in-person' events as opposed to virtual conferences. Following the cancellation of the booking at the hotel in Chester by the Hotel a sub-group consisting of Mr R Woodward, Prof Chris Barlow, Mr S W Turner, Mr A Somerville, and Mr C W Turner (Chair) met to discuss the feasibility of a hybrid event.

The work undertaken in a relatively short time frame built on the previous work of Mr R Woodward and the sub-group was felt feasible to offer Acoustics 2021 as a hybrid event across several meeting hubs around the country. Council approved this recommendation and released the funds necessary to purchase the equipment.

With thanks to the invaluable work by Prof C Barlow and Mr R Woodward over 100 delegates attended the conference in the meeting hubs around the country and internationally including delegates from the UAE, Eastern Europe, and Australasia.

Reproduced Sound was another successful event incorporating hybrid attendance building on the work carried out by the team from RS2020 again, with international delegates.

Looking forward to 2022, Meetings Committee will not be responsible for organising an Acoustics 20xx event due to the IOA hosting Internoise in Glasgow in August. As a result, the Committee's focus will be building upon the meeting strategy developed in early 2021 and looking to further build on the successful hybrid events held during the pandemic.

Membership Committee

The Committee met 4 times during 2021. Three of these were virtual. The Committee welcomed Ilaria Fichera as Young Member's representative; she has made a valuable contribution to the team.

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

The CPD committee has continued its excellent work (largely by Rachel Canham and Richard Coleman) to update the guidance. CPD presentations were given at one of the Monday forums and at online Early Careers presentations.

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

Code of Conduct (CoC) cases as follows (details are redacted): We have 3 active complaints – 2 relate to windfarms in Ireland the third to a BS4142 assessment.

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 2021 275 membership applications were assessed by the Committee; (2020 – 255, 2019 - 241, 2018 - 309,). Of these 209 were elected to membership of various grades, representing a small increase (2020 – 203, 2019 - 186) on previous 2 years.

Current membership of the Institute now stands at 3037 (2020 = 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 help address this, we are hoping that Council will approve the appointment of a Membership chair to help with application queries, code of conduct cases and improving online guidance on process and on lines to take with challenges.

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

Focus for 2022 will be on continuing to improve consistency of application reviewing and decision making:

- improving guidance for Membership Committee members and providing good feedback to unsuccessful candidates
- improving guidance for membership applicants for all grades
- In Feb 22 Paul Freeborn will step down from the Committee, Brian Turnbridge has already taken over the role of Vice Chair Code of Conduct.
- 2 or 3 new members will be coopted on the Committee in 2022
- To assist with the workload the role of Membership Manager is being considered

We will continue to prepare for the new Acoustic Technician Apprenticeship which unfortunately did not run in 2021.

The Membership (and CPD) Committees have 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 recent 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

2021	FIOA	MIOA	AMIOA	Tech	Affil	Sponsor	Total
Applicants	8	146	99	17	1*	1	275
Elected	8	104	84	9	3	1	209
New Members	6	30	53	11	1	1	102
Resigned	2	10	15	0	0	0	27
Deceased	0	2	0	0	0	0	2

We only had 1 application but we offered Affiliate to 2 others that wanted a higher grade.

Publications Committee

Acoustics Bulletin and Supplements

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

The plans to produce additional supplements to the magazine are working well. We have recently completed a transportation noise supplement, which will be published as a digital only publication. It has been designed so that it can be printed in short print runs if the IOA wants to use it at events. It has been supported by advertisers and, as it is digital, it can be updated at intervals where necessary.

Acoustics Bulletin itself continues to evolve and is generally well received. The system for reviewing all technical articles works well.

The Editorial Board helps Nicky in editing the Acoustics Bulletin by giving her an opinion on the acoustics behind the technical contributions. The board use a light-touch approach and aims to identify gross errors, technical inaccuracies and opinions which might be controversial, allowing changes to be made if necessary. The Board works well, and we have a small number of people who positively contribute their reviews a few times a year.

Marketing

During 2021, Alex Shaida, the IOA's Head of Marketing, continued to lead the development of the IOA's marketing activities covering communications videos, advertising campaigns, trade press, newsletters, school competitions, and more. There remained a strong focus on online platforms including Google AdWords and Facebook with Linked In being recently added (in 2021 initially as a test), plus maintaining trade advertising and broadening our engagement communications on social platforms including Facebook, LinkedIn, YouTube, Instagram by using a combination of page postings and group interactions. Improvements continue to be made with the monthly newsletter, Acoustics Bulletin, various trade ads, social media activities, and on other forms of communication to IOA members and beyond. A dedicated campaign kicked off around February 2021 and ran to September 2021 across both digital and traditional media channels to help promote the IOA Diploma in the UK and internationally. This has led to a significant increase in

international registered candidates for the 2021-22 cohort and a growth in short courses attendance as well. More emphasis is being placed on providing detailed metrics to measure our reach and engagement, especially across digital and social media, with tracking data being provided to Exec and Council. 2021 was also the year we integrated our video content into the IOA website and database to better showcase our strong video content and make both public and member access more clearly defined. This is a major step forward in strengthening our online value proposition to our members and video content is set to continue to develop in 2022 and beyond.

Advertising

Dennis Baylis continues to oversee advertising through the IOA. The advertising revenue has fallen again in 2021. The free job ads policy (made in response to the pandemic) accounted for the majority of the income difference between 2020 and 2021; however, the Institute is now charging again for job ads and early indications are that the income will return to normal. Other advertising figures are slightly down from 2020 levels. Looking forward to 2022, most of the regular advertisers have rebooked although there are some notable exceptions. In 2022, we hope to offer digital advertising which will provide another income stream for the IOA. It is expected that advertising income in 2022 will be up from 2021 but not yet returning to the same income pre-pandemic.

Committee Membership

Over the course of 2021 the Committee has been joined by Nikhil Banda and David Sproston. Lisa Jones has stepped down from the Committee. The Committee is reasonably well balanced across the different sectors, although more members from local government would be most welcome.

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 the 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.

There are several vacant positions in publications that we need volunteers for, this includes: members for the committee, contributors for the Acoustics Bulletin, reviewers for technical articles and moderators for our various social media platforms. Please contact Daniel Goodhand daniel@goodhandacoustics.co.uk to find out more.

Research Co-ordination Committee

In 2021, virtual meetings of the Research Coordination Committee (RCC) were held in March, July and November through the Zoom App. Professor Stephen Dance chaired the meetings and Dr Jonathan Hargreaves became the new 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 50+ joint meetings and workshops, all online, to bring together industry and academia working in acoustics. Together (UKAN and RCC) created a Horizon Scanning document which was used to identify 20 Acoustic Research Priorities. Two workshops, in November 2021, were held to develop ideas for pilot projects, this involved 72 academic and industrial researchers.

UKAN currently has 1300+ members and runs 16 Specialist Interest Groups, a Spatial Acoustics and Immersive Audio SIG was added in 2021. The RCC committee developed three ambitions: alignment of UKAN SIGs 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). Currently under consideration is a new grade: Research Member of the Institute of Acoustics (RMIOA) analogous to the Association Member of the Institute of Acoustics (AMIOA) using only electronic means of communication to reduce the membership fee.

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 Anton Krynkin (University of Sheffield). Professor Kirill Horoshenkov (University of Sheffield) stepped down from the Committee after serving 10 years. He will be missed. Thank you Kirill.

Specialist Groups

Building Acoustics Group

In 2021, the Committee organised the IOA's consultation response to the English ??? Government's proposed revisions to Approved Document L and F and a new Approved Document O of the Building Regulations. The Committee organised three virtual meetings to gather opinions from members before drafting the Institute's response to the consultation.

The Committee also assisted with the organisation of the IOA's annual conference. Our papers centred around a theme of open plan offices in the first half and bespoke materials and low frequency sound in the second half. This year we had a hybrid conference, and we were very much the guinea pig being first in the running order!

The Committee also saw a change in membership, with two of its most longest standing members, Andrew Parkin and Roger Kelly, stepping down, making way for new members and a new chair and secretary. We extend our thanks to Roger Kelly for his wise leadership and to Andrew Parkin for his many years of service. We also welcomed new members to the Committee, including Jack Harvie-Clarke.

In 2022, we hope to further the industries approach to ventilation and overheating design. We hope to provide guidance on other topics by utilising expertise within the committee, in addition to assisting the Institute with any matters related to Building Acoustics. When it is safe to do so, we hope we can also get back to providing members with Building Acoustic-themed events to further our industries awareness of Building Acoustic design.

Electro Acoustics Group

The main event in the calendar of the Electro Acoustics Group in 2021 was the 37th Reproduced Sound conference in November. The conference this year was run as a hybrid event, and attracted 76 delegates, with 55 people attending in person at the Bristol Hotel, and 21 joining online. Feedback received during and after the conference was very positive and the organising committee are happy, and a little relieved, that it seemed to go very well. As usual, the EAG committee members each took on defined roles in the organisation of the conference making it very much a team effort. At the start of the conference, IOA president, Stephen Turner, presented the Peter Barnett Memorial Award to Professor Wolfgang Klippel. Professor Klippel attended the conference in person and gave a fascinating talk on the use of smart transducers within professional loudspeakers. After the conference dinner, Stephen Turner presented former EAG chair Robin Cross with an Award for Services to the Institute and ‘Thank You Awards’ to EAG committee members John Taylor, Ludo Ausiello and Keith Holland for their contributions to the running of the online conference, Reproduced Sound 2021.

All of the meetings of the Electro Acoustics Group committee in 2021 were carried out online via Zoom, so it was great to meet in person at the conference! During 2021, the Committee said farewell to Nick Screen, and welcomed Roberto Magalotti and Andrew Horsburgh onto the Committee. Dan Pope agreed to take over the role of publicity from Paul Malpas; all other roles remain as last year.

Early Careers Group

In 2021, number of representatives remained steady at 25. The group welcomed representatives from Noise and Vibration Engineering and Engineering Committee. We have lost representatives from North West branch and Environmental Group. In 2022, the focus will be on filling these posts and liaising with Physical Acoustics, Central Branch as well as new groups Research Coordination Committee and Health and Noise on electing Early Career representatives. The terms of the group’s chair (Tomasz Galikowski) and the secretary (Adam Woolley) are to expire in June 2022 and December 2022 respectively. The Chair will not see a re-election and a new Chair will be elected in early 2022. The group has decided to follow the IOA President-model and elect a new Chair 6 months prior to the outgoing Chair leaving the post. This is to allow an improved transition between Chairpersons.

The Terms of Reference (v 3.0) of the group have been updated to lay groundwork for the Student Rep initiative (see below).

The Group Committee meets quarterly with three meetings by telecom and one meeting in person. In 2021, the group continued meeting online and attempted to meet face to face. However, a resurgence of Omicron variant of the Covid-19 virus in the 4th quarter of the year meant that the meeting was replaced by another remote meeting.

The ECG has continued to be pro-active in responding to Covid-19 impact by engaging with the IOA and its members. In the early part of the year, the group was vocal about continuing free advertisement of jobs following the 2nd lockdown.

As part of the response, the ECG was organising regular online webinars on a variety of topics including career routes between academia and industry, a showcase of the IOA Diploma and the Universities courses, “ask anything”, acoustics in space and upgrading membership from AMIOA to MIOA.

The ECG organised a virtual version of the Art of Being a Consultant in place of the face-to-face event which could not take place due to the Covid-19 restrictions. Four lunchtime sessions were arranged and were well attended. The events explored topics and themes not usually covered by the in-person event including careers routes, learning from mistakes, consultancy in a virtual world, networking, reports writing and calcs. Additionally, an extended, evening session was organised on a role of expert witness in acoustics. Additional resources accompanying the sessions were published on the IOA website.

In October 2021, together with the UK Acoustics Network Early Careers SIG, we organised a session for the hybrid IOA Acoustics 2021 Conference. The topic continued a theme of encouraging stronger connections between practitioners (i.e. consultants, industry) and the academia.

We are a core member of the organising committee of Internoise 2022 in Glasgow.

The ECG responded to the planned increase of one day meeting fees. The group did not oppose the raise but requested that greater emphasis is placed on providing financial assistance to the members and students by including information in the event adverts.

The ECG is spearheading efforts to elect or co-opt a Student Rep member. Students are currently not represented on any of the IOA groups or committees. A working group has been put together and will involve the Research Coordinaton Committee and UKAN+. The group sought views from the IOA Diploma centres and universities. The group is finalising a “Welcome Pack” which will provide information for the reps on their responsibilities, requirements etc. A wide-ranging promotional exercise is planned to include promo video and leaflets. Presentations will be given to IOA members, Universities and students themselves. A marketing budget has been agreed to help with promotion. The first student reps are planned to start in the academic year 2022/23

The group has begun liaising with the Ethics, Diversity and Inclusion (EDI) group and plans are to engage an Early Career representative.

We continued publishing a regular column in the Acoustic Bulletin dedicated to Early Careers members.

We began outreach with other organisations to exchange experience and ideas. The group have a nominated outreach coordinator overseeing this work. As a result of this work, the group established a formal arrangement with the ANC’s Future Acousticians Group and with the EAA’s Young Acoustics Network that allows reach party to attend the other’s meetings and coordinate events. In July 2021 The ECG along with IStructE, IET, ISturctE, IChemE, IMechE and ICE co-organised a Summer Virtual Event Series: Engineering Careers. <https://www.ioa.org.uk/news/summer-virtual-event-series-engineering-careers-7-14-july-2021>

As noted earlier, the ECG also continued engaging with UKAN+ (e.g. Student representative, Acoustics 2021 and Internoise 2022).

To promote the benefits of IOA membership to students we gave a comprehensive presentation on the range of careers in acoustics to students at the University of Southampton. The group will be reaching out to other Universities to arrange similar talks.

Plans for 2022

In 2022, with the economic outlook becoming increasingly pessimistic, the group will monitor impact on the Early Career professionals and represent their best interests.

Work on all of the above items will continue with particular emphasis on the Student Rep initiative, liaison with the IOA groups and EDI group.

We are 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. The upcoming Internoise 2022 will be a focal point for the group in this department. The ECG will also be organising the Art of Being a Consultant (in person) in March 2022.

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

The group also plans to review and upgrade Awards for early career members.

In 2022, the group will seek to elect a new Chair-person and carry out a seamless transition.

Environmental Acoustics Group

In March 2021 we prepared an IOA response to the DfT consultation on Spaceports giving our views on how environmental noise from spaceports could best be assessed and managed.

In October the Environmental session of the IOA's annual conference was a lively morning of hybrid conference presentations and discussion on a range of topics from wind farm piling noise to balancing ventilation and acoustics design in new housing.

In November 2021 we prepared an IOA response to the DfT consultation on The Future of Transport Regulatory Review: Future of Flight, giving our views on how environmental noise from drones could best be assessed and managed.

This year the Environmental Noise Group changed name to the Environmental Sound Group (ESG) to reflect a broadening of the group's remit to cover positive sound in the environment as well as negative noise. Following announcements in the Acoustics Bulletin, the Committee is recruiting new members with soundscape experience, and we look forward to serving the memberships in this wider area in 2022 and beyond.

Measurement and Instrumentation Group

During 2020/2021, the Group organised a one one-day meeting, and produced six articles for the Acoustics Bulletin

The one-day meeting was held via Zoom in June 2021 using a new format called 'Ask the Expert'. Designed as a forum for members to ask burning questions about sound & vibration instrumentation, over 70 members registered, making for a lively session. Chaired by Simon Bull, the panel included Mark Dowie, Martin Armstrong and Tony Higgins, to whom I send my thanks. The outcome of the meeting has been reported in the most recent Bulletin and a key question on MEMS microphones has generated a new Instrumentation Corner article in the next Bulletin.

A follow-up meeting is planned for February 2022, and it is hoped that the format can be developed further.

Over the past year, the Group's Committee members have continued to contribute to Instrumentation Corner, the latest being No 73 in the November/December 2021 issue, covering vibration instrumentation and measurement guidance, by Martin Armstrong. Other issues covered Measurement of traffic noise during lockdown by Tony Higgins; Testing of low-cost sound level meters to BS EN 61672 Part 3, by John Campbell & Martin Williams; Measurement of Peak Particle Velocity by Steven Cawser; and Health & Cost benefits of Highways Noise Barriers by Giles Parker.

All of these papers form a historical reference section which can be accessed in the M&I group pages of the IOA website. A full schedule is planned going forward, but we welcome suggestions for future subject matters.

2021 sees the year that one of our founding members and first chairman, Richard Tyler, steps down from the Committee, after more than 20 years' service. It's fair to say that the group has got where it is today thanks to Richard, and his contributions will be missed.

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.

Lastly, I would like to extend my best wishes to our honorary secretary, Sue Dowson, as she recovers from illness, and we look forward to seeing her back in action next year.

Musical Acoustics Group

The Group has been heavily affected by COVID over 2021, however meetings have been held virtually and the ninth consecutive Annual General Meeting was held in November 2021. Planned physical events were again delayed by one year to allow the pandemic to clear. The event, "Hear for Tomorrow" was to be held at the Royal Academy of Engineering during early April 2020 with the Hearing Conservation Association with the focus on music and the sound of performance has now been confirmed for 30th March 2022. This was supported by UK Acoustics Network through two special interest groups: Room Acoustics and Communication and the Biomedical SIG. In May 2021 Musical Acoustics Group organized an online seminar delivered by Dr Eric Ballestero on his PhD research, "Metadiffusers- An Acoustic Solution to Improve the Environment for Musicians". This was followed by an active contribution to the IOA Hybrid Annual Conference, October 2021, where a joint session with the Speech and Hearing Group was organized. This consisted of four great papers covering music, architecture, and hearing. 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. 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 and a special thanks go to Jemma Jones who stepped down this year as the Early Career representative. However, we welcomed Tateo Nakajima on to the Committee. We hope that 2022 brings Musical Acoustics back to the fore with the support of the new UKAN+ EPSRC grant.

Noise and Vibration Engineering Group

Following the success of our contribution to the online Acoustics 2020 conference, a programme of lunchtime seminars on Zoom have been produced every three months throughout 2021, and planning for the 2022 programme is well under way.

The four seminars presented in 2021 were a great success, with excellent audience figures of 100 – 200 attendees, a lively question and answer session following each talk, and excellent feedback. Topics covered were: ‘Acoustics of the Dyson airwrap’ (N Thomas); ‘Aerodynamic noise from planes, trains and buildings’ (M Smith); ‘Noise due to electromagnetic forces in automotive applications’ (K Degrendele); ‘Application of active noise control to transport systems’ (S. Roberts). Seminars have been recorded, edited and placed in the IOA repository.

Considerable effort has gone into making these meetings run smoothly and professionally. Besides the ‘in-house’ publicity through the normal Institute channels (newsletters, the Bulletin, LinkedIn and Twitter), committee members have made a special effort to broaden out the publicity via other organisations such as IMechE and RAeS, as well as personal LinkedIn lists and special interest groups. Our aim has been to raise the profile of IOA events for a wider audience, and we are building on that using Eventbrite notifications of future meetings.

Besides the seminars, the Group also participated in the hybrid Acoustics 2021 conference. Although ours was the final session of the 2-day conference, we were pleased with the quality of the presentations, the numbers who stayed in the meeting, and the lively online discussion following each talk.

Following an influx of new members in 2020, and a new young member joining in 2021, the Committee is up to full strength. A full committee meeting has taken place shortly after each seminar, hence four meetings this year, and there have been sub-committee meetings to organise each event. The current chairman of the group has given notice that he is likely to retire by the end of 2022, but hopefully the Committee is well placed to continue and build on its current level of activity.

Physical Acoustics Group

The Group supported the annual conference but was otherwise dormant in 2021.

Senior Members Group

Despite the continuing challenging times the Senior Members' Group held five virtual meetings during 2021 including its AGM in September 2021.

The virtual meetings covered a diverse range of topics which were very successful and well attended.

These virtual meetings included the following:

- EPSRC UKAN its development, operation and delivery presented by Professor Kirill Horoshenkov, University of Sheffield.

- Soundscape, current progress and future challenges speaker Professor Jian Kiang University College London.
- Taking Live Music to the audience in a new way, a presentation given by Jim Griffiths, Vanguardia.
- Acoustic Barriers, traditional and the Move to Sustainable Alternatives was presented by Steve Barnes of GRAMMM UK.
- Finally at its AGM Professor Bridget Shield MBE gave a presentation on the history of the Royal Festival Hall at 70 years.

It is the aim of the SMG to focus on identifying speakers and venues for future meetings in 2022 that would appeal to a wider range of SMG members than has previously been achieved and with the potential of opening future meetings to other IOA members including overseas members.

Speech and Hearing Group

The Speech and Hearing Group hosted or co-hosted three events in 2021. The first was a talk by Dr Lauren Hadley of the University of Nottingham titled “Strategies for interacting in a social world” on 30th June 2021, which took place immediately before the group’s AGM. The Committee is especially grateful as she very kindly stepped in at the last minute when the original speaker was unable to attend. The second event was a joint session on Musical Acoustics, Speech and Hearing chaired by Stephen Dance at the Institute’s Acoustics 2021 Conference on Tuesday 12 October 2021, which comprised of four papers. The final event was a joint evening meeting with the London Branch where Dr Helen Nuttall of the University of Lancaster gave a talk titled “Sensorimotor processing during perception of degraded speech”.

At the group’s AGM, held on 30th June 2021, Gordon Hunter (Kingston University) stood down from the role of Group Chair which he held for 10 years and he remained as a member of the Committee. Philip Harrison (University of York) was elected as the new Chair. Amelia Gully (University of York) stood down from the Committee and Rebecca Vos (Imperial College) became a co-opted member. The IOA President Stephen Turner attended the AGM and personally thanked Gordon for his dedication and hard work as Chair of the Committee over many years. There are vacancies for further ordinary members of the Committee, and nominations are currently being sought for these posts.

The Committee was saddened to learn of the death of Graham Frost in August. Graham was a very active member of the Committee, having first joined in 2010 and he served as group secretary from 2014 until 2020. He was also very active in the British Standards Institute in matters relating to hearing aids and in the British Society of Audiology.

The group committee met twice (February and June) in 2021 and both meetings were held online. The Committee continues to liaise with other professional bodies and organisations (such as the British Standards Institute, the UK Acoustics Network, the British Society of Audiology and the UK Hearing Conversation Association), other specialist groups (including the Building Acoustics Group and Musical Acoustics Group) and local branches of the Institute regarding topics of mutual interest. A questionnaire was circulated to members of the group during 2021 and the responses received will be used to inform future activities and events organised by the Group.

Underwater Acoustics Group

Since the 2020 AGM, the Underwater Acoustics Group Committee has been undertaking the planning of the following conferences:

- ICUA2022
- An Early Career and PHD underwater acoustics symposium in Dec 2021. This is an UKAN event with the involvement of the IOA UAG
- The 2020 AB Wood recipient Louise Roberts presentation was held at UACE21

Several members of the Committee are on the ISO TC43 SC3 (Underwater Acoustics), and are helping develop new ISO Standards. Stephen Robinson has been approved as the chair of the ISO TC43/SC3. There is a new work item on the monitoring of ambient sound in the ocean, which will require a new working group, WG5, with Michael Ainslie as the leader. Work is continuing in WG1 on ship noise measurement.

The IOA has suggested that the IOA Diploma is extended to include underwater acoustics. The IOA's Education committees plan is to do some stakeholder analysis to see if the IOA could support any training but they were also happy to leave it if the market was covered. There are issues with how we were going to achieve this since several courses have not run in the last few years.

Elections

The Committee for 2021/22 is:

Prof. G Heald	Chair	until 2024
Mr A Holden	Secretary	until 2023
Dr P Dobbins		until 2022
Dr P Lepper		until 2023
Dr C Capus		until 2024
Mr S Robinson		until 2024
Dr M Ainslie		until 2024
Mr A Brooker		until 2023
Dr P Blondel		until 2022
Mr A Woolley		until 2022

Co-opted members

The Committee agreed the co-opted members for 2021/22 as:

Dr J Smith
Mr K Hamson
Dr T Hill
Dr A Curtis

Branch Reports

Central Branch

The following meetings were held in 2021:

- Groundborne Noise and Vibration – Instrumentation and Data Processing – Joint meeting with Midlands Branch. Mike Breslin. Managing Director, ANV Measurement Systems. 20.01.21 Online only. Registered 141. Attended 90 (approx.)
- A workshop on the new (July 2021) EA technical guidance on environmental permits Jon Tofts - EA Environment and Business Advisor (Noise). Online only. 09.12.21 Registered 133 - Attended 86.
- Low-vibration design and performance validation of high-end buildings: expectations and realities, Dr Christos Karatsovis, ISVR Consulting. 13.01.21 Registered 97 – Attended 65

An online year for the central branch. The number and variety of events was low. The number of attendees was much higher than pre-covid live only meetings. In 2019 we averaged 18 attendees with a range of 10-34 over the year. This new method for regional CPD events is reaching a much larger audience.

Having access to the conference/meeting room at Milton Keynes will be very useful as we move into “Hybrid” events for 2022. We see this as a long-term shift for the Central Branch. We will make meetings available for those who want to meet in person and also for those who are either not local or cannot attend in person via online access.

Thanks to all involved. Expenses for 2021 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

With more access to other meetings from other branches available through online media, our meetings were scaled back this year. We also held a hosting hub for the Acoustics 2021 Hybrid Conference at our usual meeting venue.

A remote presentation was given by Professor Stephen Dance on the Quiet Project. This provided our attendees with a very interesting insight into just how noise levels fluctuated during the Covid-19 pandemic and the associated stages of the subsequent lockdowns. The end of our branch sessions have allowed for questions and discussions on the topics. Where

possible we have also provided time for networking after our meeting, although this has been hard to achieve with our event being held remotely.

As part of the early careers group, our ECG Eastern Representative helped to arrange a number of daytime and evening sessions aimed at early career group members including the Art of Being a Consultant Mini-series, and a number of one off talks and webinars, such as Ask anything and the IOA Membership Upgrades. The AOBAC mini-series comprised of 5 daytime events and the ECG mixed sessions comprised of approximately 5 events typically held early evening. The recent ECG future events survey has found that a mixture of events would be beneficial including unique topics, non-technical talks and British standard, recent guideline talks.

The Eastern Region Branch held a hub for Acoustics 2021 at the JobServe Community Stadium and even though there was limited attendance, great discussions were had between members within the hub on the different talks.

We are really looking forward to getting back to holding face-to-face meetings once again, although it is likely that a hybrid approach to meetings will be the way forward. We have a number of events planned for 2022, and we are looking forward to going back to face-to-face events where possible.

Thanks to all involved.

Irish Branch

The Irish Branch held one event during the year (online): the annual Gerry McCullagh Memorial Lecture given on 15th September 2021. The lecture is given each year in memory of Gerry, one of the founding members of the Irish Branch. This year, the lecture was presented by Ian Campbell, and titled 'A Measurement Journey through Soundscapes'. Ian gave a fascinating insight on the evolving field of acoustics, starting with early applications for audio transducers, and taking the listeners right up to the present day (and into the future). Listeners were enthralled, and enjoyed the break from noise modelling and report writing.

The 2021 Irish Branch AGM was held (also online) immediately after Ian's presentation, with Stephen Turner (IOA President) and Graham Parry (IOA Vice President, Groups & Branches) in attendance. Branch Chair James Mangan thanked committee members Chris Jordan, Ted Dalton and Mark Simms for their contribution over the last three years, all three having reached the end of their three year terms. Ted volunteered to remain on the Committee for three more years. Chris and Mark were replaced by Derek McCreanor and Gary Duffy, the latter returning to Branch duty after a break of several years. The current committee is:

Chair: James Mangan

Vice Chair: Paul McCullough

Secretary: Damian Brosnan

Membership Secretary: Ted Dalton

Meetings Coordinator: Diarmuid Keaney

Virtual Meetings Video Capture Organiser: Martin Lester

Young Members Representative: David Coon
Consultation Response Coordinator: Damian Kelly
Bulletin Editorial Contact: Siobhan Maher
Other members: Gary Duffy, Derek McCreanor

London Branch

Last year we had a number of presentations take place, mostly over Zoom with the continuation of COVID.

In January, the LSBU Students returned and we heard from Rory Hendrick, Courtney Hawkins and James Allen who presented their final projects.

In February, David Trew gave a talk about the latest AVO Design Guide providing further insight on this 'hot' topic.

May saw Nicole Porter give a presentation on Aviation Noise Management & Research: Reflections and Challenges in Light of the Pandemic.

Colin Cobbing then joined us in September, to discuss Acoustic Facades- Acoustics, ventilation and overheating which opened up further discussion on the topic.

In October, Professor Martin Broderick presented on Development Consent Orders (DCO) and Noise Assessments from an Examining Inspectors Perspective.

In November, we actually managed to arrange a social event in person at the Citty of York, which was well attended with people keen to meet up in person again.

We then ended the year with another in person event, a Joint speech and hearing meeting with Dr. Helen Nuttall presenting her work on Sensorimotor processing, during perception of degraded speech.

The Committee and I would like to extend our thanks to all the speakers who joined us this year.

I would also like to thank Louise Beamish for her valued input on the Committee and in her role as Chair over the last 3 years. In addition to the remaining committee members for giving up their time and input in arranging these events. With thanks to the IOA, particularly Linda, for assisting to arrange all the meetings.

We look forward to another year filled with interesting talks and hopefully the return of some in person events too.

Midlands Branch

It's been a less active year for the Branch when compared to previous years in part due to the competing demands of COVID and the Committee's professional and domestic lives. We held just three meetings in the year, all online and all successful. Our average attendance was 63. They were:

A pre-recorded talk by Mike Breslin, Managing Director, ANV Measurement Systems on Groundborne Noise and Vibration – Instrumentation and Data Processing in January.

Followed by Richard Crompton and Ronan Ellis of AVA Consulting providing an insight to Automotive Noise, Vibration and Harshness Trim Materials in March. Finally in September we held our traditional annual presentation of a selection of the previous year's projects from Derby University's IOA Diploma course. This year we were treated to three talks "Is the rating of impact sound insulation for separating floors in Building Regulations Document E fit for purpose?" by Jonathon Howell; "Tranquillity and low frequency noise in Shipley Country Park, Derbyshire" by Matt Hunt and finally Conor Chambers' "Effectiveness of variable acoustics in multipurpose halls".

A sincere thank you to all of our 2021 speakers for their informative presentations and support of the Midlands Branch.

Thanks are also extended to the Midlands 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 branch. Particular thanks to Rob Bungay, Phil Hainsworth and Fiona Rogerson for helping out at Midlands Hosting Hub of IOA 2021 Acoustics Conference.

Thank you to Fiona Devine, our Secretary who is stepping down. Phil Hainsworth has agreed to take over the role.

The 2021 Midlands Branch Committee

Chair:	Fiona Rogerson
Secretary:	Fiona Devine
CPD Secretary:	Heather Billin
Young Members Rep:	Rob Bungay
Ordinary committee members:	
	Mike Breslin
	Aglaia Foteinou
	Phil Hainsworth (Bulletin Editorial Contact)
	Paul Shields
	Mike Swanwick

Co-opted committee members:

	CJ Biggs
	John Pritchard

North West Branch

A short AGM was held (via Zoom) in April 2021 where, after 12-months of uncertainty and restrictions imposed by the pandemic, intentions were stated to try and begin to arrange some remote/virtual meetings. However, this was also part of a wider discussion around what the future of branch meetings may look like and how they could be delivered. Unfortunately, there have been no such meetings arranged in 2021. There have been some virtual meetings arranged by specialist groups and other branches of the IOA, which have been accessible to all via the IOA events page (<https://www.ioa.org.uk/events>). The North-west Branch see this as key change in the way branch members can now access CPD.

Notwithstanding, the Northwest branch aims to rally in 2022 and deliver some opportunities to meet up for CPD and/or networking. Please can branch members and committee members come forward to assist with this.

Future Events

- Early Careers Group - *“Getting Chartered as an Acoustic Consultant”* 25th May 2022 – 17:30pm (Zoom).

Scottish Branch

The Scottish Branch has been very active in the past 12 months. February 2021 saw the AGM and new committee elected. Anne Budd took over the role of Chair of the Scottish Branch from Alistair Somerville and the Committee welcomed four new members in Lindsay McIntyre (Education and CPD Representative), Ashley Leiper (Meetings Coordinator), Chris Steel (Membership Secretary) and Mark Robertson (Treasurer), as well as co-opting Zanyar Abdalrahman into the role of Early Careers Representative. Cesar Bustos and Nicole Symington stayed on the Committee and took on the joint role of social convenor, Martin Butterfield agreed to continue in the role of Branch Secretary and Laurent Galbrun continues as joint meetings coordinator. We regrettably had to say goodbye to one long standing member of the Committee, Lilian Lauder who very sadly passed away in August 2021. We thank Liliane for all her work for the IOA and our Scottish Branch during her time with us, she will be greatly missed.

The committee is currently in great shape with members representing academia, environmental protection services, the health & safety executive, consultancy and power generation – a great mix who bring different ideas and perspectives on acoustics in Scotland and to our branch activities.

The Scottish Branch meetings program in 2021 has remained virtual other than when Scottish Branch volunteers Elena Prokofieva and Lindsay McIntyre hosted the hybrid hub in Glasgow as part of the Acoustics 2021 conference. In February we welcomed Dick Bowdler to talk about the hot topic of Drone noise, May saw Raf Orłowski introduce us to Architectural Acoustics and his new book *“Acoustics in Architectural Design”*, in September our committee member Cesar Bustos presented a fascinating project on Noise Barrier Prediction with Numerical Modelling and we finished off the year in October with a double whammy of excellent presentations from Simon Waddell on noise from rocket testing and space ports and Roalt Aalmoes on the Royal NLR Virtual Community Noise Simulator. We are very grateful to all those who have taken the time to organise and to speak at our meetings this year. All our meetings have had fantastic attendance both from members of the branch and others, including international attendees, which has been great to see.

The Scottish Branch have also spent time in 2021 responding to Scottish Government consultations relating to noise. These included consultations on Short Terms Lets, Fireworks and the misuse of pyrotechnics and on Scottish Building Regulations: Proposed Changes to Energy Standard, including ventilation, overheating and electric vehicle charging provision.

We are also very proud that our branch members once again stepped up to volunteer at the 6 day bonanza that is the Edinburgh Science Festival Careers Hive. This year was very

different for volunteers as they appeared as Avatars in a virtual careers fair platform to talk to Scottish high school pupils about careers in Science, Engineering and of course acoustics. We thank the IOA who has continued to support Edinburgh Science outreach programs since 2017 and we look forward to attending as “in-person” volunteers again in November 2022.

Southern Branch

Despite the ongoing challenges forced upon us by the pandemic, the committee has had another active year and provided the Southern Branch membership with a healthy offering of virtual events culminating in two face to face meetings in the latter part of the year.

The Southern Branch commenced its 2021 schedule with a presentation on the role of Acoustics in Building Information Modelling. Dave Clarke from SRL Technical Services was our host and it was helpful to understand what we should be doing now, and how BIM might affect the acoustics industry in the future.

The meeting was preceded by the Southern Branch AGM. Sebastian Woodhams (Sustainable Acoustics) was seeking re-election as a member of committee and was duly elected.

At our March meeting, we welcomed Grant Waters and Eduardo Manzano of Anderson Acoustics who presented on *A Soundscape Approach to Create an Acoustic Vehicle Alerting System (AVAS) for Transport for London's emerging electric bus fleet*. The talk included some auralised demonstrations and generated lively debate among the membership

Following the recent change in Planning Use Classes, Tony Gallagher of Quod provided our April meeting. As a planning consultant, he was ideally placed to describe these changes in detail and how they might affect future noise impact assessments.

In July, Peter Rogers (Sustainable Acoustics) gathered members of ANC Working Group (Anthony Robinson (Westminster City Council), James Stokes (RBA Acoustics) and Martin McNulty (Hoare Lea)) to present the Draft Gym Acoustics Guidance. This included suggested criteria, practical testing methodologies and predictions.

October saw our first physical meeting in nearly two years. This had been postponed a number of times and we were grateful to finally be able to meet in person with Mason UK sharing their experience of *Overcoming architectural challenges for acoustic box in box systems*. This was followed by a drinks reception hosted by our presenters.

The year culminated in an exciting opportunity for IOA Southern Branch members to meet face to face and to visit the exhibitions at Winchester Science Centre in recognition of the International Year of Sound. We were delighted to have Professor Paul White from ISVR present on the ‘Wail in the ocean’ sharing some of his vast experience and research in the field of marine and underwater noise.

The Southern Branch meetings are all captured in the IOA archive for members to watch back at any time via the IOA website.

We have strived to continue to provide meetings in these difficult circumstances for all, and feel confident that we continue to provide members with interesting, varied and high-quality offerings.

As Chair of a great committee, we 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.

I offer my sincere thanks 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.

We are developing a programme of events for 2022 which we hope will continue the high standard of events held in 2021.

South West Branch

South West branch reconvened post-furlough and held an online AGM in March 2021. Three new members representing the Early Careers Group were voted onto the Committee, although one has since left due to relocation.

In July new ECG member Aaron Tomlinson helped organise an online talk for the branch on the use of Music Therapy in the NHS, presented by music psychotherapist Nicole Wakeling from Devon Partnership NHS Trust. Attendance was also opened to the Musical Acoustics Group and the Speech and Hearing Group. Nicole provided an introduction to music therapy from an industry expert, along with a perspective from an end user of an acoustically critical space that YOU may one day be designing. 15 people attended the meeting and positive feedback was received.

In October the branch hosted a Bristol hub for the Acoustics 2021 conference at a venue supplied by UWE in Bristol. Over the two days, around 20 attendees of the conference chose to join the branch hub and sit in the room for the presentations and Q&A. Special thanks go to Danny Elvidge at UWE for the room organisation, Chris Barlow for broadcast hub training, Jonathan Riley for managing equipment and software for the event, Adam Fox of Mason UK Ltd for presenting his paper on 'Quantitative method of isolating sensitive equipment using air' from the hub, and to Naomi Tansey from Dyson for chairing the Noise and Vibration Engineering stream from the venue.

In November the Reproduced Sound 2021 conference was held at The Bristol Hotel in Bristol. For the opening event on the Tuesday evening SW branch members were invited to join the conference attendees for a presentation by Barney Heywood of Stroud-based company Stand and Stare. At the event Barney described how the company develop activities and interactive exhibits to share stories by combining digital and physical experiences. He introduced a device known as the magical "Translatorphone" which was of particular interest to the delegates. These Translatorphones are portable baskets that contain a loudspeaker that children carry with them whilst exploring the nature and wildlife at places such as the Slimbridge Wetland Centre. As they approach exhibits, the children can hear the voices of the birds and animals via the Translatorphone. Similar interactive digital/physical experiences are being trialled at other locations.

Two new arrivals in the SW have also approached us to help out, having previously served on the committees of other regional branches. Their involvement will be put to vote at the next AGM.

More events, both online and in person, are planned for 2022 and the Reproduced Sound conference is scheduled to take place in Bristol again this year, giving SW branch members another opportunity to join in and network.

Welsh Branch

February 2021:

David Hunter 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 remains 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.

April 2021

White Paper on a Clean Air (Wales) Bill 2021

The Welsh Branch continued to support the Welsh Government by responding to requests for consultation. In particular, the Branch provided a consultation response on the White Paper for a Clean Air bill with respect to vehicle idling noise. As summary of the response is below:

Background

The IOA welcomes the fact that noise has formed part of the potential provisions of the Clean Air (Wales) Bill and recognise that the white paper proposal concerns, in particular, the principle of having statutory guidance on anti-idling measures. The IOA would welcome involvement in future workshops with Welsh Government to help develop this guidance with respect to the noise management elements.

The IOA hopes Welsh Government will find these responses helpful.

The Potential for Integrating Noise Management into the proposals

In setting any framework for setting new air quality targets, how those targets are to be met could have an impact on noise management. Care needs to be taken that measures to reduce air pollution at one location does not result in increased noise elsewhere.

As part of any the enhanced monitoring network developed for managing air quality, opportunities could be sought to include noise monitoring. Many of the real-time indicative monitoring equipment systems have capability for noise monitoring, albeit at a basic level. However, as it is known that air quality and noise are very closely linked, and that action planning work must take both into account, it would be helpful to ascertain what improvement to soundscape can be derived from air quality management.

In terms of tackling engine idling, it is felt that the current legislation is disjointed and that the provisions do not go far enough. There would be a challenge for local authorities in that the current level of fines is felt to be inadequate. Furthermore, there would be an additional cost to service delivery, which is thought to be unlikely to be sustainable for Local Authorities, even if all fines were paid in full. Current legislation being restricted to the public highway is not helpful. Air quality and noise do not respect geographic boundaries, therefore, the means to deal with them needs to encompass all locations. It is noted that all NHS hospital grounds, school grounds, public playgrounds, along with outdoor day care and child-minding settings have all now been designated as smoke free zones. A similar policy could be used for engine idling, and extended to all Local Authority school car parks, Local Authority car parks, public body car parks etc.

In tackling engine idling, there is an additional benefit of reducing unnecessary noise. Noise complaints relating to engine idling for taxi ranks, vehicle operating centres and distribution centres can be difficult to deal with just through the statutory nuisance provisions. However, were the legislation on engine idling to be overhauled, then this would be an additional means to tackle such issues.

Full details, including response to the consultation questions, can be found on the IOA website.

The Committee would like to extend their thanks in particular to Oliver Matthews, Graham Parry and Malcolm Hayes for their valuable input to the consultation response.

October 2021

Members of the Branch from Formant, Hunter Acoustics and Ramboll were able to meet in-person for the Acoustics 2021 conference at the 'Welsh Branch Hub' at Henstaff Court, Llantrisant, and all attended an in-person social/meal in the evening.

The consensus was that the hybrid conference worked well and was a great forum for socialising and sharing knowledge. The format was particularly helpful to early career members to expand their professional networks, having had limited opportunities during the pandemic.

Plans for 2022

The Welsh Branch will continue to support the Welsh Government by responding to requests for consultation.

We hope to organise more in-person events later in the year, both social and CPD, including visits to completed/on-site projects. There is particular interest in teaming up with local EHOs in Cardiff to visit live music venues and discuss the management of night time economy noise. This is very topical in Cardiff, as well as around the UK.

Yorkshire and North East Branch

Meetings in 2021

Date	Subject	Speaker	Attendance
12/01/2021	Acoustics of schools for SEN	Ian Rees and Joe Bear	60
09/03/2021	ANC Good Practice Technical Note on BS 4142	Robert Adnitt	90
29/04/2021	Indoor acoustic requirement for people with special needs	Federica Bettarello & Marco Caniato	100
08/06/2021	ANC 'red book' - Measurement & Assessment of Groundborne Noise & Vibration	David Hiller	53
21/07/2021	An introduction on the role of the expert witness in civil cases – CPR 35	Teli Chinelis	56
02/12/2021	Introduction to Sound Quality & Psychoacoustic Parameters	Miguel Garcia Pedroche	30

In 2020 we had six online branch meetings. The attendance at the meetings ranged between 30 – 100 participants, which was comparable to the attendance in the previous year.

At the AGM Meeting in December 2021 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. We also welcomed a new committee member – Seena Sajeev from Apex Acoustics Ltd.

This year's talks covered various topics of acoustics. The first talk by Ian Rees and Joe Bear of Adrian James Acoustics Ltd. explored the acoustic requirements for schools teaching pupils with Special Educational Needs (SEN). The presenters also expanded the definition of SEN set out in Building Bulletin 93 2014 and the duties placed on schools by the 2010 Equality Act, 2012 School Premises Regulations and BB93 2014 to provide for SEN pupils.

The second meeting was dedicated to the ANC Good Practice Technical Note on BS 4142. The presentation was given by a panel of WG members who had been involved in the production of the Note.

The third talk was a truly international event as the presenters broadcasted from Italy and the participants joined from various countries, including some in Asia and Middle East. Federica Bettarello and Marco Caniato discussed the initial results from the European project “SENSHome” that aimed to develop new design and smart home technologies that could be applied to houses dedicated to impaired people, improving their comfort and well-being. The research was primarily focused on autism rather than disability in general.

At the fourth talk, David Hiller of Arup provided an overview of the changes to the ANC 'red book' – ‘Measurement & Assessment of Groundborne Noise & Vibration’ since the second edition of the book and briefly reviewed the new content, followed by a wider discussion of the various vibration and groundborne noise criteria in current use and described within the book.

The fifth presentation was given by Teli Chinelis of Finch Consulting on the role of the expert witness in civil cases – CPR 35. Mr Chinelis explained that expert witnesses play a fundamental role within the judicial system by providing opinion evidence to assist courts in reaching decisions; and that to do so they are required to have relevant qualifications and experience in their professional field. An Expert Witness may be involved in court proceedings and may be called to give evidence. The Civil Procedure Rules (“CPR”) were introduced in April 1999 and further major developments came into effect in 2013.

The last presentation of the year delivered by Dr Miguel Garcia Pedroche of Head acoustics UK Ltd. was dedicated to Introduction to Sound Quality & Psychoacoustic. The talk aimed to introduce the principles of a Sound Quality centered design approach and the basics of the psychoacoustics predictors presented in part 3 of the ISO -12913 Acoustics – Soundscape standard - Data analysis.

This year we also actively supported the Acoustics 2020 conference. The branch committee would like to express special acknowledgement to Apex Acoustics Ltd. who organised and hosted the branch`s conference hub in Gateshead.

This year we also tried to organise one meeting in the face-to-face format, but only one person expressed interest in attending the event and therefore it was moved to the online format.

Plans for next year

2022 is again going to be busy for the Branch.

We have already agreed with three presenters to deliver the following talks this year:

1. Soundscape – practicalities and community engagement, by Pete Stollery from University of Aberdeen and Martin Purdy of Harp & a Monkey– 26th January 2022
2. Jon Tofts from the Environment Agency has agreed to give a talk on the EA`s new guidance on 22nd February.
3. Prof. Bridget Shield - on the history of the Royal Festival Hall – March 2022.

The branch committee also plans to meet in January to review the outcomes from the online survey conducted at the end of 2019. 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 received very valuable comments and suggestions from the respondents however due to the pandemic most of them were not possible to implement. We are also interested in multidisciplinary topics related to the UK and worldwide economy and public interest, including on the air and ground source heat pumps, wind and solar energy, hydrogen manufacturing, and on innovative materials and technologies.

We understand that we may still have to wait until face-to-face meetings are fully possible, however, we feel that by experiencing the virtual format of the meetings in the last two years, it is likely that not many will be willing to travel to the face-to-face meetings even when all the restrictions are lifted. Therefore, we intend to use the equipment provided to the branch by the IOA to host Acoustics 2020 and use it in the hybrid format of the meetings.

Statistic and Information Tables

TABLE 1: Membership

Grade		2021	2020	2019
Hon Fellow		34	33	34
Fellow		151	150	156
Member		1911	1861	1854
Associate Member		770	789	791
Affiliate		53	59	70
Technician Member		122	122	129
Student		295	320	340
Totals		3336	3334	3374
Founding Key Sponsor		2	2	2
Key Sponsor		1	1	1
Sponsor		45	51	49
Institutional Subscriber		3		

TABLE 2: Group membership

Group		2021	2020	2019
Building Acoustics		1712	1729	1276
Early Careers		466	450	412
Electroacoustics		537	539	525
Environmental Noise		1944	1954	1942
Measurement &		880	882	866
Musical Acoustics		604	609	588
Noise and Vibration		1380	1403	1367
Physical Acoustics		430	436	408
Senior Members		129	123	120

Speech & Hearing		398	398	384
Underwater Acoustics		341	336	324

TABLE 3: Branch membership

Branch		2021	2020	2019
Central		276	283	278
Eastern		282	292	285
Irish		137	142	136
London		959	992	990
Midlands		441	466	467
North West		463	483	481
Overseas		293	309	309
Scottish		199	204	196
South West		323	337	337
Southern		563	575	566
Welsh		96	93	84
Yorks and North East		258	272	265
Middle East		8		

TABLE 4 Details of employment (interests)

Employment Category		2021	2020	2019
Architectural Practice		467	477	463
Consultancy		2075	2127	2127
Education		510	528	747
Industry/Commerce		674	711	697

Public Authority		365	382	394
Research & Development		757	792	769
Retired		97	100	102
Other		217	233	224

Table 5: EVENTS AND ATTENDANCE IN 2021	
Topics, date and Venue	Attendance
ACOUSTICS 2021 11-12 October Virtual	226
Reproduced Sound 2021	74