

INSTITUTE OF ACOUSTICS

***39th ANNUAL REPORT OF THE COUNCIL
FOR THE YEAR ENDED 31 DECEMBER 2012***



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39th annual report of the Council for 2012

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

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

During the year:

- The Chief Executive, Kevin Macan-Lind, resigned in August 2012. He was replaced by the previous Chief Executive, Roy Bratby, who came out of retirement until a new Chief Executive could be appointed. A new Chief Executive was appointed in December and was due to take up post in January 2013. Chantel Sankey joined the staff at St Albans in January as the full-time Membership Officer.

- An ambitious programme of well attended conferences and technical meetings was undertaken at international, national and regional level. These included the 11th European Conference on Underwater Acoustics (ECUA 2012), which was held in Edinburgh and attracted 411 delegates and a jointly organised spring conference with the French Acoustical Society (SFA) in Nantes, attended by 960 delegates.

- Seven candidates presented themselves for CEng Professional Review Interview, of whom two were “Standard Route” candidates, holding accredited degrees, and five were “Individual Route” candidates with diverse backgrounds, including physics degrees. Their areas of employment were equally diverse – aerospace engineering, architectural and building acoustics, and naval noise and vibration engineering. One candidate, holding the University of Salford Acoustics degree, was elected IEng. All eight candidates were successful.

- The Diploma in Acoustics and Noise Control is now in its fifth year since extensive revision in 2008. During the year 97 students were awarded the Diploma with 108 new students registering for the course of which 63 have enrolled for distance learning, including six from overseas.

- An online survey of members was carried out; 37% of members responded
- The Institute's *Acoustics Bulletin* continues to provide a high standard of technical content and remains popular with members, as confirmed by the membership survey.
- Despite the financial climate, membership has been retained at just under 3,000.
- The Institute is represented internationally through the following members: Colin English (Vice President, EAA), Barry Gibbs (Director, IIAV), Prof Y W Lam (ICA Board), and Rupert Thornely-Taylor (Director, IIAV).
- The Institute once again sponsored the Noise Abatement Society's John Connell Technology Award.
- The Institute has purchased demonstration equipment to support the "You've Been Banned" acoustic workshop for presentation to schools. A number of volunteers have been trained and 12 workshops were delivered in schools during the year.
- The Institute continues to engage with a number of government departments (DfE, DCLG, Defra and DECC) to influence future policies affecting acoustics.

STANDING COMMITTEES

The operation of the Institute is guided by Council through standing committees concerned with Education, Meetings, Membership, Publications, and Research Co-ordination. There is also a committee of the Engineering Division. The reports of the various committees follow.

Education Committee

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

The Diploma in Acoustics and Noise Control is now in its fifth year since extensive revision in 2008. As a result of grades obtained in 2011/12, the Diploma was awarded to 97 students. Despite the fact that NESOT decided not to operate as a Diploma Centre for 2012/13, recruitment for the 2012/13 year has been buoyant at 108 including 63 by distance learning. The latter include six overseas students and an effort is being made to cater for them and attract more such students by videoconferencing the tutorials offered through the St Albans Centre, by making arrangements for examinations to be taken at suitable overseas venues and by arranging consolidated laboratory sessions in Liverpool.

The Education Committee is monitoring the effects of the changes in higher education funding on students and centres.

For the 2012/13 presentation of the Diploma the distance learning notes for the Noise and Vibration Control Engineering Module have been revised and edited. They will be distributed in January 2013.

In 2011/12, the Certificate of Competence Courses recruited as follows: Management of Hand-Arm Vibration 21 students (21 passes), Environmental Noise 230 students (200 passes), and Workplace Noise and Risk Assessment 41 students (40 passes). The Certificate of Proficiency programme in Anti-Social Behaviour (Noise) continues to be run in Scotland by Bel Education and Strathclyde University and recruited 27 students (23 passes) despite not being run in spring 2012 at Strathclyde as a result of a fire.

The Certificate of Competence in Building Acoustics Measurements had its second cohort of candidates at Southampton Solent University in 2012. A total of 15 students have taken the course (15 passes).

Since 2011, Diploma members have been able, for CPD or other reasons, to register for additional specialist modules. So far four people have taken advantage of this opportunity. Additional "formal" CPD courses (with a syllabus and assessment) are being considered in conjunction with groups and branches. Options for alternative delivery of courses (including e-learning) have been considered.

Since 2011 the Education Committee has agreed a policy whereby, if there have not been any material changes in facilities, tutors or delivery, then Certificate and Diploma Centres may achieve their (quinquennial) re-accreditation simply by submitting the necessary proforma without also being subjected to a visit.

In 2012 Council approved that sets of demonstration equipment to support the "You're Banned" acoustic workshop for presentation to schools could be purchased. A workshop on education in schools was held at the new IOA headquarters in May 2012 and was attended by 20 delegates including many Acoustic Ambassadors. A presentation was also made at the London branch. Twelve "You're Banned" presentations were given during 2012.

The Education Committee continues to be indebted to the support of its members, course tutors and examiners, the work of the Education Manager and for the assistance provided by the Education Administrator and other members of office staff.

Engineering Division Committee

The Committee met once during the year, confirmation of approval of registration for some candidates being given by email correspondence. One internal audit was carried out, with no non-compliances identified. The number of enquiries for registration from Institute members remained strong, but many potential candidates still deferred or failed to complete their applications, despite the personal support provided.

The number of formal applications for Chartered Engineer and Incorporated Engineer registration was higher in 2012 than in recent years. Seven candidates presented themselves for CEng Professional Review Interview, of whom two were "Standard Route" candidates, holding accredited degrees, and five were "Individual Route" candidates with diverse backgrounds, including physics degrees. Their areas of employment were equally diverse – aerospace engineering, architectural and building acoustics, and naval noise and vibration engineering. One candidate, holding the University of Salford Acoustics degree, was elected IEng.

All eight candidates were successful.

Medals and Awards Committee

Professor Yui Wei Lam of the University of Salford was awarded the 2012 Rayleigh Medal for his outstanding contributions to teaching and research in room acoustics. The medal was presented to Professor Lam at Acoustics 2012, the conference organised jointly by the IOA and SFA and held in Nantes. Also at the same conference, Carl Hopkins of Liverpool University was presented with the Tyndall Medal which is awarded in alternate years to younger acousticians for their achievements.

The (overseas) recipient of the 2013 Rayleigh Medal was also decided and awarded to Professor Jacques Guigné of PanGeo Subsea based in Newfoundland, Canada. The medal will be presented at the international conference on underwater acoustics (ECUA/UAM) to be held in Corfu in June 2013.

The A B Wood Medal for underwater acoustics (for 2011) was presented to Dr Kyle Becker at the ECUA conference in Edinburgh.

In October, at the NPPF meeting in Birmingham, Stephen Turner was presented with an Honorary Fellowship in recognition of his many years of service to the Institute and continuing contribution to acoustics in the UK.

Several awards were made at the autumn conference in Birmingham. John Hinton, who was President from 2008 to 2010, received an Honorary Fellowship and Ian Bennett received a Distinguished Services award in recognition of his many years as editor of the *Acoustics Bulletin*. Two ANC prizes were also presented by Sue Bird, the President of the ANC: the award for best IOA Diploma project (2011) to Richard Shears and for best paper presented by a young person at an IOA conference(2011) to Ned Crowe.

The Peter Barnett Memorial award was given to Pat Brown of SynAudCom in the USA. Unfortunately Pat was unwell and was unable to travel to Reproduced Sound to receive the award in person, so the citation and presentation were videoed and the award was subsequently presented in person by Peter Mapp on a visit to the US. Two other awards were presented at Reproduced Sound. Brian Tunbridge received a Distinguished Services award for his work in acoustics and for the Institute, in particular as chair of the Membership Committee. Luke Rendell was also presented with his (2011) prize for the best IOA Diploma student.

The final presentation of the year took place at the London branch dinner in November. The Engineering Medal was presented to Derek Sugden in recognition of his long and distinguished career in engineering acoustics.

Other awards made during the year were as follows. A Distinguished Services award was given to Dennis Baylis who has acted as the IOA Advertising Manager for many years (presented to Dennis at his home in France). The Professor D W Robinson prize for best ISVR MSc Audiology project was given to Sarah Meehan.

Meetings Committee

The committee met four times in 2012. The membership of the committee remains the same as last year. The committee constitutes a chair (Jeremy Newton), secretary (Hilary Notley), young member (Christopher Turner) and two other members – Ken Dibble and Paul Lepper.

The committee presided over the organisation of 14 meetings covering a wide variety of topics including the joint spring meeting with the French Acoustical Society and the very successful underwater acoustics international conference, ECUA 2012, held in Edinburgh. The feedback from the meetings' questionnaires continues to be very favourable. Given the global recession, the financial performance of meetings in 2012 has been very positive. The committee continues to scrutinise the financial performance of conferences for future events and ensures that lessons learnt from previous conferences are applied going forward.

Membership Committee

The committee met four times in 2012. Brian Tunbridge retired as Chair after six years in the post and was thanked for his support and commitment. Paul Freeborn was appointed as his replacement. It is intended to recruit a local authority member to the committee to improve the balance of the committee.

During the year 282 applications for membership were considered and 271 accepted. The majority of these were for new associate members and for associate members transferring to corporate member grade when they had accumulated sufficient experience.

The committee is now requiring all members to practise CPD and revised CPD forms have been posted on the Institute's website.

The committee considered seven Code of Conduct cases, four of which have been closed; one following a rejected appeal; two following advisory letters; and one following the resignation of the member. One case has been withdrawn and two are on-going.

The membership bylaws were revised to remove age limit requirements and also the Rules of Conduct have been clarified. Both the revised bylaws and the revised Rules of Conduct have been posted on the Institute's website.

A fast track process has been introduced to improve the efficiency of assessing non-corporate members.

2012	FIOA	MIOA	AMIOA	Tech	Affil	Student	Sponsor	Total
Applicants	3	105	120	17	2	29	6	282
Elected	3	99	114	17	3	29	6	271
New Members	1	27	93	16	3	29	5	174
Resigned	3	47	31	1	1	5	3	91
Deceased	1	3	0	0	1	0	0	5

Publications Committee

During 2012 the main focus of the Publications Committee was the revision to the website. Whilst the revision was initially about improving functionality, it was soon apparent that certain revisions would save vast amounts of administrative time and significantly reduce paperwork. Amongst other things the website was aiming to manage members' details, membership applications, conference organisation/registration and CPD, with the diploma and education coming after. Naturally, the devil of such projects is in the detail, and whilst there was excellent work in the planning and design of the website, there were plenty of data headaches trying to combine different database sources and getting the system to work seamlessly. The current work on the new website was stopped at the end of 2012 and the best way to proceed will be decided in 2013.

Acoustics Bulletin and *Acoustics Update* continue to provide a high standard of technical content, reporting news and details of the Institute's meetings and affairs. During 2012 feedback from the membership survey was received on both publications and views from members have been taken on board.

The IOA group on the social networking site LinkedIn continues to attract a steady stream of interested people, now with more than 3,800 members.

There have been relatively few changes in committee membership over the year with one person leaving the committee. There were several volunteers for the committee from the membership survey and we look forward to welcoming them to the committee in 2013. Thanks go to all members of the committee for volunteering their time over the year, especially members of the website sub-committee who have given many hours throughout the year.

Research Co-ordination Committee

During 2012, the committee met in May and October at the Defra offices in London. Some discussions focused on the general organisation, attendance and outcomes, and quality of contributions of the Acoustics 2012 conference in Nantes (France) in April 2012.

The committee discussed the scope for better liaison between the IOA, EPSRC, Defra and TSB and two committee members met with Dr. Tracy Hanlon of the EPSRC. The EPSRC tasked the RCC to come up with a list of grand challenges which acoustics as a discipline will face in the future. This request was discussed by the committee in May and a note was published in the October issue of the *Acoustics Bulletin* asking members to contribute to this list. These contributions have been compiled and communicated to the EPSRC.

The committee has spent a considerable amount of time discussing better integration between the IOA and IOP Physical Acoustics Group (PAG) communities (originally a joint IOA/IOP Group), joint meetings and joint membership. This issue is yet to be resolved and it is likely to be referred to the Council.

The committee have noted that serious cuts in the Research Council's funding in the UK may adversely impact on the acoustics research community. The committee have discussed alternative EU research opportunities and joint UK/EU opportunities which may help to maintain the existing level of research funding in acoustics in the UK and make better use of the world-class expertise which exists within the EU. Professor Horoshenkov has spoken to the EPSRC regarding this issue and possibilities for supporting collaborative projects which can be funded jointly with research councils from other EU partners. The committee, together with the Environmental Noise Group organised a workshop in London to discuss the Noise and Health Workplan put out for consultation by the Health Protection Agency.

SPECIALIST GROUPS

The Institute reflects the broad spectrum of the science and application of acoustics and several specialist groups exist to foster contacts between members of the various specialisms; the reports of the specialist groups follow below.

Building Acoustics Group

Another busy year has just passed with the Building Acoustics Group delivering high quality educational meetings, providing thorough and coherent consultations for new documents and standards, and promoting the IOA to a wider audience.

We were involved with organising the following meetings:

- The IOA Autumn Conference in Austin Court, Birmingham, 5 - 6 November 2012 – this was a team effort and the day was received well by all
- Acoustic Challenges in Green Buildings – held at BRE in September – thanks to James Healey for organising this meeting
- Nantes 2012 – Carl Hopkins attended this joint meeting with the French Acoustical Society (SFA) with Alex Krasnic providing remote organizational assistance to his SFA Building Acoustics counterpart.

The following work was also carried out:

- BB93 – Andrew Parkin has been involved in the revision of this document and is contributing in the review panel for section 2 which is being chaired by Bridget Shield
- BSI EH/1/6 – Rory Sullivan has been leading the BAG feedback to the working group committee
- BS8233 / ISO414 – Rory Sullivan has been leading the BAG response
- And many more...

We thanked Mike Barron and Alistair Somerville as they stepped down from their positions as BAG committee members. We cannot thank them enough for their contribution over many years. In their place we welcomed Alex Krasnic and Rory Sullivan as full members of the committee having being co-opted for a number of years.

2013 looks like being another exciting year with the IOA spring meeting which is being organized collectively by many of the specialist groups including BAG. We are very much looking forward to meeting the new CEO and are excited that this could bring a new dynamism and energy to everything that the IOA does.

Thank you to all the people who have given their time so generously. We really couldn't do it without you.

Electro-acoustics Group

During 2012, the Electro-acoustics Group committee organised and put on Reproduced Sound 2012, the annual two-day conference that has run every year since 1984. This was held at the Thistle Hotel in Brighton and was once again well attended by both regulars and new faces. Feedback (questionnaire forms) was sought from the attendees and these have been scrutinised to help with future events, especially the input from the new influx of student attendees.

It was announced at RS2011, and confirmed at RS2012, that Reproduced Sound 2013 would be in Manchester/Salford, making full use of links established with BBC Salford, MediaCityUK and The University of Salford. Themes will include the role of audio in broadcast, with the scope widening to include video conferencing and "new media" distribution. As ever, abstracts from the wider range of subjects affecting Electro-acoustics will be welcomed.

At the EAG AGM, held at RS2012, the 2013 committee was agreed. Paul Malpas remains as Chairman, and Helen Goddard as Secretary. Other offices had been developed within the EAG Committee, and this being a definite team effort, the contributions of all members were acknowledged and appreciated.

Environmental Noise Group

In June and October 2012 the IOA hosted one-day workshops to consider the implications of the government's new National Planning Policy Framework including the removal of Planning Policy Guidance 24 (PPG24). Graham Parry led the meetings, with break out sessions discussing various aspects of how members work on the planning arena would be affected by new government policy.

During the year the ENG committee considered four public consultations and prepared responses to two; the European Commission's consultation on the implementation and effectiveness of EC Directive 2002-49, the Environmental Noise Directive, and a Department for Transport consultation on aviation noise policy. In response to the need to involve a wider membership, notifications of the consultations were issued by email through *Acoustics Update* and members were invited to respond alone or to contribute to the Institute's response. The IOA responses are now routinely posted on the website.

Four committee meetings were held in 2012 and the committee analysed the IOA member survey responses, reporting to Council on members' requests, and proposed actions, including the need to continue to hold workshops, to publish technical articles in the *Acoustics Bulletin* and to facilitate information on revisions to standards and guidelines.

Measurement and Instrumentation Group

During the past year the group has organised two one-day meetings. In March, the first one-day meeting was held at the Royal Society in London entitled Environmental Noise Propagation – definitions, measuring and control aspects which attracted 76 delegates and nine authors to a wide-ranging set of topics ranging from weather and vegetation effects to exhaust stacks and sonic crystal barriers.

Later than originally planned, in November, a one-day meeting was organised in conjunction with the Young Members' Group and was entitled Basics of Measurement - Practical Implementations, which was primarily aimed at spreading good measurement practices to people who may be either new to the measurement field or in need of some refreshment of the principles involved. Forty-two people attended the session held at the Building Research Establishment in Watford, which also included a short tour of their facilities. The group's AGM was also held during this meeting.

Over the past year, the group's committee members have continued contributing to the regular Instrumentation Corner article in the IOA's Bulletin, which has produced some interesting discussion and articles, and this is scheduled to continue for the forthcoming year.

A programme of three one-day meetings has been planned for 2013, with the first of these covering the latest vibration measuring techniques is scheduled for 21 March 2013 at the HSL in Buxton, Derbyshire.

Thanks go to all members of the committee for the active roles they take in all aspects of the group's activities and to Martin Armstrong for his secretarial skills on behalf of the group.

Musical Acoustics Group

Progress continues with revitalising the Musical Acoustics Group (MAG) although there have been some set-backs. Firstly, the proposed one-day meeting due to be held at the National Museum, Cardiff in May had to be abandoned due to lack of support. It would appear that the geographic location and timing of this event close to the conference in Nantes may have been contributory factors. Secondly, the MAG AGM that should have been held at London South Bank University had to be abandoned due to the fact that only the acting Group Chair was present. Nevertheless, it was agreed by Council that further efforts should be made to "spark new life" into the group as there were a significant number of members who supported the MAG. The 2012 Institute's membership survey showed that 45 members, out of total of 1,077 members who responded, indicated that they belonged to the MAG and 48 members positively responded as being interested in the group. With a total of more than 2,800 members in the Institute there could well be many others who did not respond to the survey but are, nevertheless, interested in the MAG. However, over half of the respondents to the survey were consultants and it would seem that some members in this sector would also like to take interest if they had time to do so.

As a move to spark new life into the MAG, it is considered essential that events should be held and a call for papers for a one-day meeting in London entitled Acoustic Challenges in Quires and Places Where They Sing went out in November 2012. However, some concerns over the cost of one-day meetings have been expressed by members of the MAG and efforts will be made to explore ideas for further events that involve less cost. A MAG newsletter is also proposed and it is also hoped that the MAG will host sessions in the 2013 Spring Conference.

Getting together a formal committee has been a problem as travelling distances may still discourage attendance. The possibility of holding group AGMs by teleconferencing is also being considered. Whilst this method may be possible for ordinary committee meetings, at the present time, the IOA terms of reference for specialist groups would prevent holding an AGM in this way until details of how such a method encompass the committee election process can be worked out. At present, Michael Wright is acting Group Chair with David Sharp as Group Secretary. It is proposed that an informal meeting of the group will be held at the IOA HQ in early 2013 with teleconferencing facilities arranged to enable all interested members to participate. It is hoped that following this meeting, the group will be in a position to move further forward.

Noise and Vibration Engineering Group

Five committee meetings were held during the year, mainly by teleconference, supplemented by smaller subgroup meetings to develop specific events. The committee meetings focused on planning events of interest to the membership.

The group assisted in the organisation of Acoustics 2012 by co-organising a session on noise and vibration engineering with our SFA colleagues. Malcolm Smith also chaired a plenary session. An event organized jointly with HSE on Buy Quiet/Design Quiet was planned for December, but a change in committee membership (Tim Ward from HSE being replaced by Sarah Haynes) led to this meeting being delayed until March 2013. A meeting on vehicle NVH was also planned at Loughborough University, but this is now going to form a session in the Spring 2013 Conference.

Other changes and contributions to the IOA include: Reuben Peckam has been appointed as an examiner for the Noise and Vibration Control Diploma; Simon Stephenson has joined the committee; Dave Lewis has decided to turn the NVEG newsletter into a contribution to *Acoustics Update*.

Physical Acoustics Group

The Anglo-French Physical Acoustics Conference (AFPAC) was held in Brighton at the Thistle Hotel from 18-20 January 2012. This was a joint meeting with the GAPSUS group of the Société Française d'Acoustique, and brought together acousticians from both countries. The meeting was well attended with 44 papers being presented. The conference was widely acclaimed as being very successful.

A tutorial day on physical acoustics was held at the Institute of Physics in London in September. Three external speakers presented tutorials that were accessible to non-specialists in their field. This year's theme was Modelling Techniques in Physical Acoustics with presentations by Dr Steve Langdon (University of Reading), Dr Patrick Macy (PACSYS Ltd) and Dr Andrew Nowacki (University of Bristol). At the meeting the Bob Chivers Prize, for the best published paper in physical acoustics by a PhD student, was presented to Pierre Gélat of the National Physical Laboratory and University College London for his paper on modelling the acoustic field of a high intensity focussed ultrasound array scattered by human ribs.

Senior Members' Group

The Senior Members' Group is progressing slowly – the more so as we get older! All communications have been by email, particularly with the committee, and this seems to have worked.

Two meetings have been held during the past year. The first was our AGM which was kindly hosted at Ecophon. Geoff Levenhall was our speaker. The timing in January was based on our first AGM and was not found to be ideal so it is planned to have our next AGM on 19

March 2013 at IOA headquarters in St Albans. An autumn meeting that had to be delayed took place in December at Stansted Airport on the subject of aircraft noise. Rupert Taylor, our speaker, gave us an interesting review of airport noise. The participants at this meeting came from across the IOA membership.

The SMG had three volunteers who have been cooperating on testing the new website.

SMG members attended a one-day meeting at the Royal Society to offer advice and guidance to young and potential members to the IOA. SMG have not held any formal joint meetings with the YMG.

SMG members took part in the Webinar trial.

The Chairman of SMG has been in touch with the CPD Committee and attended the September meeting of the Membership Committee when the CPD Committee reported. The work of the CPD Committee is completed apart from full implementation. The SMG has offered to find volunteers if the IOA requires surveillance of the scheme.

The History Project is progressing under the guidance of Geoff Kerry with assistance from SMG members.

Speech and Hearing Group

The Speech and Hearing Group held two events during 2012. The first was a talk entitled Progress and Prospects in Spoken Language Processing by Professor Roger Moore of the University of Sheffield, held in April (and followed by the group's AGM). The other, co-organised by the London Branch, was a talk in May given by Johnny Robinson, introducing the National Sound Archives at the British Library, and was very well attended. A further meeting, a talk on protecting the Professional Ear by Andy Shiach of Advanced Communication Solutions, was also co-organised with the London Branch and scheduled to be held in December, but had to be postponed due to unforeseen circumstances. An alternative date is being investigated.

Members of the group were active in the organisation (particularly with respect to reviewing submitted papers) of the sessions on topics relating to speech and hearing at the joint SFA & IOA Acoustics 2012 conference held in Nantes, France, in April.

Discussions are under way with the British Society for Audiology to hold a joint workshop on Good Practice in Speech Audiometry during 2013. The group is also liaising with the British Library to arrange a visit to and talk on their Sound & Vision Section. A talk on Looking after your Voice, and a follow-up to the successful one-day tutorial workshop on Speech Recording and Analysis, held in London in 2010, are also planned.

The group committee met five times (in February, April, July, October and November) during 2012. The group's AGM, as noted above, was held in April 2012. This meeting was quorate, but attendance was rather disappointing, possibly due to it taking place on a Friday afternoon.

During the course of the year, Graham Frost (due to poor health) and Ed Weston (who was taking a career break) resigned or stood down from the group's committee. Dr. Bradford Backus was elected as an ordinary member of the committee at the AGM. The remaining committee members due for re-election were re-elected unanimously.

Underwater Acoustics Group

In 2012, the Underwater Acoustics Group continued to concentrate on the dissemination of knowledge via its conferences, primarily through the organisation of the 11th European

Conference on Underwater Acoustics, 2-6 July in Edinburgh at Heriot-Watt University. The event was organised by a committee led by Chris Capus, and we thank Chris for his efforts. The conference attracted more than 400 papers and close to a record number of attendees. In particular, the social events were very popular, and included a Scottish themed conference dinner, a whisky tasting and a musical evening at the Reid Concert Hall Museum of Instruments. A number of major sponsors supported the event, including the US Office of Naval Research (ONR), the Acoustical Society of America (ASA), Ultra Electronics, Wildlife Acoustics, Hydrason and Webistem. A new venture was the on-line publication of proceedings via the ASA's open-access journal Proceedings of Meetings on Acoustics (POMA). Following this success, the group is dedicating its efforts to future meetings, including a session at the IOA spring conference 2013.

Young Members' Group

The Young Members' committee meets quarterly. We have a representative on most of the specialist groups and regional branches.

We have made good progress this year in terms of raising the profile of the group and involving more of the members.

The group has held two technical seminars this year on public inquiry procedures. The seminars were open to all, although aimed at those in the early stages of their career or wanting to better understand the public inquiry procedures. The seminars addressed procedural issues followed by a mock inquiry. The seminars held in London and Manchester were very well attended with positive feedback. A third seminar is planned for Birmingham in 2013.

The group has also jointly organised one-day meetings. For example, in September, we assisted the Building Acoustics Group in organising the Acoustic Challenges in Green Buildings one-day conference. In November we teamed up with the Measurement and Instrumentation Group to assist in organising the conference on The Basics of Measurement.

We have also been keen to promote networking and social evenings for the members. We held a sponsored pizza and pub quiz evening in London and drinks at Christmas.

We plan to continue providing technical seminars in 2013 and involving the young members of the Institute as much as possible.

REGIONAL BRANCHES

The regional branches of the Institute exist to further the technical and social activities of the Institute at local level.

Central Branch

Central Branch held eight meetings during 2012 with an average attendance of 20, attracting a total of 89 different people (including the speakers). The length of the first meeting's title Uncertainty in Field Measurements and in Prediction of Sound Pressure Levels, which was presented by Colin Cobbing and Bob Peters and well attended at NHBC, could be considered to be an indicator of the importance of this subject, although there is probably no correlation between these factors.

This was followed up a few months later by the University of Salford team's presentation on Human Response to Vibration in Residential Environments again at NHBC, which tied with the later railway noise meeting for the highest number of attendees (26).

The National Physical Laboratory kindly hosted a fascinating visit covering a wide range of research topics in June, with Richard Tyler's Have You Been Set Up – Calibration talk hosted

by Casella in July. The Open University hosted September's meeting on Current Acoustics Research at the OU, which provided an interesting insight into aspects of acoustics that are beyond the experience of most acousticians working in commercial environments.

In October, Dani Fiumicelli facilitated a topical discussion about the National Planning Policy Framework and Noise Policy Statement for England. The aim was to consider how these policies are being implemented in practice and what effect this is having. November's meeting on Railway Noise – What Every Acoustician Should Know, presented by Brian Hemsworth was again hosted by NHBC and provided a well explained and comprehensive insight into many of the factors affecting the level and propagation of noise from railways. The year was rounded off with a tour of Marshall Amplification's production facility in Milton Keynes which provided an opportunity to see some audio equipment being built that most musicians can only ever aspire to own or even use.

Our grateful thanks are extended to all the speakers and the venues for hosting for the meetings.

Eastern Branch

The Eastern branch has had a successful year with six meetings on various subjects at various locations to cover the large geographical area covered by the branch. It has always been a source of bemusement as to what influences a member's decision to attend a meeting, whether it is the subject matter, the speaker, the location, the time or what is on television! Having varied all the above (with the exception of the TV schedule) we are still none the wiser but the turnout for our varied presentations has been encouraging, whether it has been a site visit at Perkins diesel engines acoustic facility in Peterborough or a demonstration on the certification of instrumentation calibration at Campbell Associates laboratory in Great Dunmow. The branch is extremely grateful to all speakers and hosts who offer their time, knowledge and experience for the benefit of the members.

The occasional committee meeting was replaced this year with email discussion and a can do attitude to arrange many of the speakers and locations by individual members, not least through Clive Pink, our secretary, who has provided sterling support to the branch once more.

Having steered the Eastern Branch for four years the Chairman, Colin Batchelor, took a final bow and handed over the reins into the capable hands of Martin Jones of Pace Consult, passing the sphere of influence from local authority to consultancy once more. We wish Martin well during his tenure and look forward to another action packed year of acoustic enlightenment.

Irish Branch

Two events were organised by the Irish Branch in 2012.

In mid July we held our AGM at a one-day meeting to allow for local discussion on the recent release of the IOA's A good practice guide to the application of ETSU-R-97 for wind turbine noise assessment. At the AGM Brian McManus stepped down from committee after twelve years of service. The meeting itself was very informative and had very positive feedback from all attendees.

In October we held the seventh annual Gerry McCullagh Memorial Lecture at which Wolfgang Babisch of the Federal Environment Agency of Germany gave a most interesting talk on The Burden of Disease from Environmental Noise. This was very different to the more typical discussion of what noise limits are considered appropriate (particularly for planning scenarios where environmental health and consultants need to come to an agreed point) and where the discussion was more on the particular health effects (heart disease and other associated illnesses). These are considered to be associated with exposure to noise events that cause the body's natural instincts to react, but where the person does not

physically react and hence there becomes a build-up of “toxins”. This led to one of our longest discussion periods for some time.

London Branch

Our London evening meetings have been successfully held for the third year at WSP’s offices. Attendance began well this year, with two sessions drawing 60 and 84 attendees in January and March respectively. Attendance at all other meetings has typically been between 20 and 30 people.

It has been another very busy year which has included nine events comprising of seven evening meetings, a one-day meeting held at London South Bank University and our annual dinner.

As usual, the topics for the evening meetings have been very varied in nature, covering subjects such as the British Library sound archives; human response to vibration; and the sound of Stonehenge.

2012 was an iconic and unforgettable year, dominated by the Olympic Games. The first evening meeting of the year set the scene, with Vanguardia Consulting’s Olly Creedy discussing the development of the noise prediction and noise management plans for the Olympic Park. This presentation was followed in February by a talk by Dan Saunders, of Bruel & Kjaer on internet-enabled instrumentation, and how this technology can simplify the way acousticians monitor noise and vibration. In March, David Waddington and James Woodcock presented a summary of the Defra NANR209 project, which investigated human response to vibration in residential environments. This was obviously of great interest, with the highest attendance of any evening meeting in 2012. Three students from London South Bank University presented summaries of their MSc projects for the evening meeting held in April. The three projects were considered the best MSc projects of 2011, and were put forward for the RBA Acoustics prize.

A joint evening meeting in collaboration with the Speech and Hearing Group was held at the British Library in May. This fascinating presentation by Jonnie Robinson, the Curator of the Socio Linguistics, gave an insight into the development of British dialects during the last century. Jonnie also demonstrated a number of online resources developed in-house and reviewed on-going research.

Music to your ears – outdoor entertainment and environmental noise was the title of the one-day meeting, held at London South Bank University in June. Topics covered included effects of the weather on sound propagation; acoustic control of outdoor events; modelling of stadia and arenas; and licensing. The meeting was followed by the IOA AGM, during which Professor Bridget Shield was inaugurated as IOA President.

Following a two month summer break, Richard Collman and members of the IOA Education Committee discussed the role of Acoustic Ambassadors, and looked at the tools available to use for sound education in schools. October’s meeting was hosted by Dr Bruno Fazenda of the University of Salford who reviewed research looking at the “sound of Stonehenge”. This was the last evening meeting of 2012. The meeting scheduled for December on hearing loss and hearing protection unfortunately was cancelled at short notice. It is hoped that this can be rescheduled with Andy Shiach for 2013, as the topic was generating a great deal of interest.

November saw a new venue for our annual dinner. Pescatori, an Italian fish and seafood restaurant in Charlotte Street, W1 played host this year, providing good food and a pleasant ambience. During the evening, Derek Sugden, former Arup Associates Chairman and founding principal of Arup Acoustics, was awarded the 2012 IOA Engineering Medal by Bridget Shield. Rupert Thornely-Taylor provided a lighthearted after dinner talk entitled

Acoustical Reminiscences and Prophecies, which looked at the changes in acoustics over the two centuries spanned by his career, examined today's issues facing acousticians and what the future may hold in the industry.

Exciting and interesting talks are already planned for 2013. We would like to thank all the members of the London Branch committee and, of course, the Institute staff at HQ for all their invaluable support throughout 2012. We would also like to thank all London Branch members for their continued support at the meetings and of course all the speakers who have helped make the London Branch such a success.

Midlands Branch

The Midlands Branch has had another successful year in 2012. We held 12 well attended evening meetings, one each month, with an average attendance of about 30. The meetings covered a wide and interesting range of subjects at seven different venues across the region, as can be seen from the list below. We aim to appeal to the wide range of members' interests in the region. CPD certificates were provided at all meetings, which were as follows:

- 31 January **Noise and Statutory Nuisance**
David Horrocks (Statutory Nuisance Solutions)
(Venue: University of Derby)
- 15 February **Human Response to Vibration in Residential Environments**
David Waddington, Eulalia Peris, Gennaro Sica, James Woodcock (University of Salford)
(Venue: URS Nottingham)
- 22 March **Aspects of Research at the Institute of Hearing Research**
Chris Sumner, Ian Wiggins (University of Nottingham IHR)
(Venue: University of Nottingham)
- 18 April **Improving management Decisions through the Effective Management of Uncertainty**
Colin Cobbing (ARM Environment), Bob Peters (Applied Acoustic Design)
(Venue: Atkins, Birmingham)
- 23 May **Ground-borne Noise and Vibration: Prediction and Mitigation for the Thameslink-Canal Tunnels Project**
Steve Cawser (URS), Barnaby Temple (LB Foster)
(Venue: Aston Court Hotel, Derby, jointly with the RPWI)
- 20 June **Hospital Noise – is it really a problem?**
Nicola Shiers (London South Bank University)
(Venue: URS Nottingham)
- 18 July **Environment Agency Regulation of Noise**
Tony Clayton (Environment Agency England and Wales)
(Venue: Atkins Birmingham)
- 22 August **Responding to the END by Demonstrating the Benefits of Rail Grinding on the GB Railway Network**
Oliver Bewes (Arup Acoustics)
(Venue: Arup Campus, Solihull)
- 25 September **IOA Diploma Student Projects, University of Derby Noise Exposure of Amateur Brass Musicians and Noise Reduction Methods**
Martin Hamer

An Investigation into the Efficacy of a Commercially Available Acoustic Absorbent Material in Reducing the Airborne Sound Transfer of an Acoustic Guitar through a Suspended Floor

Matthew Barnes

(Venue: University of Derby)

- 18 October **Underwater Bioacoustic Research**
Paul Lepper (University of Loughborough)
(Venue: University of Loughborough)
- 28 November **Wind Turbine Noise: A Brief History and some Technical Issues**
Andy McKenzie (Hayes McKenzie)
(Venue: University of Derby)
- 11 December **Environmental Noise and Effects on Health: Recent Developments**
Bernard Berry (Berry Environmental)
(Venue: University of Derby)

The branch committee would like to thank the speakers for their excellent technical contributions, and the various sponsoring venues: Atkins Birmingham, Arup Solihull, URS Nottingham and the Universities of Derby, Loughborough and Nottingham, who provided the vital facilities and refreshments. Finally, thank you to the branch members who have supported us so well again this year.

The committee is unchanged for 2013.

North West Branch

During 2012 the energised branch committee with its influx of some new faces organised six successful meetings starting in February at BDP with a presentation by Lisa Lavia of the Noise Abatement Society. Lisa covered the dual subjects of Quiet Night Time Deliveries and Using a Soundscape Approach to Address Night Noise Issues in Brighton, where good practice in delivering goods near residential properties at night and the calming effects of a pleasant acoustic environment on late night street life were described.

In March, a one-day meeting was organised by the NW Branch, ably assisted by HQ, on Sustainability and Renewable Energy at the Victoria and Albert Hotel, Manchester. The topics included BREEAM assessments, sustainability in building design, the effect of electric vehicles, the acoustic issues associated with building services plant in sustainable buildings and the measurement of air source heat pumps, plus the ongoing impact of wind turbines, but this time due to smaller scale types. Much of the organisation was undertaken by Will Martin and Paul Freeborn.

A limited number of participants undertook a tour of the Liverpool Institute for Performing Arts (LIPA) in June. LIPA was co-founded by Sir Paul McCartney and Mark Featherstone-Witty and is housed in Paul McCartney's old school. Pete Philipson of LIPA gave a fascinating conducted tour that included the Paul McCartney auditorium and main recording studios, and illustrated the acoustic requirements and design of the spaces. The trip was arranged by Dave Poley.

In September, Dr Paul Lepper of the Underwater Acoustic Research Department at Loughborough University provided a talk on the Effects of Underwater Noise on the Marine Environment at BDP. Paul fascinated the audience, many of whom were new to underwater acoustics, describing the potential impact of man-made noise on a variety of marine species.

The AGM in October held at BDP provided the starter to a presentation by Peter Mapp who discussed his vast experience in the design of sound systems for a wide range of project environments in From Harry Potter to the Mersey Tunnels via multipurpose spaces – can

sound systems really overcome poor or inappropriate acoustics? Peter took the opportunity of expressing his concern that acoustic conditions are being relaxed by acoustic consultants. He asked, are they under pressure from the “value engineering” exercise, to a position where the design of appropriate sound systems becomes difficult or impossible.

The last meeting was held in November at the renowned Chethams School of Music, where Steve Swan of Arup Acoustics led a tour of the new music teaching building. Steve, who had led the acoustics consultancy team, introduced a large group of interested observers to the new £31million building with its many teaching rooms, rehearsal rooms, recording studios and 100 seat recital hall, not to mention the huge cavernous space for a future 350 seat concert hall.

Thanks to BDP for hosting most of the meetings during the year and all those who provide the backup at the venues.

Scottish Branch

2012 has been a relatively quiet year in terms of branch meetings. We hope to be much more active in 2013.

However, Scottish branch members have been active in responding to several Scottish Government Consultations, including the proposed Technical Guidance for Section 7 of the Non Domestic Technical Handbooks on Sustainability Labelling for Schools. Thanks to Chris Steel for feeding into the Building Acoustic Group’s response and Ann Budd for coordinating this.

Scottish Branch, via the IOA Accreditation Board members, also responded to the Scottish Government Building Standards Division review of the Sound and Air-tightness Testing document. Thanks go to Alistair for coordinating the Scottish Branch response to this consultation.

The IOA’s accreditation scheme for sound insulation testing accredited its first member in 2012. This scheme differs from the ANC scheme in that it is exclusively an accreditation of the individual tester rather than being linked to an organisation. Congratulations to David Barbour in becoming the first Scottish Branch member to be accredited under the IOA scheme.

The Chair, Secretary, Treasurer and Young Person’s Representative of the Scottish Branch remain unchanged. Many thanks to Andy Watson for continuing to look after Scottish Branch financial matters, to Nicola Robertson for her continued commitment as Young Person’s Representative and to Committee members for their support.

Southern Branch

The Southern Branch has been inactive during 2012 but is now in the process of being revitalised; with the aim of serving its members in 2013. An interim committee has been formed comprising Peter Rogers as acting Chair and Daniel Saunders as acting Secretary. A vacant place is available for a young member on the committee to assist in delivering this year’s evening meetings, so please do express an interest to us if you fancy the challenge.

The year will start with an AGM at the end of January to formally elect new committee members. Presentations on calibration and railway noise have already been organised with updates on planning and wind turbine noise also expected during 2013. Ideas for future topics are always welcome and the committee would be pleased to hear of these and other ideas for how the branch could best serve members.

South West Branch

The South West branch organised a meeting on Sustainability and Ecominimalism: The Architect and the Engineer in October. This was held at Atkins’ Bristol office and was

presented by architect Lee Fordham, of Archetype and Nick Cullen, head of R&D at Hoare Lea.

The meeting provided a fascinating insight into some emerging trends in building design and how this can affect acoustics among other fields. This can sometimes have bonuses for acoustics, for example the very good performance of façades using the Passivhaus system.

The branch was represented at the Groups and Branches meeting at head office by secretary Dan Pope.

Other than this, the branch had a outwardly peaceful year as several planned talks did not come to pass, but these are now back on track and we look forward to a more active 2013.

Welsh Branch

2012 was another modest but successful year for the Welsh Branch with one well attended event organised. Wind Turbine Noise 7 was held in January at the SWALEC Stadium, Cardiff. The event was fully subscribed in advance and drew attendees from government, local authorities and consultants.

The day itself went very well with a mixture of leading Industry speakers and an engaged audience contributing to a robust and healthy debate. Another event is expected for 2013 on another topic and it is hoped that it will be as successful as the event held in 2012.

Yorkshire and North East Branch

The Branch held two meetings in 2012, at the University of York and the University of Bradford.

At the meeting at the University of York, Dr Dave Chesmore gave a talk entitled The Hidden World of Sounds. This covered infra-, ultra- underwater and vibrational sounds, concentrating on animals and insects. Many examples were given, and sound detection and identification was discussed. Dr Chesmore also discussed sound evolving in different habitats. Some examples included mole crickets excavating an acoustic chamber that can generate sounds in excess of 70dB and caterpillars talking to each other, and in conflict having acoustic battles!

The meeting in Bradford was preceded by our branch AGM, the main issue being the election of the committee. The following were elected:

Chairman: Dave Chesmore

Secretary: Dave Daniels

General Committee: Niall Smith, James MacKay, Simon Clothier, Kirill Horoshenkov

Young Members Rep: Michael Pimlott

Professor Horoshenkov then gave a talk entitled Natural Means for Noise Control. He discussed the factors influencing a Tranquility Rating (TR), and the acoustic absorption of soils, plants, etc. The involvement of visual and acoustic interaction determining what is tranquil was presented, and the derivation of a Tranquillity Scale.

There were two stages, photographic assessment and subjective assessment using audio/visual stimuli. Equations for TR were derived through Linear Regression Analysis, also cultural differences on what is tranquil.

Pot plants were put in an impedance tube, different types of plants with different leaf types, with/without soil, measuring the equivalent flow resistivity (tortuosity) of the plant. He concluded that by selecting soil/plants, noise can be controlled.

MEMBERSHIP

Grade	2011	2012
Hon Fellow	34	35
Fellow	179	173
Member	1698	1722
Associate Member	742	733
Affiliate	67	65
Technician Member	78	81
Student	79	67
Totals	2931	2930
Key Sponsor	3	3
Sponsor	51	51

GROUP MEMBERSHIP

Group	2011	2012
Building Acoustics	1206	1226
Electro acoustics	311	322
Environmental Noise	1500	1540
Measurement & Instrumentation	455	499
Musical Acoustics	286	280
Noise and Vibration Engineering	968	984
Physical Acoustics	183	199
Senior Members	81	104
Speech & Hearing	193	186
Underwater Acoustics	156	172
Young Members	116	145

BRANCH MEMBERSHIP

Branch	2011	2012
Central	148	172
Eastern	262	260
Irish	131	127
London	732	767
Midlands	395	387
North West	378	386
Overseas	315	326
Scottish	163	160
South West	265	265
Southern	456	454
Welsh	67	71
Yorkshire & North East	213	224

DETAILS OF EMPLOYMENT

Employment Category	2011	2012
Architectural Practice	42	43
Consultancy	1397	1420
Education	244	221
Industry/Commerce	369	365
Public Authority	390	370
Research & Development	219	219
Retired	146	149
Other	88	91

MEETINGS ATTENDANCE IN 2012

Topic, Date & Venue	Attendance
Wind Turbine Noise 26 January Cardiff	85
Sustainability & Renewable Energy 1 March Manchester	27
Environmental Noise Propagation 21 March London	54
Acoustics 2012 23-27 April France	960
Music to Your Ears 12 June London	74
National Planning Policy Framework 28 June London	75
ECUA 2012 2 – 6 July Edinburgh	411
Good Practice Guide on Wind Turbine Noise 18 July Dublin	29
Good Practice Guide on Wind Turbine Noise 13 September London	40
Acoustic Challenges in Green Buildings 26 September Watford	30
National Planning Policy Framework 2 October Birmingham	69
Autumn Annual Conference 2012 6 November Birmingham	102
RS2012 14-16 November Brighton	97
Basics of Measurement 27 November Watford	42

INSTITUTE PERSONNEL AT 31 DECEMBER 2012

<p>COUNCIL</p> <p>Officers</p> <p>President President Elect Immediate Past President Honorary Secretary Honorary Treasurer</p> <p>Vice Presidents</p> <p>Engineering Groups & Branches International</p>	<p>Prof B M Shield HonFIOA Mr W Egan MIOA Prof T J Cox MIOA Dr N D Cogger FIOA Dr M R Lester FIOA</p> <p>Mr R A Perkins MIOA Mr G Kerry HonFIOA Dr W J Davies MIOA</p>	<p>Ordinary Members</p> <p>Ms L D Beamish MIOA Mrs A L Budd MIOA Mr K Dibble FIOA Dr E E Greenland MIOA Dr P A Lepper MIOA Mr R Mackenzie MIOA Mr G A Parry MIOA Mr A W M Somerville MIOA Mr D L Watts FIOA</p>
<p>Committees & Sub Committees</p> <p>Education</p> <p>Diploma in Acoustics and Noise Control, Board of Examiners Certificate of Competence in Environmental Noise Measurement Certificate of Competence in Workplace Noise Assessment Certificate of Proficiency in Anti-Social Behaviour (Scotland) Act 2004 (<i>IOA/REHIS</i>) Certificate in the Management of Occupational Exposure to Hand Arm Vibration</p> <p>Engineering Division Medals & Awards Meetings Membership Publications Research Co-ordination</p>		<p>Chairman</p> <p>Mr S W Kahn MIOA Mr S J C Dyne FIOA Dr M E Fillery FIOA Mr G Brown MIOA Mr S Williamson MIOA Mr T M South MIOA Mr R A Perkins MIOA Prof B M Shield HonFIOA Mr J P Newton MIOA Mr P T Freeborn FIOA Mr A Lawrence MIOA Prof K Horoshenkov FIOA</p>
<p>Specialist Groups</p> <p>Building Acoustics Electroacoustics Environmental Noise Measurement & Instrumentation Musical Acoustics Noise and Vibration Engineering Physical Acoustics (<i>Joint with the Institute of Physics</i>) Senior Members' Group Speech & Hearing Underwater Acoustics Young Members' Group</p>	<p>Chairman</p> <p>Mr R O Kelly MIOA Mr P R Malpas MIOA Mr S C Mitchell MIOA Mr R G Tyler FIOA Mr M Wright MIOA Dr M G Smith MIOA Prof V F Humphrey FIOA</p> <p>Mr R J Weston MIOA Dr G J Hunter MIOA Dr P F Dobbins FIOA Ms L D Beamish MIOA</p>	<p>Secretary</p> <p>Mrs A L Budd MIOA Ms H M Goddard FIOA Ms N D Porter MIOA Mr M J Armstrong MIOA Mr D Sharp MIOA Mr M D Hewett MIOA Prof M Lowe</p> <p>Mr M R Forrest MIOA Mr D Nash MIOA Dr R A Hazelwood MIOA Ms E Keon MIOA</p>
<p>Regional Branches</p> <p>Central Eastern Irish London Midlands North West Scottish Southern South West Welsh Yorkshire & North East</p>	<p>Chairman</p> <p>Mr R A Collman MIOA Mr C L Batchelor MIOA Dr M R Lester FIOA Mr J E T Griffiths FIOA Mr P J Shields MIOA Mr P E Sacre MIOA Mr A W M Somerville MIOA Dr N D Cogger FIOA Ms H G Kent MIOA Mr G O Mapp MIOA Dr D Chesmore FIOA</p>	<p>Secretary</p> <p>Mr M Breslin MIOA Mr C M Pink AMIOA Mr S Bell MIOA Mrs N Stedman-Jones MIOA Mr K Howell MIOA Mr P J Michel MIOA Ms L Lauder MIOA Mr S J Gosling MIOA Mr D C Pope MIOA Mr J M Keen AMIOA Mr D Daniels MIOA</p>
<p>Acting Chief Executive: Mr R Bratby</p>		