

INSTITUTE OF ACOUSTICS

***34th ANNUAL REPORT OF THE COUNCIL
FOR THE YEAR ENDED 31 DECEMBER 2007***

***Institute of Acoustics
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Achievements

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. Strategic development of the Institute continued to be a priority and various actions were implemented.

During the year:

- A full time Membership and Publications Officer was appointed to assist with membership, publications, and the Institute's engineering activities
- The membership figure is at an all time high, increasing by just over 4%
- An ambitious programme of well attended conferences and technical meetings was undertaken at both national and regional level, and included the 23rd Reproduced Sound conference, held in the spectacular setting of the Sage in Gateshead
- Efforts to re-activate the dormant Speech Group bore fruit, with several members volunteering to join a provisional committee. This committee had four meetings, changing the name of the group to 'Speech and Hearing'
- The Institute was delighted to learn from the European Acoustics Association that its bid to host the Eurnoise 2009 conference had been successful. The conference will take place in October 2009 in Edinburgh and will be an excellent opportunity for members to participate in a major international conference. Further details can be found on www.eurnoise2009.org.uk
- Six editions of the e-newsletter had been published and is regarded as a very good communication tool by members
- The 'Acoustic Ambassadors' initiative had been piloted in schools in Hertfordshire initially, before it is rolled out nationally to encourage students to follow acoustics
- The Institute had a very successful year, both in terms of delivery of services to members and also financially
- Applications for science and engineering courses had risen by 10-13% depending on the subject
- The Institute held its AGM in Manchester Town Hall
- Professor Peter Wheeler retired as education manager after many years' service, and Professor Keith Attenborough took over the role
- The Institute honoured four past presidents for their significant contributions over the years. In addition to Peter Wheeler, Honorary Fellowships were also awarded to Roland Dobbs, Mike Ankers and Bernard Berry

STANDING COMMITTEES

The operation of the Institute is guided by Council through Standing Committees concerned with Education, Medals and Awards, Meetings, Membership, Publications, and Research Co-ordination. There is also a Committee of the Engineering Division.

Education Committee

The Diploma and Certificate courses continue to be successful and provide education and training for both members and non-members. The education programmes and courses introduce many working in acoustics and associated professions to the Institute and help in the recruitment of new members.

In September 2006 the Diploma in Acoustics and Noise Control recruited 209 students of which 81 were re-sitting one or more modules. Fifty four of the students chose to study by the Distance Learning Scheme. The Diploma was awarded to 68% of students. This rather low percentage of students gaining the award is a reflection of the continuing trend by which students choose to defer one component of their studies because of employment pressures.

In September 2007, 167 new students were recruited to the Diploma, including 39 on the Distance Learning Scheme. 43 students registered for examination re-sits, confirming the trend mentioned above.

In both 2006 and 2007 there has been a marked increase in the number of Appeals. To some extent this is the result of candidates not observing the grounds for appeals set out clearly in the Diploma Handbook. On the other hand one of the Specialist Assignments caused considerable difficulty in 2007. In the remaining year of the current Diploma syllabus and assessment regime extra efforts will be made to reiterate the allowable grounds for Appeal and to avoid too subtle or difficult Continuous Assessment.

The established Certificate of Competence Courses recruited as follows; Management of Hand-Arm Vibration 17 students (82% pass), Environmental Noise 169 students (80% pass), and Workplace Noise and Risk Assessment 115 students (81% pass). The Certificate of Proficiency programme in Anti-Social Behaviour (Noise), which is currently run only in Scotland by Bel Education and Strathclyde University, recruited 48 students (92% pass). All programmes recruited fewer students than last year; the average decline in the applications for the competence courses was 25% while the decline in applications to the proficiency course was 60%. The large decrease in applications for the latter programme probably indicates that most organisations in Scotland have sent staff for training and the programme has realised its main objective of providing this training.

This year much of the Committee's work has been directed towards the revision of the modular structure of the Diploma. The task has been to produce a programme that meets the needs of those seeking a general post-graduate qualification in acoustics while satisfying the Higher Education Qualifications requirements. Final approval was given by Council in December to the structure of the revised Diploma which comprises a general acoustics module, two (chosen from four) specialist modules, an experimental module and an extended project. The Education Committee was asked to consider further proposals for revised pass/fail thresholds. The drafting of the detailed syllabi and associated learning outcomes and assessment requirements is almost complete and, although the Education Committee will continue to discuss the aims and content, it is expected that the new programme will start in September 2008.

During the year the Committee has re-accredited the Diploma Centres at Leeds Metropolitan University and Colchester Institute.

The Committee has considered changes to its structure and expects to present formal proposals to Council early in 2008.

One issue that continues to cause concern is the small number of members that are able to regularly attend committee meetings.

Meeting the challenges of (a) achieving a more sustainable and active Committee Membership and operating procedure, and (b) implementing the restructured Diploma and assessment regime and (c) pursuing the opportunities that exist for IOA participation in a school-leaver qualification in Acoustics will be an important aim for the Committee in 2008.

The Committee is once again indebted to the support of members, the work of the Education Manager and assistance provided by members of office staff.

Engineering Division Committee

The Committee met three times during the year. One internal audit was carried out, with no non-compliances identified. The number of initial enquiries for registration from Institute members remained strong (at 56), but many potential candidates still deferred or failed to complete their applications, despite the high level of personal support provided. Ways of resolving this disparity will be addressed as a priority for 2008.

Six formal applications for Chartered Engineer registration were submitted in 2007. These candidates presented themselves for Professional Review Interview: four were "Standard Route" candidates, holding accredited degrees, and two were "Non-standard Route" candidates with diverse backgrounds, including non-accredited acoustics degrees. All these six candidates came from the acoustical consultancy sector. Four candidates were successful. The two other candidates were invited to re-submit after a further period of professional development.

The Engineering Council visited the Institute on 3rd October for a mid-term licence review. David Morgan, who has chaired previous licence renewal visits, took the chair. He explained that EC^{UK} now usually organised 'mid-term' visits, in order to maintain and improve liaison. This approach was welcomed by the Institute. A change in committee procedures was proposed by the Institute, in order to facilitate a higher number of IEng registrations being made. The increasing number of younger IOA members working in areas such as pre-completion testing also constituted a sizeable potential market for IEng registration.

As regards EngTech registration, the Engineering Division Committee had identified the potential market for registration among IOA Technician Members and indicated its intention to seek a licence. It was agreed that the level of interest among TechIOA members would be established.

The Institute's recent initiative in respect of the accreditation/approval of 'mainstream' university acoustics courses, at Bachelor's and Master's levels, for the purposes of Membership and Engineering Division Committees was described and the issue of our future involvement in EC^{UK} degree accreditation work was raised.

The visiting panel noted that our internal audit process was operating effectively and that our EC^{UK}-nominated liaison officer, Howard Malleson, was providing a highly-valued input into the committee's work. We were asked to nominate a liaison officer (and Jim Glasgow agreed to act for the IOA, being allocated to IET in the first instance).

The EC^{UK} team suggested that the Institute should consider what steps are needed to be taken in respect of succession planning, both for the Engineering Division Manager and for committee members.

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Medals and Awards Committee

Dr Aaron Thode, an eminent American researcher in ocean acoustics was awarded the Institute's prestigious A B Wood Medal for his innovative, interdisciplinary research in ocean and marine mammal acoustics. The medal and certificate were presented by the President, Colin English, during the 4th International Conference on Bio-Acoustics at Loughborough University.

The Spring Conference also provided an opportunity to present several of the Institute's awards. Professor Michael Griffin received the RWB Stephens Medal for his outstanding contribution in the field of human response to vibration, while Professor Bridget Shield received an Honorary Fellowship in recognition of her inspirational teaching and work for the Institute.

We also recognised early career achievement when Wayne Seeto was presented with the prize for achieving the best results in the IOA Diploma 2006.

The underwater acoustics conference held in Edinburgh tackled the complex subject of detection and classification of underwater targets and it was appropriate that the President presented the 2007 A B Wood Medal to an American researcher, Dr Preston Wilson.

The Autumn Conference dinner held in Oxford provided the opportunity to present several awards. Professor Peter Wheeler received an Honorary Fellowship and Dr Mike Fillery an award for Distinguished Services to the Institute in recognition for his work developing our educational services. The prize for the best results in the IOA diploma went to Jacqui Patel and Ed Clarke, chairman of the ANC, presented prizes for the best papers at IOA conferences to Guen-Tae Yim (2006) and Dr Anthony Chilton (2007).

Trevor Baylis OBE presented the IOA Young Persons' Award for Innovation in Acoustical Engineering to the winner, Dr Constantin Coussios, and to the runners-up, Dr Frederic Cegla and Lara Harris.

Professor Michael Howe is one of the world's foremost theoreticians in aeroacoustics and was presented with this year's Rayleigh Medal.

At the Institute's final conference of 2007 – Reproduced Sound 23 in Gateshead – Dr Graham Bank was presented with the 2007 Peter Barnett Memorial Award in recognition of his substantial contribution to the advancement of loudspeaker design.

An Honorary Fellowship was presented in December to a past president Professor Roland Dobbs at a family 'This is your life' get-together to mark Roland's 83rd birthday. We all owe him a debt of gratitude for transforming the fledgling society into the professional Institute that it is today.

Meetings Committee

The Meetings Committee met four times in 2007. The year has again seen some change in the active members of the Committee, as Hilary Notley rejoined after maternity leave releasing Judy Edrich from secretarial duties and Sarah Radcliffe has resigned. A search has begun for new committee members.

The Committee presided over the organisation of 14 meetings covering a wide variety of topics. The main 'strategic' topics of discussion for the Committee were 'Member demographics' (to review the membership epicentres with a view to choosing meeting locations), encouraging a meeting for the newly revived Speech and Hearing Group and 'Guidelines for PowerPoint presentations' which resulted in a document for use by meeting presenters and was presented to Council for approval.

Membership Committee

Four meetings were held throughout the year to review 412 applications of which 390 were successful. There were 6 new Sponsor members and only 3 new Fellows. The predominant entry was to the associate grade especially just after the Diploma results were published. 142 members retired during the year but there was a net gain over the year leaving the Institute with 2896 members at the end of 2007.

There were at least 10 attendees per membership meeting to review the applications. Our thanks go to Dennis Christie and James Dunn (also former chairman for 7 years) who retired from the committee at the end of the year. Both joined the committee in October 1994.

The membership committee also forms the Disciplinary panel and we had one major case this year, which attracted correspondence with both the committee and the President. The case eventually challenged our procedures which will be reviewed in the near future. Two other informal complaints regarding competence of specific member were resolved informally.

There were some changes to application requirements. Sponsor Members will be asked for a description of the company or organisation from the IOA sponsor. The Primary sponsor for a Fellow will be asked to write a letter stating the contribution made to acoustics by the candidate. In addition this Primary sponsor may also be a Fellow of another associated professional institute provided the other two sponsors are Fellows of the IOA.

To aid the committee, lists of acoustics courses are being drawn up which will satisfy the by laws and in this context the first accreditation visit to a university was completed. The Part E course from Acoustic Associates will be accepted for Technician grade following a visit to the course.

Nezi Yusuf joined the office in July, with part responsibility for membership. As part of the recruitment drive a new members' pack has been produced and new members will be asked for the membership fee at the time of application. An e-group has been set up to consider potential 'member services' for the future.

The time given by many of the committee outside the meetings to membership business over the year, has been appreciated.

Publications Committee

This has been a year dominated by consideration of web-based publications. The e-newsletter got into its stride having had its first publication in December 2006 and has been well-received. It had its first major service in December 2007 giving it splendid good looks as well as being easier to use. Meanwhile the proposed re-vamp of the website was the subject of much consideration and this reached a significant milestone, also in December 2007, with the appointment of a new company to produce the design.

Associated with the new website the Committee produced a copyright agreement for authors writing for the Bulletin and Conferences principally in order to allow papers to be reproduced on the website when the facility becomes available.

The Bulletin started to have 'themed' content for every edition and this will continue for 2008. The income from advertising in the Bulletin, the Register of Members and the web continues at a very healthy level.

Thanks must go from the chair to all members of the Committee, who have done sterling work throughout the year

Research Co-ordination Committee

During 2007 the Research Coordination Committee (RCC) has had two meetings. Continuing activities include liaison with Research Councils (particularly EPSRC) and with Government Departments sponsoring acoustically-related research. Dr. Edward Whyte has replaced Dr. Katie Finch as the EPSRC representative on the Committee. Other new members elected during 2007 include Dr. Michiel Postema (University of Hull), Prof. Simon Chandler-Wilde (University of Reading) and Dr. Roland Potthast (ISVR and Reading).

The liaison with DEFRA continues to be useful especially in respect of noise and vibration-related activities. Richard Perkins has continued as their representative on the Committee. Bureau Veritas hosted the RCC meeting in April at which a liaison was established with the EPSRC-funded Noise Futures network.

At the meeting in November, the RCC undertook to organise the IOA Spring Conference for 2008 'Widening horizons in Acoustics' with the intention of specifically involving non-IOA members who do acoustically-related research. By the end of 2007 nearly 100 abstracts have been received enabling four Parallel Sessions on topics include Building Acoustics, Environmental Acoustics, Medical Acoustics, Inverse Problems in Acoustics, Engineering Acoustics, Musical Acoustics, Underwater Acoustics and Speech and Hearing.

During 2008, RCC will carry out a web-based survey of acoustically-related research (involving IOA members) and establish more effective links with researchers in NDE, Physical Acoustics, Bio-acoustics, Speech and Hearing.

SPECIALIST GROUPS

The Institute reflects the broad spectrum of the science and application of acoustics and several Specialist Groups have been formed to foster contacts between members of the various specialisms.

Building Acoustics Group

The Building Acoustics Group members have had a fairly busy 12 months with activities ranging from book reviews to saving the planet!

There were two big meetings in 2007, the first was held in London in January on Vibration and Re-radiated noise from Trains with 79 attendees and the second, the two day Spring conference on sustainability held in Cambridge in April which attracted 133 participants. Thanks to all those who attended and to the meeting organisers for all their efforts. In addition to these two meetings, two consultation responses were undertaken by BAG in 2007 on the new HTM2045 and the future of the Code for Sustainable Homes.

In January with the aim of fostering greater communication between BAG and the ANC the then Secretary of the BAG attended the ANC committee meeting. His attendance is expected to continue and further co-operation to develop. Focussing on the importance of multidisciplinary activities the idea of an Ambassador for Building Acoustics was adopted in August with the aim of achieving greater co-operation between the BAG and other institutions with important roles in building acoustics. This work will continue into 2008 and will hopefully result in some interesting outcomes.

On the literary front in 2007 members of the BAG committee reviewed two books and wrote articles for Sitelines, Premier Construction magazine and Education Business magazine on Acoustics in Schools, Housing and Vibration Isolation.

And finally, International News. In September BAG representatives were invited to attend the sustainability session of the ICA Conference in Madrid to speak on sustainability and

acoustics in the UK. This proved a fruitful fact finding mission for the IOA and should lead to further international building acoustics links and highlighted some topics which need further focus here in the UK.

Electro-acoustics Group

The Institute's Electro-acoustics Group primarily organised the annual Reproduced Sound Conference, RS23, held this year at The Sage Gateshead, one of the UK's newest music venues. Also this year a wireless 'voting system' was used in a number of papers to trial the use of listening tests in a real auditorium space with a distributed audience. The conference began with an invited lecture by Dr. Michael Barron, an acoustician's view of of sound system design for auditoria. Following papers covered electroacoustics, room acoustics, sound perception and speech intelligibility, including the Peter Barnett Memorial Award paper by Dr Graham Bank. Largely thanks to much increased marketing, attendance was up from 83 to 132 registered delegates, including 21 students attracted in part by the offer of 10% fees. The committee was pleased with the response to the programme and is now planning the 24th and 25th in the series

Environmental Noise Group

The Environmental Noise Group continued to be very active throughout the year. The Group was responsible for a one-day meeting on Developments in Noise Research held in Birmingham in May.

Significant progress on the IOA/IEEMA Noise Assessment Guidelines has also been made, with input from members of the ENG, and it is hoped that the document will be published around June 2008.

In addition, the ENG committee assisted the IOA Council with a number of consultation responses to external documents from Defra and other organisations, and we continue to liaise with internal and external groups to ensure that the IOA keeps up to date with the latest issues in environmental noise.

John Hinton has decided to stand down from the committee, prior to his term Presidency of the IOA, which starts later this year. The Group would also like to take this opportunity of thanking him for all the work he has put in to the group since its formation, especially for his patient work in getting the Noise from Pubs and Clubs Guide published. He has been a cornerstone of the group, and his presence at committee meetings will be sorely missed.

Measurement & Instrumentation Group

The group's Committee has been responsible for 3 widely-varied one day meetings during 2007.

'Rumble in the (Urban) Jungle' took place in March at the Society of Chemical Industry in London. 7 papers based around the revision of BS6472 relating to the measurement and assessment of human response to ground-borne vibration attracted an audience of 72 to what proved to be a thorough examination of the means of dealing with different aspects of this problematic field.

In July, the Group was at the National Physical Laboratory in Teddington, London for 'Its *practically* a quality measurement!' which offered advice and some practical demonstrations on making accurate acoustic measurements and where unforeseen difficulties may arise. 40 delegates also enjoyed a tour of the new facilities at the NPL.

The final one-day meeting of the year was held in September at the Arden Hotel in Solihull. 'Perception, Consideration and Closure' was looking into future ways of dealing with aircraft

noise and 58 delegates enjoyed 6 presentations and a lengthy discussion session on several different aspects of this contentious topic.

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. In 2008, the Group is preparing to organise the Autumn Conference, so it will continue to be busy.

Musical Acoustics Group

The Musical Acoustics Group still remains effectively dormant. However, there is now a positive move towards revitalising the group. The first AGM for some years is to be held at the IOA 2008 Spring Conference at Reading University. There is to be a substantial musical acoustics session at this conference, so it is expected that a significant number will attend the AGM. A plan for future activities will be prepared by the existing Committee for discussion at the meeting and agreement by the membership. It is anticipated that this will involve some form of merger with the Musical Acoustics Research Network coordinated by Murray Campbell at Edinburgh University.

Noise and Vibration Engineering Group

The major event for NVEG in 2007 was the Autumn Conference, entitled 'Advances in Noise and Vibration Engineering', focusing on new diagnostic measurement techniques and their application to control methods. The technical content of the meeting was very well received by delegates, although turnout was a bit lower than expected. Other activities included a joint meeting on railway ground borne noise with BAG in which Jo Webb assisted, and the continued issue of newsletters prepared by Dave Lewis.

Four main committee meetings were held during the year, alternating between teleconferencing and meetings either at St Albans or in the North, with a number of subsidiary teleconference discussions of particular issues. The AGM was held during the Autumn conference.

A number of changes to the committee were approved at the December meeting. David Bull stepped down and was thanked for his work on the committee over many years. Mike Hewett was appointed as Secretary and two new committee members Wayne Seeto and Reuben Peckham were agreed.

Joint IOA/IOP Physical Acoustics Group

The highlight of the year was the Anglo-French Physical Acoustics Conference (AFPAC '07). This meeting, which is now held annually on opposite sides of the Channel, was organised jointly with the Groupe Spécialisé d'Acoustique Physique, Sous-marine et Ultra-Sonore of the Société Française d'Acoustique. On this occasion the delegates headed south to the Centre de Vacances CNRS at Fréjus, Côte d'Azur in France for the meeting from 17th-19th January 2007. The meeting covered a wide range of topics in Physical Acoustics with 39 oral papers being presented. These included six invited speakers who helped to expand the wide range of topics considered. As usual a strong theme running through the meeting was the practical application of acoustics and ultrasound to measurement problems in diverse areas, and the need for a thorough understanding of the science underlying such techniques.

In addition a very successful AGM and Tutorial Day on Physical Acoustics was held at the Institute of Physics in London in September and attracted 32 delegates. This took the form of 3 extended lectures on the general theme of 'inhomogeneous media' and covered the theory of elastic wave propagation in inhomogeneous and porous media, and the characterisation of inhomogeneous materials. The extended format enabled the presenters to provide comprehensive reviews of their topics

Speech and Hearing Group

Efforts to re-activate the dormant Speech Group bore fruit in 2007, with several members volunteering to join a provisional committee. This committee had 4 meetings during 2007, changing the name of the group to 'Speech and Hearing' with a view to broadening the scope of the group's activities. A one-day meeting on 'Speech and Hearing in Learning Environments' has been arranged for January 2008 and future meetings are currently being planned, along with a Speech and Hearing session at the Institute's Spring Conference 2008.

It is intended that the reformed group will include members whose interests encompass audiology, speech and language therapy, speech perception, speech pathology, speech technology, sound recording and reproduction and aspects of building and architectural acoustics which relate to speech and hearing.

The Committee aims to:

Represent the interests of the S & H group as a whole.

Promote the understanding / development / appreciation of high quality/imaginative solutions for Speech and Hearing and their specific contexts (whether in education, commercial or domestic settings)

Encourage its members; and

Help inform and develop their work.

The Committee wishes to pursue these aims by:

Providing a forum for exchange of information and experience

Arranging opportunities for continuing professional development (and quality assurance) of its members

Providing a point of contact for practices, potential clients, marginalised organisations or events compatible with the Committee's aims; and

Supporting collaborations with other groups having shared or complementary interests

Underwater Acoustics Group

2007 has been another successful year for the Underwater Acoustics Group, both in terms of conferences held and planning for meetings in the years ahead.

The year was initiated by a most successful Bioacoustics conference, held as previously at Loughborough University, and organised again by Paul Lepper and Peter Dobbins. The amazing range of mechanisms for hearing in the animal kingdom was described by speakers covering a diverse set of fields of research and many countries. The increasing interest in the impact of underwater acoustics on marine creatures worldwide has produced many useful cross comparisons

However, the continued absence of the chairman Gary Heald, did provide some concern, although Victor Humphrey provided a very capable expertise as deputy.

However, Victor's other commitments prevented him from continuing in the role, and Peter Dobbins was persuaded to take up the responsibility in August.

A second concern was the venue for committee meetings. The facilities kindly provided at University College London were naturally no longer available when Hugh Griffiths moved to his new position at Shrivenham. However, Simon Richards has persuaded QinetiQ to provide a London meeting room, and we even get biscuits! It was felt best to continue with a London venue, given the need for members to travel from across the UK, and we are very grateful for this facility.

A workshop on underwater radiated noise was arranged at NPL in May, thanks to Steve Robinson, and was well attended.

Several members took part in the large multi-session IEE conference Oceans 07 in Aberdeen, which was sponsored by the IOA, as encouraged by Hugh Griffiths who was involved in organisation. This provided an interesting contrast to the much smaller but more coherent typical IOA underwater conference, where the choice of sessions and mad dash from one room to another do not play such a large part.

Judith Bell and colleagues at Heriot Watt University, Edinburgh, report considerable appreciation for their conference on 'Detection and Classification of Underwater Targets'. Even so, we feel the need to keep procedures under review, with the changes in templates for authors and other technical issues. There is a need to try to preserve the benefits of the smaller conference, and we are keen to provide attendees with printed proceedings to allow them to make best use of the expertise present .

The committee is already planning meetings and schedules for 2009 and beyond. So far these include a conference/workshop on Sonar Performance Modelling and the next Bioacoustics meeting.

We have now established new procedures for assessing AB Wood Medal nominations which, hopefully, will be visibly objective and impartial. We do, however, have to work on encouraging more nominations to assess in the first place. In particular we need to persuade the entire underwater community in Europe to identify and nominate suitable nominees.

Finally, we wish to extend our thanks to Gary Heald for his effective and active chairmanship over the past few years, and to Victor Humphrey for standing in when Gary became unwell. We again wish Gary a speedy recovery and return to full health in the near future.

REGIONAL BRANCHES

The Regional Branches of the Institute have been established to further the technical and social activities of the Institute at local level.

Central Branch

The Central Branch held three evening meetings during 2007 and had a one day visit to RAF Henlow. The average attendance was 16 and the meetings covered a variety of topics: appropriate noise levels inside new dwellings for external noise, creeping background, the visit to RAF Henlow and aircraft noise.

We were made to feel very welcome at the meeting venues, NHBC and RAF Henlow, and thanks are extended to all the speakers and hosts for the meetings.

The Central Branch now has several Acoustics Ambassadors under the Setpoint Hertfordshire scheme which promotes science and engineering in schools. Richard Collman has made a major contribution to the development of an acoustics workshop activity where teams of students develop approaches to noise control using test rigs designed and built by Richard. The efforts made by Richard with the support of others are to be commended.

The Annual General Meeting was held in December at which all the existing members of the Management Committee re-affirmed their willingness to continue (with some shuffling of responsibilities) and were duly approved to take the Central Branch forward in 2008 and beyond. The support of the committee is vital to the success of the branch and greatly appreciated.

Eastern Branch

Over the year the Eastern Branch Committee has organised five technical meetings. These meetings had an average attendance of around 16 members and were organised from four committee meetings.

As always, the committee members have tried to provide a wide cross-section of topics with venues spread across the Eastern Region as much as possible.

Our first meeting was an afternoon meeting in March when we visited the British Telecom Acoustic Testing facility at Martlesham and also received a talk on 'Use of optic fibres for sound and vibration measurement' by Ray Scholey. This was followed in April by a meeting at the Ramada Hotel, Colchester delivered by Mike Stigwood on 'Alton Towers – How screams equals a nuisance'. In May, we visited Celestion International Ltd at Claydon near Ipswich where Ian White and Mark Dodds gave us a presentation on 'Developments in loudspeaker design' followed by a tour of their production and R&D facility. After the summer break our branch members returned in October to enjoy an evening meeting at Woodbridge Cruising Club entitled 'Do Audiograms Tell the Whole Story' delivered by Prof. Ted Evans. Our AGM was combined with our final meeting in November at the Ramada Hotel, Colchester when Carmel Briggs delivered a lecture on 'Sound Healing'.

On reflection our meeting numbers have shown a decline over the years and we all, as members, need to try and attend as many meetings as we can to keep our active branch buoyant. This improved attendance will make possible social events, which we have not been able to offer effectively recently.

Finally, it is also essential that we encourage new members to join our committee to enable the organisation of all the regional functions to continue, so please feel free to put your name forward if you wish to help.

Irish Branch

This year has seen two events organised by the Irish Branch of the Institute of Acoustics. In September we held a visit to the new hemi-anechoic test facility at the F G Wilson (Engineering) Limited site in Larne. The facility is one of Europe's largest and was certainly an impressive sight. In November we held the second Gerry McCullagh Memorial Lecture. The presentation *Sure You're Sure?* was given by Gerry's friend of many years, Geoff Kerry. It was a pleasure to have a number of former colleagues of Gerry's attend the lecture, along with a number of his family; his widow, mother, daughter and grandson, and also Kevin Macan-Lind, his wife Linda and Geoff's wife Joan. As well as having an invited guest giving a presentation on their chosen topic, the Branch also presented a certificate for the best performing IoA Diploma student resident in Ireland (both North and South). This year the certificate was presented to Pamela Christie, an Environmental Health Officer with Antrim Borough Council.

This year the Branch Committee welcomed Damian Kelly and Ray Walsh on board.

London Branch

The London Branch has had another buoyant year comprising of an interesting half day visit, our annual dinner and an extensive programme of evening meetings.

A total of eight events were held throughout the year. These comprised six evening meetings, a half day visit to the CCSR/I-Lab Facilities at the University of Surrey, and our annual dinner.

Attendance at the meetings and functions has been excellent and are pleased to announce, yet again, that we have seen a steady rise in the number of people attending compared to the previous year.

The half day visit held in March, came about following an interesting evening talk in 2006 by Amber Naqvi of Sonic Element relating to studio acoustics. The visit included a tour of the I-Lab Multimedia facilities at the University of Surrey. The tour was most informative and included:-

- a demonstration of the VisLab, which comprises of a 7.5 x 2.5m semi-cylindrical, active-stereo, rear projected visualisation screen; 340 speaker IOSONO WFS 3D audio system; and a virtual reality system allowing rendering of virtual environments in 3D video and 3D audio.
- a visit to the I-Lab, a research facility with the aim of developing innovative ways of using multimedia and communication technologies.
- a visit to the studio facility, with demonstrations of current research including; extending the audible boundaries of a room with loudspeaker arrays; sound source localisation with different microphone array geometries; virtual visual objects responding to sounds, binaural audio for mobile devices, wave propagation and source directivity synthesis with digital waveguide mesh; and filter interpolation for sound synthesis.

The visit was heavily oversubscribed and proved to be an excellent half day's visit.

The annual dinner was held in November at The Bleeding Heart Restaurant in Holborn. The guest speaker was Joe O'Herlihy, the legendary sound engineer for the world's greatest rock band, U2. Joe gave an insight into his varied career starting from when he ran a music shop in Ireland over 30 years ago, to working with artistes such as Rory Gallagher, REM, The Cranberries and many others. His work with U2 over the past 25 years was presented with numerous stories of life from the '*other end of the microphone*'. His after dinner talk sparked a number of questions from the floor and the discussions followed well into the late evening.

A big thank you to all the speakers who took part at all the events that have made the 2007 IOA London Branch calendar so interesting. A full programme is being planned for this forthcoming year and we look forward to the continued support from our members.

Midlands Branch

2007 was another successful year for the Midlands Branch. We had 6 well attended meetings with a wide and interesting range of subjects.

Industrial Applications of Ultrasonics by: Mike Swanwick, Rolls-Royce
January at Atkins, Birmingham

Soundscapes - a view from the GLA by Alan Bloomfield Noise Strategy Team Greater London Authority.
March at Scott Wilson's Nottingham

Half Day Meeting on Aircraft Noise

- Ben Hanley, Birmingham International Airport Ltd
- Darran Humpheson, RPS Group Plc
- Mike Swanwick, Rolls-Royce Plc

May at Birmingham International Airport

An Update on Defra Noise Research Richard Perkins, Principal Acoustic Consultant (PBLtd) and Consultant Noise Research Manager, Defra.
July at Scott Wilson Nottingham

Presentation of Student Projects

- Ian Grove – Noise Exposure of a Semi-Professional Rock Musician
- Kevin Emery – Noise Exposure of Window Fitters

September at Derby University

Assessment Of Noise Impacts Of Speed Options On The M32 By Tim Clarke Pollution Control Manager, Bristol City Council.

November at Scott Wilson, Nottingham

The branch committee also held its traditional 'November Curry' planning meeting where we plan the next year's events. We are expecting another full programme of 6 meetings, one every other month.

John Hinton stepped down from the position of chairman after many years at the helm. We would like to take this opportunity to thank John for his enthusiasm and drive which has had a significant impact on the resounding growth and success of the branch. John has agreed to continue as a committee member during his Presidency of the IOA.

The branch also lost two other key committee members, due to retirement, namely: Ron Hawkes and Mike Fillery. We wish them well and thank them for their sterling support over the years. We still expect to see them in the future, as they are not totally off the hook!

North West Branch

Meetings commenced in 2007 in February with a visit to the Royal School for the Deaf and Communications Disorders in Cheadle Hulme. There, Jane Douglas and Rob Phillips provided a thought provoking and enlightening presentation on *Challenges in Teaching Impaired Pupils with Additional Complex Needs*.

In April at Arup, Dr David Hiller of Amp Acoustics and Colin Cobbing of Temple Group Ltd, took us ably through the *Defra Research into Human Response to Vibration in Residential Environments*. The question and answer session appeared to indicate that there was some way to go with ongoing research following this pilot study.

Our efficiently held AGM at BDP in September was ably supported by a presentation on *Noise Maps & Local Action Plans*. John Hinton and Andrew Jellyman of Birmingham City Council's Environmental Protection Unit explained why and how updated noise maps have been produced, the difficulties in obtaining all the necessary baseline data, and how the results are being used to develop local action plans. The local action plans did appear to be hampered by a very small budget.

In November, at Arup, Professor Chris Plack from University of Lancaster presented *Making Sense of Sound* and provided, to a well attended meeting, an insight (or insound!) into the way the ear and brain process sound and whether psychoacoustics can help us to make smarter measurements of sound.

The year ended in December on a high note with a very successful meeting organised by the North West branch for the Joint Engineering Institutes in the north west of England. The meeting was held at the Museum of Science & Industry where Professor Trevor Cox of University of Salford presented *Musical Engineering* and proceeded to entertain a packed lecture theatre with instruments made from vegetables and the worlds biggest whoopee cushion.

As every year, we are grateful to all those who provided venues for hosting the meetings and, of course, assisted with the organisation of the meetings. Thanks also to Bureau Veritas, where Paul Freeborn arranges a venue and refreshments, for committee meetings, and to all the committee who are still waiting for some young ideas to be tabled. A special

thanks to Paul Michel who allegedly has been secretary for ten years, but who keeps on going with his good humour and relaxed approach.

Scottish Branch

The Scottish Branch's 2007 Annual General Meeting was held in the unique setting of Edinburgh's new Scottish Story Telling Centre, situated on the Old Town's Royal Mile in December.

The evening began with a short presentation from the Director of the Storytelling Centre, Dr Donald Smith, on the use of the venue and some of its specialist design features, including black-out modes and high specification lighting. Richard MacKenzie of the Robin MacKenzie Partnership, who was involved in the initial design of the Storytelling Court and auditorium then outlined some of the problems and difficulties the design team had to overcome in achieving its planning criteria. This was no easy task as the glazed roof of the centre (which would be used for Ceilidh bands) was directly overlooked by residential properties.

Afterwards the group retired to a nearby Italian restaurant for some much needed refreshments and relaxation. The attendance to both the meeting and social night were excellent and everyone thoroughly enjoyed themselves

Once again we enjoyed the company of Kevin Macan-Lind and his wife, Linda, for the presentations and evening social event.

Particular thanks are due to Sean Smith, from the Robin MacKenzie Partnership for all his work in organising the presentations and social evening that followed.

We were pleased to welcome Nicola Riddoch to the Scottish Branch Committee as our new Young Person's Representative. Many thanks to Nicola for agreeing to take up this post. The Secretary and Treasurer of the Scottish Branch remain unchanged. Thanks are due to Andy Watson for continuing to look after Scottish Branch financial matters and to all Committee members for their continued support during 2007.

Southern Branch

Andrew Bullmore from Hoare Lea Acoustics gave a presentation on Wind Farm Noise; its generation, propagation and assessment in March. The talk centred on the use of ETSU-R-97 as the accepted methodology for assessment of noise and also addressed source generation mechanisms, the method for measurement of turbine source noise for the derivation of sound power levels and the impact of wind farms at noise sensitive receptors. This included a discussion of the particular characteristics of wind farm emissions, including the more complex mechanisms, such as enhanced amplitude modulation. The meeting was well attended, with an audience of 30, and the formal presentation was followed by a lively discussion.

South West Branch

The committee met twice in 2007 and organised two branch meetings.

The first was a social gathering held in July at the Avon Gorge Hotel, overlooking that famous Bristol landmark Brunel's Clifton Suspension Bridge. The meeting was enjoyed by around 16 members from a variety of acoustics disciplines and employment backgrounds, and involved food, drink, and swapping of acoustic anecdotes, experiences and also, perhaps more importantly, business cards!

Our one formal meeting was again hosted by the University of the West of England and our thanks are again due to the university. This meeting, held in October, was attended by

around 24 members and involved an interesting presentation about robust details by David Baker of Robust Details.

It is hoped that the Branch can build on this for 2008 and promote more meetings, and stimulate greater involvement from other members across the region. However, we do recognise that the sheer size of the region, spreading as it does from Gloucester all the way to Land's End, poses some considerable geographical challenges to a higher level of involvement, and attendance at meetings. For example, Manchester is nearer to Bristol than Plymouth.

Our secretary, Stan Simpson, has not enjoyed the best of health in 2007 and our best wishes are with him for a better year in 2008.

Yorkshire & Humberside Branch

At our annual meeting in the University of Leeds members of the Branch were given the opportunity to learn exciting facts about the sounds of food and the use of acoustics for the material characterisation. This excellent talk and demonstration was presented in July by Professor Malcolm Povey who works in the Procter Department of Food Sciences at Leeds. Professor Povey in his lecture drew useful metaphors of light scattering to help appreciate sound propagation and its application to the measurement of the properties of complex inhomogeneous materials such as foods. His talk was followed by a tour of the laboratories at the Procter Department of Food Sciences which hosts an impressive range of facilities for analysis of foods and other types of organic materials.

TABLE 1 MEMBERSHIP

Grade	2006	2007
Hon Fellow	22	25
Fellow	202	197
Member	1463	1526
Associate Member	794	877
Affiliate	48	89
Technician Member	56	52
Student	58	65
Totals	2643	2831
Key Sponsor	3	3
Sponsor	32	33
Institutional Subscriber	17	29

TABLE 2 GROUP MEMBERSHIP

Group	2006	2007
Building Acoustics	872	953
Electroacoustics	229	243
Environmental Noise	1185	1293
Measurement & Instrumentation	325	354
Musical Acoustics	166	186
Noise and Vibration Engineering	777	825
Physical Acoustics	111	128
Speech	116	125
Underwater Acoustics	133	138

TABLE 3 BRANCH MEMBERSHIP

Branch	2006	2007
Central	79	96
Eastern	248	263
Irish	116	134
London	630	664
Midlands	380	404
North West	347	363
Overseas	291	299
Scottish	141	156
South West	245	269
Southern	483	519
Yorkshire/Humberside	204	213

TABLE 4 DETAILS OF EMPLOYMENT

Employment Category	2006	2007
Architectural Practice	26	33
Consultancy	1033	1177
Education	198	290
Industry/Commerce	340	347
Public Authority	494	505
Research & Development	200	201
Retired	105	106
Other	84	91

TABLE 5 MEETINGS ATTENDANCE IN 2007

Topic, Date & Venue	Attendance
Vibration and Structure borne noise 24 January London	79
The Art of Being a Consultant 6 March London	49
Rumble in the (Urban) Jungle? 13 March London	72
Windfarm Noise 20 March Swaffham	80
4 th International Conference on Bio- Acoustics 10-12 April Loughborough	72
Spring Conference 2007 The Sound of Sustainability 24-25 April Cambridge	133
Measurement of Underwater radiated noise 23 May Teddington	38
Microwind Turbines 1 June Solihull	72
The Art of Being a Consultant 5 June Manchester	53
It's Practically a Quality Measurement 11 July Teddington	40
Detection, Clasification of Underwater Targets 18-19 September Edinburgh	86
Perception, Consideration and Closure 25 September Solihull	58
Autumn Conference 2007 Advances in Noise and Vibration Engineering 17-18 October Oxford	72
Reproduced Sound 23 29-30 November Gateshead	113

TABLE 6

INSTITUTE PERSONNEL AT 31 DECEMBER 2007

<p>COUNCIL</p> <p>Officers</p> <p>President President Elect Immediate Past President Honorary Secretary Honorary Treasurer <i>Vice Presidents</i> Engineering Groups & Branches International</p>	<p>Mr C E English FIOA Mr J F Hinton OBE FIOA Dr A J Jones FIOA Prof V F Humphrey FIOA Mr A W M Somerville MIOA</p> <p>Dr B McKell MIOA Mr S W Turner FIOA Prof B M Shield HonFIOA</p>	<p>Ordinary Members</p> <p>Dr K V Horoshenkov FIOA Prof J Kang FIOA Dr M R Lester MIOA Mr D N Lewis MIOA Mr P J Rogers MIOA Prof P D Thorne FIOA Mr R G Tyler FIOA Ms L J Webb MIOA Dr B J Williams MIOA Mr C R Simpson MIOA (co-opted)</p>
<p>Committees & Sub Committees</p> <p>Education 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 Engineering Division Medals & Awards Meetings Membership Publications Research Co-ordination</p>		<p>Chairman</p> <p>Dr D J Saunders FIOA Mr J G Walker HonFIOA Mr D Trevor-Jones FIOA Mr G Brown MIOA Mr J Stirling (REHIS) Mr T M South MIOA Dr B McKell MIOA Mr C E English FIOA Mr J P Newton MIOA Dr B J Tunbridge MIOA Mr P C Bird FIOA Prof K Attenborough FIOA</p>
<p>Specialist Groups</p> <p>Building Acoustics Electroacoustics Environmental Noise Noise and Vibration Engineering Measurement & Instrumentation Musical Acoustics Physical Acoustics <i>(Joint with the Institute of Physics)</i> Speech & Hearing Underwater Acoustics</p>	<p>Chairman</p> <p>Prof R J M Craik FIOA Mr S P Wise MIOA Mr K M Collins MIOA Dr M G Smith MIOA Mr R G Tyler FIOA Dr P F Dobbins FIOA Mr D Cartwright</p> <p>Mrs E E Greenland MIOA Dr P F Dobbins FIOA</p>	<p>Secretary</p> <p>Ms A L Carey MIOA Ms H M Goddard MIOA Ms N D Porter MIOA Mr M D Hewett MIOA Mr M J Armstrong MIOA Vacant Dr N Saffari</p> <p>Dr G J Hunter MIOA Dr R A Hazelwood MIOA</p>
<p>Regional Branches</p> <p>Central Eastern Irish London Midlands North West Scottish Southern South West Yorkshire and Humberside</p>	<p>Chairman</p> <p>Mr D L Watts FIOA Mr M P Alston MIOA Dr M R Lester MIOA 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 Mr T Clarke MIOA Mr D Daniels</p>	<p>Secretary</p> <p>Mr E A MacGregor MIOA Mr C L Batchelor AMIOA Mr S Bell MIOA Miss A L Carey MIOA Mr M Swanwick FIOA Mr P J Michel MIOA Ms L Lauder MIOA Dr H Sagoo MIOA Mr S Simpson MIOA Dr K V Horoshenkov FIOA</p>
<p>Chief Executive: Mr K M Macan-Lind</p>		