

INSTITUTE OF ACOUSTICS

***37th ANNUAL REPORT OF THE COUNCIL
FOR THE YEAR ENDED 31 DECEMBER 2010***



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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:

- In December, a Groups and Branches meeting was held in St Albans, the first one since April 2008 and the fifth in the last ten years.
- One new team member joined the staff at Head Office during the year – Charles Ellis joined the team as Publicity Officer, replacing Debbie White.
- An ambitious programme of well attended conferences and technical meetings was undertaken at international, national and regional level.
- Nine formal applications for Chartered Engineer registration were submitted in 2010 and Professional Review Interviews were held in May and December. Four were 'Standard Route' candidates, holding accredited degrees, and five were 'Non-standard Route'. All were successful.
- By September 2010 the 'new' Diploma in Acoustics and Noise Control, now in its second year, recruited 112 new candidates of which 37 chose to study by the Distance Learning Scheme. As a result of grades obtained in 2009/10, the Diploma has been awarded to 83 students.
- Planning has been ongoing throughout 2010 for ICBEN 2011 which will take place 24-28 July 2011 at Imperial College, London, to be held in the UK for the first time in the conference's history.
- The Institute's e-newsletter changed its format and frequency during the year. It is now monthly and consequently more relevant and up to date.
- The Senior Members' Group was formed, Ralph Weston being appointed its first Chairman.
- The Institute is represented internationally through the following members: Colin English (Vice President, EAA), Barry Gibbs (Director, IIAV), and Rupert Thornely-Taylor (Director, IIAV).
- This year the Institute produced its first ever 5 Year Strategic Plan and this was submitted to the Engineering Council.
- The Institute sponsored one of the Noise Abatement Society's John Connell Awards in 2010.

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 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.

In September 2010 the 'new' Diploma in Acoustics and Noise Control, now in its second year, recruited 112 new candidates of which 37 chose to study by the Distance Learning Scheme. As a result of grades obtained in 2009/10, the Diploma has been awarded to 83 students.

To date the distance learning notes for the new *General Principles of Acoustics (units 1-10)* and *Environmental Noise: Prediction, Measurement and Control* Modules have been revised, edited and distributed. Revised versions of the Building Acoustics Notes are being prepared by Mike Fillery and Nick Conlan.

In 2009/10, the Certificate of Competence Courses recruited as follows; Management of Hand-Arm Vibration 15 students (12 pass), Environmental Noise 142 students (118 pass), and Workplace Noise and Risk Assessment 56 students (50 pass). The Certificate of Proficiency programme in Anti-Social Behaviour (Noise), which is run only in Scotland by Bel Education and Strathclyde University, recruited 43 students (40 pass).

There has been an overall reduction in numbers on courses generally, probably a result of the economic climate. The diploma may also have been affected by one-off effects of the change in syllabus. The certificate of competence course enrolment may be affected by a change of emphasis in health and safety from technical assessment towards generic risk assessment.

The issue of the postgraduate status of the Diploma has continued to be raised. The education committee has identified that the Open University accreditation schemes offer a route that is compatible with the IOA structure.

During the year the Committee has accredited a new Diploma Centre at Napier University and re-accredited centres at Ulster (Diploma) and Bel Education (ASBA and CCENM).

A proposed Certificate of Competence in Building Acoustic Measurement is being considered, with a firm expression of interest from Napier University. Following a request from Electro-acoustics Group, we are also considering the provision of short courses in specialist subjects, possibly associated with conferences and meetings.

The committee is seeking to expand the schools activities, to roll out the Acoustic Ambassador scheme, following successful co-operation with Setpoint in Herts, to other areas, and to develop the sound insulation workshop devised by Richard Collman.

John Walker stood down after three years as chief examiner and six years as deputy chief examiner and we are very grateful for his excellent service in this role. The new chief examiner is Stuart Dyne and Neil Ferguson is the new deputy chief examiner.

During 2010, Clive Bentley resigned from the committee. We were pleased to welcome David Trevor-Jones as a member of the committee, although sad to lose him as chair of the

Certificate of Competence in Environmental Noise Measurement, a position he has occupied since its inception.

The Education Committee continues to be indebted to the support of its members, the work of the Education Manager and for the 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 grew to 97 and the increase in numbers of candidates wishing to present themselves for interview continued.

Nine formal applications for Chartered Engineer registration were submitted in 2010 and Professional Review Interviews were held in May and December. Four were 'Standard Route' candidates, holding accredited degrees, and five were 'Non-standard Route' candidates with diverse backgrounds. All candidates were successful.

Presentations on Engineering Council registration were given to consultancies and to students at ISVR.

Two new members joined the committee in 2009 and they have completed their training to become interviewers. The reins as Chairperson were also successfully passed from Dr Bernadette McKell to Richard Perkins at the May Committee meeting. Bernadette was presented with a Distinguished Service Award in November for her services to the Institute.

With IMechE, the periodic degree-accreditation visit to ISVR took place in March, and a further five-year accreditation was granted for their BEng, MEng and MSc courses.

The Engineering Council granted the Institute a further five-year licence in January 2010, following their visit in November 2009. They commended the work of the committee and the quality of our new registrants and they encouraged us to increase the numbers of members seeking registration. They recommended that the Institute develops a formal Risk Register, covering its full range of activities as a professional institution, and this work has been undertaken during 2010 under the auspices of Council.

Medals and Awards Committee

Professor Bob Craik was awarded the 2010 Rayleigh Medal at the Autumn Conference for his outstanding contribution especially in the area of statistical energy analysis. It was a busy conference for awards: the Engineering Medal was awarded to Alan Fry, Bernadette McKell received an Award for Distinguished Services to the Institute, Colin English an Honorary Fellowship and Darren Clucas the ANC Prize for the best IOA Diploma Project 2010.

The 2010 Tyndall medal was awarded to Dr Olga Umnova at Noise in the Built Environment Conference in Ghent for her ground breaking work modelling absorbers. Dr Mario Zampolli received the 2010 A B Wood Medal

An Honorary Fellowship was given to Linda Canty and an Award for Distinguished Services to the Institute to Sue Omasta for their excellent work for the Institute over many years. Oliver Hetherington was given an Award for Distinguished Services to the Institute at the Annual Gerry McCullagh Memorial Lecture.

The Award for Promoting Acoustics to the Public was given to Mary Stevens from Environmental Protection-UK. The Professor D W Robinson Prize was awarded to Nicholas Crowe.

Finally, it was a delight to give Leo Beranek, one of the most famous acousticians in the world, the Peter Barnett Memorial Award at Reproduced Sound 2010.

Meetings Committee

The Meetings Committee met four times in 2010. The year has seen some change in the active members of the Committee, as Hilary Notley returned from maternity leave to resume as Secretary and a new recruit was found to fill the role of Young Member. The Committee now constitutes a Chair, Secretary, young member Chris Turner, and two other members – Ken Dibble and Paul Lepper.

The Committee presided over the organisation of 11 meetings covering a wide variety of topics. The number is slightly down on the target due to one postponement and one cancellation from those planned. Despite this, initial indications are that the financial target of an average surplus of £1k per meeting will be met or even slightly exceeded. The feedback from the meetings questionnaires continues to be very favourable. Given the global recession, the financial performance of meetings has been under some scrutiny and we continue to review performances and learn from our experiences so that deficits may be minimised in the future and meetings continue to generate a moderate surplus.

Membership Committee

The Membership Committee met four times. One new member has joined the committee which now has its full complement of members.

310 applications for membership were considered and 281 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 again considered a number of Code of Conduct cases, with four new cases. This has been an increasing part of the committee's work in recent years. Many of these were resolved informally, but in three cases this year formal action was taken. The committee regularly has to decide whether a complaint is really about a lack of professional standards (and competency in one case) or whether the complainant has simply not achieved the desired result in an inquiry and feels that the acoustic report is to blame. Over recent years the committee has in the majority of cases found in favour of members over complaints against them.

A regular discussion point during the year has been the role of sponsor members and the conditions attaching to them. This is likely to continue in 2011.

A CPD team was formed to establish a policy and action plan for CPD, a much discussed committee topic. CPD is now to be a requirement rather than an option for membership applications. We believe that the Institute is moving towards a clearer and more workable CPD scheme.

The committee instigated the formation of a Senior Members' Group. This is now in operation and the committee wishes it every success.

2010	FIOA	MIOA	AMIOA	Tech	Affil	Student	Sponsor	Total
Applicants	9	117	120	18	10	32	4	310
Elected	9	99	110	15	14	30	4	281
New Members	2	22	99	13	14	30	4	184
Resigned	6	83	77	8	17	16	14	221
Deceased	2	2						4

Publications Committee

Through 2010 the focus of the Committee has continued to be on the Institute's website. Following the launch of the revised website in 2009 various concerns have been raised, and the opportunity has been taken to ensure that the website can meet the requirements of the Institute and is able to undergo further development in the future. A sub-committee has been formed to manage this process, initially capturing the detailed requirements of the website from head office, and groups, branches and committees.

Acoustics Bulletin continues to be produced to a high standard, containing reports of the Institute's meetings and affairs, and a broad selection of technical contributions. The committee is always keen to receive technical contributions of all kinds for inclusion, so why not put 'fingers to keyboard' and report on your latest interesting work?

The E-Bulletin has now become a focussed monthly production, and is produced by Charles Ellis, the IOA's publicity officer. The IOA groups on the social networking sites Facebook and LinkedIn continue to attract a steady stream of interested people, now with over 700 on LinkedIn.

There have been several changes in Committee membership over the year. Thanks go to all members of the Committee, who have put in sterling work throughout the year, particularly to the website sub-committee who have generously made substantial efforts with the website project. Enthusiastic committee volunteers are always welcome.

Research Co-ordination Committee

The Research Coordination Committee seeks to involve academic members of the Institute in raising the profile of acoustically-related research in the UK and to monitor such research through surveys and formation of a database. During 2010 the Research Coordination Committee (RCC) has had two meetings. Continuing activities include liaison with EPSRC and with Government Departments (particularly Defra) sponsoring acoustically-related research.

Dr. Louise Tillman has continued as the EPSRC representative on the Committee. New RCC members appointed during 2010 were Prof. Jian Kang, Sheffield University, and Prof. Kirill Horoshenkov, Bradford University.

Liaison with DEFRA continues to be important and, following the retirement of Richard Perkins, Yvette Hood has agreed to be their representative on the Committee. DEFRA hosted both of the meetings in 2010.

The RCC was active on behalf of the IOA in nominating members and non-members carrying out acoustically-related research to serve as sub panel chairs and/or members for the Research Excellence Framework which will be completed in 2014 and replaces the Research Assessment Exercise, the last of which was completed in 2008. One of the IOA nominees, Prof. Philip Nelson, Southampton University, has been appointed Chair of the Mechanical Engineering sub-panel. At the time of compiling this report, the results of nominations for sub-panel members had not been announced.

The Chair serves as a representative on the publishing sub-committee concerned with the new IOA website.

RCC continues to monitor and assist with arrangements for the joint IOA/SFA conference to take place in Nantes, April 2012.

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.

Building Acoustics Group

In 2010 The Building Acoustics Group (BAG) has continued its mission of:

- delivering high quality educational meetings
- providing thorough and coherent consultations for new documents published in the field of Building Acoustics
- Promoting the IOA member Acoustic Consultants to the Building Industry both in the UK and across the rest of the world.

2010 has been another busy and successful year for BAG. It started with a collaboration between BAG and the Belgian Acoustics Association (ABAV) organising a highly successful meeting 'Noise in the Built Environment' held in Ghent, Belgium in April.

The main objective for 2010 was to organize the Autumn Meeting which took place in Birmingham. 'Practical Acoustics in an Ever Changing World' was a ground-breaking meeting where for the first time we joined forces with the Association of Noise Consultants (ANC) to provide another successful and highly educational two-day meeting.

To end the year a one day meeting called 'Symposium on School Acoustics' gained sponsorship from a manufacturing company which increased the profitability of the meeting and also attracted an audience where over 50% of the attendees were architects.

In addition to the meetings several document consultations were carried out including the AIS Office Design Guide, PPS for Planning for a Natural and Healthy Environment, Code of Practice for Sustainable Homes and the Energy Efficiency Standard for Zero Carbon Homes and finally Planning for School Development. This element of BAG's work is extremely important as it helps improve the quality of published documents.

2011 presents new opportunities with the different Groups within the IOA collaborating to organise a meeting in Glasgow later on in the year. We have also been asked to speak at an Acoustics Conference in Saudi Arabia where we will have the opportunity to demonstrate the depth and excellence of the acoustic expertise within the IOA.

Thanks go to Peter Rogers who has recently stepped down as Chairman and Committee Member of BAG. His leadership, tireless hard work and enthusiasm will be sorely missed.

Electro-acoustics Group

During 2010, the Electro-acoustics Group committee organised and put on the annual conference Reproduced Sound 2010, the annual two-day conference that has run every year since 1984. This was held at the Wales Millennium Centre in Cardiff and was once again well attended for both regulars and new faces. Feedback (questionnaire forms) was sought from the attendees and these have been scrutinised to inform future events, especially from the new influx of student attendees. It was announced at RS2010 that Reproduced Sound 2011 would be held at the Thistle Hotel in Brighton over 16-17 November. Themes will include high performance sound systems for sports and performance venues, audio networking and streaming and the design of venues for sound. The theme will be titled 'Sound Systems: Engineering or Art'.

At the EAG AGM held at RS2010 the 2011 committee was agreed. Paul Malpas remains as the Chairman, and Helen Goddard as Secretary. Paul Malpas proposed thanks to Ken Dibble, who was standing down after over 25 years service to Reproduced Sound throughout its whole history. This was enthusiastically agreed all round.

Environmental Noise Group

The Environmental Noise Group held no IOA events in 2010, but had a busy year responding to public consultations arising, in part due to the change of government and emerging changes in the planning system. The committee held five meetings and responded to seven consultations: DCLG Permitted Development Rights for small scale renewables, DECC Energy National Policy Statements (NPSs), DCMS Licensing Act Exemptions, I-INCE Guidance on Noise Assessment, CLG NPS on Natural England, Royal Commission topics for future study, and the Defra Nature of England White Paper. Members have made representation on various environmental noise policy groups and committees, including those considering wider Permitted Development Rights, and the National Policy Statement for England.

Much of the work of the committee is not well published to ENG members, and it is hoped the forthcoming revisions to the IOA website in 2011 will facilitate a broader exchange of information.

Measurement & Instrumentation Group

The Group's committee organised two one-day meetings during the year at two new venues. Motor Sport Noise was held at the Silverstone racing track on 18 March and attracted 79 delegates to the eight presentations plus a short tour of the noise monitoring facilities around the track. Proceedings were occasionally interrupted by noise from cars practising on the track, but everyone seemed to take this in their stride and enjoyed the day.

On 14 July we were at the British Museum, for a very well-attended meeting on Construction Noise & Vibration. 121 delegates enjoyed eight presentations, including an extended one from British Museum staff about the difficulties in preserving their artefacts whilst building a new conservation and exhibition centre on the same site, and much interesting data emerged about BS 5228 and many large-scale construction projects.

For 2011 the Group will be playing a full role in the Autumn Conference in Glasgow in September with two sessions devoted to measurement and Instrumentation topics.

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

The Musical Acoustics Group remains effectively dormant. Many of its former activities were duplicated with the establishment of the EPSRC funded UK Musical Acoustics Research Network, coordinated by Murray Campbell at Edinburgh University. An attempt was made to merge the two groups but, to date, this has not resulted in any new group activity. It would appear that either some new blood must be found to volunteer to revitalise the group, or we must accept that there is no longer a role for an IOA Musical Acoustics Group.

Noise and Vibration Engineering Group

Five main committee meetings were held during the year, generally by teleconferencing but with meeting in St Albans. The main focus of committee meetings was developing plans for events of interest to the NVEG membership.

A workshop on 'Sound Power Measurement - Problems and Practice' was held at HSL Buxton in early June. This was very successful, generating good feedback from delegates and interesting technical results. There are plans to repeat the event in 2011 at either HSL or ISVR.

A meeting on NVH issues in cars and other transport systems was planned for September 2010, but had to be cancelled because of the poor response to the call for papers. However, the committee's interests in NVH have now been strengthened by a new member, Andrew Wolfindale from Jaguar Land Rover, and a session on NVH is planned for the Autumn 2011 conference.

Plans for 2011 include the sound power workshop, two sessions at the Autumn conference and participation in a joint meeting with BAG on Green Buildings.

Joint IOA/IOP Physical Acoustics Group

The Anglo-French Physical Acoustics Conference (AFPAC) was held in Kendal, The Lake District, from 17-22 January 2010. This was a joint meeting with the France-UK GDR (Group de Recherché) network on 'Ultrasonics for Non Destructive Testing', and brought together engineers and applied mathematicians from both countries. There were 110 attendees. The conference was widely acclaimed to be a great success. The meeting was part-sponsored by the GDR.

A very successful AGM and Tutorial Day on Physical Acoustics were held at the Institute of Physics in London on 23 September 2010. Three external speakers presented tutorials accessible to non-specialists in their field. This year's theme was 'Ultrasonic transduction'. The Bob Chivers Prize was presented to Dr Zheng Fan, of Imperial College, for his paper on "Elastic waves guided by a welded joint in a plate".

2010 saw the sad and untimely death of Prof Andrew Temple, Chairman of the PAG committee, on 6 February 2010. His last great contribution to the Group was acting as the local organiser of the AFPAC meeting in Kendal. Prof Victor Humphrey has taken over the role of Chairman.

Senior Members' Group

Ralph Weston is currently acting as Chairman.

The Senior Members Group (SMG) was formed during 2010. The idea for a SMG began between some older members at the end of 2008 and continued at Euronoise in 2009. An ad-hoc group met in London in April 2010 to form the group and plan a future programme. A Committee was formally set up in November 2010 and an initial meeting planned for January 2011 at London South Bank University.

The initial programme includes gathering archive information about the IOA for a History project led by Geoff Kerry. The Young Members' Group had asked the SMG if it could provide members who have experience of public enquiries to help at meetings and workshops on this subject. It is also planned that SMG members help out the IOA in mentoring and surveying CPD of members wishing to become full members of the Institute.

Speech and Hearing Group

The Speech and Hearing Group's first meeting of 2010 was a talk entitled 'Voice Analysis and Hearing' by Professor Adrian Fourcin, Emeritus Professor of Experimental Phonetics at UCL and an Honorary Fellow of the Institute of Acoustics. This was held on 28 January 2010

and attended by some 25 people. It was followed by the Group's AGM, attended by 22 IOA members.

The Group also organised, jointly with the Centre for Human Communication at UCL, a successful one-day tutorial workshop on 'Speech Recording and Analysis', held in London on 22 April 2010. This was attended by 27 delegates and a report of this very successful day was written up by Ed Weston for the Acoustics Bulletin. The group is hoping to repeat the workshop format at other venues in the future.

Further workshops on similar themes are also being planned.

Discussions are underway with the British Society for Audiology to plan and hold a joint workshop on 'Good Practice in Speech Audiometry' during 2011. The group are also liaising with the British Library to arrange a visit and talk on their UK Speech Archive.

There were four full committee meetings in January, July, September and December during 2010.

During the course of the year, Peter Attwood and Mark Tatham resigned from the Group's Committee. Rob Conetta and Graham Frost joined as ordinary members, and Phil Harrison (previously a co-opted member) was elected as an ordinary member of the committee.

Underwater Acoustics Group

The major decision of 2010 was to accept a request to run the European Conference on Underwater Acoustics in 2012. This biennial event has not before been hosted in the UK, and we are grateful to Chris Capus of Heriot Watt University for taking on the local organisation in Edinburgh for July, a little before the Olympics.

The use of Edinburgh has been well tested by Euronoise and suitable venues are available. At the same time having Philippe Blondel (Bath) on our committee helps as he has past experience with the ECUA committee.

The second SAS conference at Lerici in Italy was organised by Hugh Griffiths and Gary Heald and was another success, with plans now being made for another, possibly in 2013.

The workshop in Cambridge was less well attended but we are grateful for the significant effort by Mike Ainslie, and understand that those who made the effort to run the comparative tests found it worthwhile.

So whilst Mike and Philippe have added their expertise we have lost Simon Richards, who has had to leave the underwater acoustic field and we thank him for his efforts.

Young Members' Group

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

Activities

Young Members' representatives assisted with the organisation for the student event at Euronoise and continue to attend branch meetings and generally trying to promote the group.

Unfortunately, the group organised a half day event at the Wales Millennium Centre that was cancelled due to low registration.

The group had an article in the Bulletin to introduce the committee members and has had postcards printed that can be handed out at future events.

Towards the end of the year we asked all young members to complete an online questionnaire, the result of which will be analysed to determine exactly what the younger members of the Institute want.

REGIONAL BRANCHES

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

Central Branch

The Central Branch held three evening meetings during 2010 with an average attendance of around 16. The first meeting was 'Do You Get The Shakes?' presented by Martin Armstrong which provided an informative and wide ranging round up of all things vibratory whether hand-arm, building damage or human perception and comfort. Andrew Parkin and Emma Greenland gave a popular talk on 'BB 93: Past, Present and Future' comprehensively covering what was in the title and patiently answering numerous questions. In October, Lawrence Grasty and William Egan hosted a visit to Brüel & Kjær's new premises in Royston continuing the vibration theme under the title 'Why, Shake, Rattle and Roll?' by talking about vibration testing and giving a tour of the factory in which large (up to 290 kN) shakers are manufactured. Thanks are extended to all the speakers and the venues for hosting for the meetings.

Eastern Branch

This year the branch had some wonderful presentations on a wide selection of subjects.

It tried to cater for various interests and also spread the meetings around within Suffolk, Essex and Cambridgeshire. The stand out success was the guided tour of Snape Maltings in May which attracted a fantastic turn out on a glorious afternoon. Many members stayed on to enjoy a meal afterwards as a social event.

The branch broke new ground at its September meeting in which there was no speaker but a debate amongst the audience on the topic of 'Noise from Motor Sports'. Attendees contributed towards the discussions with various levels of knowledge and all will have benefitted. It's a format which may be repeated should a suitable subject matter become apparent or be requested in future.

Meetings during 2010 (with attendance figures)

17 th February – The next step for Auditory Safety in Noise (Rob Shephard)	Woodbridge	[19]
17 th March – Noise Control on Large Construction Sites Olympic Site 2012 (Stuart Monk)	Colchester	[26]
29 th April – Noise Control at The Oval. How's that? (Clive Bentley)	Ipswich	[10]
20 th May – Guided Tour & Presentation Snape Maltings (Raf Orłowski)	Snape	[38]
29 th September – Why is the violin so hard to play? (Prof. Jim Woodhouse)	Cambridge	[9]
21 st October – Noise from Motor Sports Debate (Led by Clive Pink & Colin Batchelor)	Bury St Edmunds	[18]
24 th November – Towards Silent Aircraft (Ann Dowling)	Colchester	[26]

Irish Branch

This year has seen two events organised by the Irish Branch, as well as responses being made to consultation documents for the Clean Neighbourhoods and Environment Bill, the proposed revisions to the Building Regulations (Northern Ireland) 2011, and the Irish EPA Guidance Note on Noise Assessment of Wind Turbine Operations at EPA Licensed Sites (NG3).

In February we held our AGM at the Ventac Acoustic Laboratory in Blessington, Co Wicklow. The AGM progressed and closed smoothly, with a number of committee members standing down and 'fresh blood' being brought on board. Standing down were Oliver Hetherington, Simon Hetherington, Eugene McKeown and Ray Walsh. A special thanks goes to Oliver Hetherington who has been on the committee since the Irish Branch was formed in 1998 and was Hon Secretary from inception until 2004. New members to the committee are Sarah Middleton and Diarmuid Keaney.

In October we held the fifth Annual Gerry McCullagh Memorial Lecture. An enlightening presentation entitled The Development and Application of Noise Management Policies was given by Stephen Turner, Director of Acoustics, Bureau Veritas. As in previous years, it was a pleasure that Gerry's mother (Jean) and his widow (Rita) attended the lecture. The Irish Branch annually presents a certificate for the best performing IOA Diploma student resident in Ireland (both North and South). This was not possible at the time due to changes in posting of results, but this year's certificate goes to Stephen Byrne who gained merits in all modules as well as the labs and project. It was also a special occasion as Oliver Hetherington was presented with an Award for Distinguished Service to the Institute of Acoustics for his time given to the formation and growth of the Diploma on the island of Ireland and his involvement with the formation of the Irish Branch. Both these were closely tied to his time spent working with Gerry McCullagh, and hence a fitting act that the presentation was made at the Annual Gerry McCullagh Lecture.

London Branch

Attendance at our meetings has been sustained as compared with last year with a record 73 members reported at one London evening meeting and typically over 40 attendees at most other evening meetings. It has been another very busy year which has included ten events comprising eight evening meetings, a one day conference and our annual dinner. As usual, the topics for the evening meetings have been very varied in nature covering subjects from instrumentation, statutory nuisance, the topical Olympics to various sources of noise generated both within and outside the built environment.

The one day conference was held in May in the prestigious Royal Society building in Central London. The conference was on instrumentation and was chaired by Dr Bob Peters. There were presentations from six authors all who gave a varied overview to the use and new applications of modern day instrumentation.

The annual dinner was held in November in the Bleeding Heart restaurant, which is renowned for its excellent French cuisine and friendly ambiance. This year's after dinner speaker was none other than former IOA President and pop-science television personality, Peter Wheeler. His talk, cryptically entitled 'Taking Tea with Wotan – tales of an itinerant acoustician', took us on the unconventional journey through his life as a teenage professional train-driver, scientist, chaperone to politicians and the royals, as well as an acoustician in industry and academia.

Our new home at WSP for London evening meetings has been very well received and has adequately catered for our numbers.

The meetings started with a fascinating presentation by Professor Ann Dowling who has completed research on quiet aircraft. She methodically went through all the noise sources of aircraft and provided engineering solutions to deal with each component. She finally

concluded with an AV demonstration of aviation for the future. This was followed by Alex Krasnic in February who gave a light-hearted and informative presentation reviewing the acoustic design for speech privacy between offices in new developments and fit-outs. A double act was featured in March with a presentation by Dr Stephen Dance and Dr Bradford Backus. Both speakers complemented each other in both style and delivery and presented their work on monitoring and reducing the noise experienced by classical musicians. The presentation looked at the issue from two aspects, one focusing on acoustics and the other on audiology.

The potential noise from the event of the century was next on the agenda with Stuart Monk talking about the noise control and strategy concerned with the London 2012 Olympic Games. Stuart who is co-ordinating the local authorities through JLARS described the extensive monitoring and control processes that were being implemented at each stage of this extraordinary project. The next London evening meeting was in June and was presented by John Pointing dealing with the often controversial noise and Statutory Nuisance. John is a barrister practising in environmental and regulatory law and gave an excellent presentation reviewing case law and the use of best practical means as a defence. With over 70 members attending this meeting, this gave a fitting conclusion to our normal summer break.

Our meetings re-started with a presentation from Nicky Shiers on her research in the acoustic environment in hospital wards. The project focused on general inpatient wards and comprised a comprehensive series of noise, acoustic and questionnaire surveys. The preliminary results were interesting in that the use of technology, including medical equipment, communication systems and personal entertainment systems accounted for much of the high level noise and resulted in negative responses from staff and patients. Dr Carl Hopkins gave the next presentation in October. Carl's talk was on the spatial sampling of sound pressure in rooms and gave an excellent evaluation of the advantages and disadvantages of the various techniques available for room analysis. The final London evening meeting was in December which was given by Dr Richard Barham from NPL. Richard gave us all food for thought for future instrumentation by presenting his assessment of the latest microphone technology (MEMS) using the systems adopted in Smart type mobile phones. With some work on the frequency response, these types of microphones could soon be seen on our next generation sound level meters at replacement costs of tens of pounds rather than hundreds of pounds!

Exciting and interesting talks are already planned for 2011 and I would like to take this opportunity to thank all the members of the London Branch committee and, of course, Kevin and Linda at HQ for all their invaluable support throughout 2010. I 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

2010 has been a very successful year again for the Midlands Branch. We held 12 well attended meetings with a wide and interesting range of subjects. This is the first time we have managed to deliver one presentation a month, and it is our intention to continue this for the forthcoming year. CPD certificates are handed out at all meetings and we try to provide a range of topics and use venues across the region to appeal to as wide range of the membership as possible.

The 2010 Midlands Branch Programme

26/01/10	Helicopter Noise, Paul Freeborn.
02/03/10	Open Plan Office Acoustics, Andrew Parkin.
23/03/10	Valuing Noise Nuisance, Prof. Abigail Bristow.
21/04/10	Sound Insulation – Round Robin Testing, Dr. Robin Hall.
10/05/10	Aspects of Occupational Noise & Vibration, Paul Brereton,

	Paul Pitts and Andy Nash.
23/06/10	Light Railway Noise & Vibration, Dr. Rick Jones.
15/07/10	The Auditory Brain, Prof. Dave Moore, Dr. Bernhard Seeber and Prof. Alan Palmer.
25/08/10	Wildlife Sound Recording, Ray Goodwin.
28/09/10	Best IOA Diploma Projects, Mark Dring and Richard Twist.
20/10/10	Man Made Noise in the Ocean and its Effect on Marine Mammals, Dr Paul White.
10/11/10	Implementation of Noise Action Plans in England, Stephen Turner (Including Branch AGM).
07/12/10	Advanced Development of Automotive audio systems, Kelvin Griffiths, Gabriel Ruiz and Adrian Cartlidge.

The branch committee would like to thank all the speakers for their technical contributions, and the support from the various sponsoring venues who include: Atkins Birmingham, Arup Solihull, Health & Safety Laboratories Buxton, Institute of Hearing Research, Nottingham University, University of Derby, Loughborough University and URS Scott-Wilson Nottingham, who all provide the vital facilities and refreshments.

Finally a vote of thanks to the stalwart members behind the scenes, including: Kevin Howell for his bulletin reports, and Andrew Jellyman for creating the CPD certificates.

The branch committee also held its traditional planning meeting, where we have planned an equally full programme of monthly meetings for 2011

North West Branch

Yet another year has passed by and the average age of the North West Branch Committee gets ever greater and despite attempts at encouraging younger members to be involved with organising the activities of the Branch, we have not benefited from more youthful input, although Mike Barrett does his best among the aged. So our report begins with the often heard plea for members to participate in identifying and possibly organising meetings either by joining us at one of our informal committee meetings at Bureau Veritas, Didsbury or by contacting one of the committee members. If you would like to attend a committee meeting please contact Paul Freeborn on 0161 446 4793 regarding the location and the date of the next meeting.

Perhaps as a consequence of the ever increasing average age of the Committee, The Senior Members' Group started its life for the NW Branch on 30 September with a meeting and tour of the facilities in the Acoustic Laboratories at the University of Salford organised by Past President Geoff Kerry. It must have been successful since further meetings have been planned for the older members, if they can remember!

The meetings during the year started in February at Arup where Richard Barham from National Physical Laboratory addressed one of the criticisms from the first round of noise mapping exercises required by the European Noise Directive, which related to the absence of any measurements in the computer modelling process. Richard in a valuable insight described the MEMS (Micro-Electro-Mechanical Systems) a measurement system that has been developed and tested to provide 'Low-Cost Environmental Noise Measuring'. The early results of the trial to show the added value of including measurements in the mapping process and the potential for MEMS microphones in measurement applications were discussed.

In March at BDP Professor David Oldham of the University of Liverpool discussed difficulties encountered by many acoustic engineers in determining the requirements for the external envelope of buildings in noisy environments to achieve both reasonable sound insulation and also ventilation. The apparent incompatibility of acoustic insulation and natural ventilation,

an area of interest and concern to not only acoustic engineers, was presented with various useful approaches to the inherent conflict of these opposing requirements provided. The theoretical aspects of ventilation requirements appeared to leave many of the audience at BDP with blank faces but the issue was suitably aired.

Claire Shepherd of Bureau Veritas gave an illuminating presentation at Arup in May on the concept and importance of 'Quiet Areas' their context with the European Noise Directive and practical examples of her work with Local Authorities.

At BDP in October Dr Graham Day of the University Hospital of South Manchester NHS Foundation Trust gave a fascinating talk on effective hearing aids in 'An Approach To Audiology', and the strides made using modern technology.

The best attended meeting of the year was a workshop in November on 'Use or Abuse of BS4142' which was chaired by Geoff Kerry following provocation by Paul Michel who had concerns regarding the use of this standard in some situations. The meeting room at Arup was crowded as the audience, who had obviously arrived for the AGM, were keen to understand the background to the workings of BS4142 and how it should be used. Concerns including:

- the use of BS4142 for noise from delivery activities, night clubs, barking dogs etc;
- location of measurements – façade or free-field;
- the range in assessing the rating levels, i.e. -10dB to +5dB;
- effect on general planning issues;

were aired in what was generally agreed to be a useful meeting; and a precursor to other types of meeting.

Scottish Branch

The Scottish Branch started the year with a meeting on 22 January 2010 in Kelvinside Hillhead Parish Church, Glasgow to discuss the ongoing revision of PAN – 56 Planning & Noise document. Scottish Branch members exchanged views on what requires be revising, adding, removing or leaving alone. This was followed by the Scottish Branch Annual General Meeting which was well attended.

2010 has been a year of significant change in building acoustics, with changes to Section 5 of the Building Standards (Scotland) Regulations being implemented in October and with compulsory testing being phased in during 2011. The implementation of the new standards and testing regime has involved Scottish Branch in meetings with Scottish Government, consultants, universities and local authorities.

The Scottish Branch responded to two important Scottish Government consultation documents during 2010 on 'Permitted Development Rights for Domestic Micro-Wind Turbines' and on 'Air Source Heat Pumps and Microgeneration Equipment on Non-Domestic Properties'. Thanks go to Alistair for coordinating the Scottish Branch response to both consultations.

2010 has also been a sad year for Scottish Branch members who tragically lost a friend, work colleague and enthusiastic member of the Scottish Branch Committee. John Nicol who died on 28 June will also be remembered by Scottish Branch members for his flute renditions in Kelvinside Hillhead Parish Church preceding our 2006 AGM and for his guitar jamming sessions following many Scottish Branch events.

The Chair, Secretary, Treasurer and Young Members' 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 Members' Representative and to Committee members for their support during 2010.

Southern Branch

Activity was light in the year, though we are hoping to reinvigorate for the coming year.

The Southern Branch enjoyed a presentation from John Shelton of AcSoft on the possible applications of a multi-channel microphone system which - together with an embedded webcam - functions as an acoustic camera. The discussion included practical demonstrations of how the beam forming device operates and how it can be used to quickly and easily locate noise sources.

A series of evening meetings are being planned for 2011 - members willing to discuss a relevant topic are asked to contact either Steve Gosling or Nigel Cogger in the first instance.

South West Branch

The SW Branch met five times during 2010. Changes to the committee were made, it now being chaired by Hannah Kent of [Parsons Brinckerhoff](#) with Daniel Pope of WSP acting as secretary. Mike McLoughlin of Atkins takes on the role of Young Members' representative.

During the year the branch organised talks on Attenuation Solutions for Natural Ventilation, presented by Ze Nunes of Mach Acoustics at the University of the West of England in Bristol, and on Causes of Non-Compliance with BB93, presented by Andrew Mitchell of University of Exeter, and Auralisation as an Assessment Tool in Schools presented by Konca Saher of Atkins, at Atkins' offices in Exeter.

A social meeting also acted in July as a double with the inaugural meeting of the Senior Members' for the South West, with eight branch members expressing interest in joining this new group. The committee met again in November to plan presentations and events for 2011.

Welsh Branch

The Welsh Branch has had an eventful first year.

January saw the Branch hosting Wind Turbine 6, the latest in the series of IOA events examining the issues surrounding Wind Turbine Noise.

The conference was well attended, with over 110 delegates who were treated to presentations of a very high calibre, including a key-note speech from Welsh Assembly Minister Jane Davidson AM. In addition, the conference generated positive publicity for the IOA and interest in the topic of Wind Farm Noise with Professor Leventhall being interviewed by several national newspapers and Gwyn Mapp appearing on the S4C evening news.

June saw a second meeting of the Branch, a networking event that involved a tour of the Millennium Stadium as the venue prepared for an International Rugby match between Wales and South Africa.

A positive year, with hopefully more to come in 2011..

Yorkshire and North East Branch

The Yorkshire and North East Branch had its first meeting on Tyneside for many years at Armstrong World Industries in Gateshead, for a plant tour plus a lecture on 'The Art of Manufacturing Acoustic Ceiling Tiles'.

Rob Gardiner of Armstrong gave a presentation which covered a wide range of themes related to suspended ceilings and acoustics. He expanded on the topics of test methods, quality control and sustainability, and endeavoured to answer questions such as:

- What affects the performance of a ceiling tile?
- How can you test suspended ceilings?: α_w , D_{nfw} , R_w , Rain Noise
- How do you test floating canopy ceilings? - discrete absorbers vs. planar absorbers
- Are ceiling tiles porous or panel absorbers?
- School acoustics: BB93, solutions for exposed ('thermal mass') concrete soffits
- Healthcare acoustics: HTM0801 – acoustics vs. infection control
- How sustainable are ceiling tiles?
- What quality controls are in place to ensure that products meet their stated performance?

The tour of the mineral fibre ceiling tile plant took us through the process from the raw materials to the finished product coming off the manufacturing line.

The Committee is currently looking at meetings in 2011 to encompass airports, utilities and education.

TABLE 1 MEMBERSHIP

Grade	2009	2010
Hon Fellow	32	33
Fellow	185	186
Member	1637	1655
Associate Member	844	811
Affiliate	96	82
Technician Member	72	77
Student	70	74
Totals	2936	2977
Key Sponsor	3	3
Sponsor	49	56

TABLE 2 GROUP MEMBERSHIP

Group	2009	2010
Building Acoustics	1120	1171
Electro acoustics	278	296
Environmental Noise	1426	1474
Measurement & Instrumentation	402	427
Musical Acoustics	227	259
Noise and Vibration Engineering	940	940
Physical Acoustics	155	164
Speech & Hearing	170	190
Underwater Acoustics	138	137

TABLE 3 BRANCH MEMBERSHIP

Branch	2009	2010
Central	123	135
Eastern	259	259
Irish	139	142
London	730	728
Midlands	423	402
North West	409	392
Overseas	326	321
Scottish	180	169
South West	298	291
Southern	484	485
Welsh		45
Yorkshire & North East	223	215

TABLE 4 DETAILS OF EMPLOYMENT

Employment Category	2009	2010
Architectural Practice	31	31
Consultancy	1347	1388
Education	216	209
Industry/Commerce	353	345
Public Authority	468	433
Research & Development	180	185
Retired	120	134
Other	84	86

TABLE 5 MEETINGS ATTENDANCE IN 2010

Topic, Date & Venue	Attendance
Wind Turbine Noise 27 January Cardiff	101
Motor Sport Noise 18 March Silverstone	79
Sonar Performance Tools 7-9 April Cambridge	30
Speech Recording & Analysis 22 April London	29
Noise in the Built Environment 29-30 April Ghent, Belgium	125
Aspects of Noise & Vibration 26 May London	41
Sound Power Measurements 3 June Buxton	30
Construction Noise & Vibration 14 July London	121
Synthetic Aperture Sonar & Radar 13-14 September Lerici, Italy	55
Autumn Conference 2-3 November Birmingham	133
RS2010 18-19 November Cardiff	105
School Acoustics 7 December London	46

TABLE 6

INSTITUTE PERSONNEL AT 31 DECEMBER 2010

<p>COUNCIL</p> <p>Officers</p> <p>President President Elect Immediate Past President Honorary Secretary Honorary Treasurer Vice Presidents Engineering Groups & Branches International</p>	<p>Prof T J Cox MIOA Prof B M Shield HonFIOA Mr J F Hinton OBE FIOA Dr N D Cogger FIOA Dr M R Lester FIOA</p> <p>Mr R A Perkins MIOA Mr S W Turner FIOA Dr W J Davies MIOA</p>	<p>Ordinary Members</p> <p>Ms L D Beamish MIOA Mr K Dibble FIOA Dr E E Greenland MIOA Prof J Kang FIOA Mr P R Malpas MIOA Mr P J Rogers MIOA Mr A W M Somerville MIOA Prof P D Thorne FIOA Ms L J Webb FIOA</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>Mr S W Kahn MIOA Mr S J C Dyne FIOA Dr M E Fillery FIOA Mr G Brown MIOA Mr J Stirling Mr T M South MIOA Mr R A Perkins MIOA Prof T J Cox MIOA Mr J P Newton MIOA Dr B J Tunbridge MIOA Mr A Lawrence MIOA Prof K Attenborough 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 Dr P F Dobbins FIOA Dr M G Smith MIOA Prof V F Humphrey FIOA</p> <p>Mr R J Weston MIOA Dr E E Greenland 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 Vacant Mr M D Hewett MIOA Dr M Lowe</p> <p>Mr M R Forrest MIOA Dr G J Hunter 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 D L Watts FIOA 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 Mr D Daniels</p>	<p>Secretary</p> <p>Ms R H Canham MIOA Mr C M Pink AMIOA Mr S Bell MIOA Mrs N Stedman-Jones MIOA Mr M Swanwick FIOA Mr P J Michel MIOA Ms L Lauder MIOA Mr S J Gosling MIOA Mr D C Pope MIOA Mr J M Keen AMIOA Prof K V Horoshenkov FIOA</p>
<p>Chief Executive: Mr K M Macan-Lind</p>		