



Noise Control & Acoustics Division Newsletter

Sean F. Wu, Editor

Summer 2002

Chair's Message



Martin L. Pollack

The primary objective of the Noise Control and Acoustics (NCA) Division is to foster the communication of technical information in noise control and acoustics. The past year has been one of significant change for NCA Division, during which we focused on improving the quality of our products and functioning. It has been my pleasure to serve as the Division Chair during this period.

Participation in the International Mechanical Engineering Congress and Exposition (IMECE) has been the main activity of our Division. Over the past couple of years we focused on improving the quality of the papers presented, balancing the nature of our symposia, and ensuring that topics of relevance to industry as well as academia are properly covered. In addition, we initiated several tutorials since the IMECE 2000, which were well received by the members. We plan to continue this activity.

Many of the topics of interest to the NCA Division overlap with technical areas of other divisions. Hence we intend to sponsor more joint symposia with other divisions when such occasions occur. In the past, we've jointly sponsored symposia on Pump Acoustics with the

Fluids Engineering Division. At IMECE 2002, we will sponsor four sessions in a symposium on Flow-Induced Acoustic Phenomena and Fluid-Structure-Sound Interactions. This symposium will be part of the ASME 5th International Symposium on Fluid-Structure Interaction, Aeroelasticity, and Flow Induced Vibration and Noise.

In order to strengthen the technical focus of our division, we have restructured our technical committees. The four technical committees are: Structural Acoustics (led by Dr. S. Hambric), Aero/Hydroacoustics (led by Dr. M. Jonson), Active Noise Control (led by Dr. J. Viperman), and Transportation Noise (led by Dr. Mardi Hastings). Our intention is to encourage and foster active participation in our technical committees throughout the year. More information on the technical committees is available in our web site.

During the past year we've also completed revision of the Bylaws to reflect our operating policies and structure, and to ensure that we are appropriately focused. This revision was led by Dr. Ted Farabee, and was approved by the Environment and Transportation Group.

We look forward to working with all of you in implementing these changes. Your active participation in NCAD is strongly encouraged.

Martin L. Pollack, Chair, NCAD

Editor's Comments



Sean F. Wu

It has been four years since the publication of our last Newsletter. During this time period the Noise Control and Acoustics Division has gone through major changes that included restructuring the

Technical Committees, revising the Bylaws and Operating Policy, and reorganizing the Executive Committee (EC). Unfortunately, we have not been dutifully doing our job in keeping you updated the changes that were taking place in the division. As your new Newsletter Editor, I pledge that this will not happen again. On the contrary, we plan to issue Newsletters twice a year to better serve our members by reporting to them the activities underway, and by providing a forum for our members to express their concerns and suggestions. There will be surveys and polls to pulse what you feel about the direction and actions the division is taking. In addition to being a linkage for our members, this Newsletter will also carry forward the fine tradition of the NCA Division. Starting from this issue, we will have special sections for the Per Bruel Gold Medallists and their eminent achievements and extraordinary merits in the field of noise control and acoustics. I urge you to be actively involved in the division's activities and let any of the EC members know your comments and suggestions.

Sean F. Wu, Newsletter Editor

2001 IMECE



Rick Marboe

The 2001 ASME International Mechanical Engineering Congress and Exposition (IMECE) was held in New York City from 11-16 November. At this congress, the NCA

Division sponsored eight symposia covering a broad range of topics in acoustics and noise control, which included: 1) Aero- and Hydroacoustics Facilities, Experimental Techniques, and Validation of Computational Methods; 2) Advanced Techniques for Structural Acoustics; 3) Acoustic Engines; 4) Acoustic Diffraction; 5) Analysis Techniques in Designing Quiet Structures; 6) Computational Acoustics; 7) Active/Passive Control; and 8) BS/MS Student Paper Competition.

In addition to these symposia, valuable information was presented in other NCAD sessions. Dr. Jerry Ginsberg delivered the keynote Rayleigh Lecture on "Variational Solutions: What Rayleigh and Ritz Did Not Tell Us." Dr. Mark Moeller gave a tutorial lecture entitled, "Evolution of the Statistical Energy Analysis as Viable Simulation Technology in the Automotive Industry." An additional session was dedicated to Emerging Topics in Noise Control and Acoustics. This session provided the opportunity for each technical committee chairperson to make a short presentation on what technologies or issues were becoming of more interest and to generate discussions on a theme topic: How could the NC&A technologies be applied to homeland defense and to disaster recovery efforts? This session also provided an opportunity for the audience members to introduce issues or problems that they would like to see addressed by the technical committees. Responses to some of those requests will be shared at the 2002 IMECE. Both the tutorials and emerging topics sessions were well received and will become regular features for the future Congresses.

During the Congress, NCAD also held a general division meeting, technical committees meeting, and executive committee meetings. The majority of our planning for the next several years occurs each year at these meetings. ASME member participation is encouraged. In the future we must look to more joint sponsorship of symposia with other ASME technical divisions.

The proceedings of the congress were provided as scanned PDF files on a 3-volume set of CD-ROMs for the first time. The NCAD papers are located on Volume 3. To order a copy, call 1-800-THE-ASME.

Significant effort went into soliciting, writing, reviewing, and presenting papers for IMECE. On behalf of the NCAD Executive Committee, I thank the many authors,

anonymous reviewers, and editors for their hard work and dedication to meeting our goal of dissemination of knowledge to our engineering community. Special thanks go to session organizers Lisa Grega, Nick Vlahopoulos, Bart Lipkens, Sheryl Grace, Gary Koopmann, Ken Frampton, Jeff Viperman, and Mardi Hastings.

Rick Marboe, Program Chair

Bylaws Update



Ted Farabee

A major revision of the Division Bylaws was just passed by the Board of the Environment and Transportation Group and COE at the ASME Summer Annual meeting.

Founded in 1981, the Division established guiding Bylaws and Operating Policies. Over the past twenty years there has only been one revision to the Bylaws, which was so minor that it only existed in the ASME records as a simple pen mark up to the original Bylaws. Two years ago, as part of the Division's Long-Term Planning process, it was decided that a major updating of the Bylaws be undertaken. The timing was excellent because within a year the ASME began a major push for Divisions to review and update their Bylaws.

In 2000, the Division Executive Committee established a Bylaws Revision Steering Committee to bring the Bylaws up to date with the way ASME and the Division were operated. Initially this seemed like a rather straightforward administrative task. However, it resulted in the Executive Committee seriously reviewing all the elements of the Division and establishing an operating framework that would make the Division more responsive to its member's needs.

A sincere note of thanks goes to the members of the Bylaws Revision Committee for their hard work and to the members of the Executive Committee who spent valuable time reviewing, critiquing, and finally approving the Bylaw revisions. This is just one of the many "behind the scenes" activities that make the Division run so smoothly. I encourage you to read the revised Bylaws when they are posted on the Division WebPage later this summer. While they may not be one of the most exciting readings you have ever had, it will give you an excellent introduction to the Division's inner-workings. After that, you are welcome to call the Division Chair and ask what you can do to serve the members of the Division.

Ted Farabee, Chair
Bylaws Revision Steering Committee

In their own words

Editor's Note: Starting from this issue, we will publish essays and thoughts by the previous Per Bruel Gold Medallists that epitomize their successes and ardent expectation on us, especially the younger generation to advance science and technologies. The first essay on mentoring was written by Dr. Gary H. Koopmann of the Pennsylvania State University.

On Mentoring



G. H. Koopmann

Real estate agents have three important words of advice to offer homebuyers: location, location, location. Regarding success in the engineering profession, I offer the words: mentoring, mentoring, mentoring. It is

the past, present, and future of our engineering society and almost without exception, the great advances in our science and technologies are achieved by a progression of able scientist/engineers who have been well mentored and in turn mentor well.

Past mentors reside within our favorite textbooks and publications and, even though we haven't met them personally, we get to know and respect them through their clear and disciplined offerings - an elegant equation, a beautifully crafted explanation of a physical phenomenon or the unexplained tidbit that pricks our curiosity to search farther. Through the years, these mentors enter our circle of friends and we often speak of them as if we 'know' them.

Present mentors (many of us have the good fortune of having them in our midst) offer invaluable advice, often in an informal way. Colleagues may enlighten us on a perplexing problem during lunch or a chance meeting in hallway. Discovery comes only in the true spirit of inquiry and often requires that the mentor becomes the mentee - we learn as much from our colleagues as they learn from us - a bit of humility here and there helps.

Future generation mentors need to be nurtured and prepared for their daunting responsibility. They have a demanding tradition to maintain. We must ask ourselves these questions: Do we make our young colleagues aware of the necessity of good mentor/mentee relationships for success? Are we sharing with them the teaching and learning skills required of a good mentor? Do we insist that they master the art of scientific inquiry so they in turn, can mentor the generation following them? It is evident that the success of our engineering society rests on the continuity of the mentoring process. We engineers and scientists are privileged to be part of that ongoing effort. For this I am grateful.

G. H. Koopmann

We heard that:



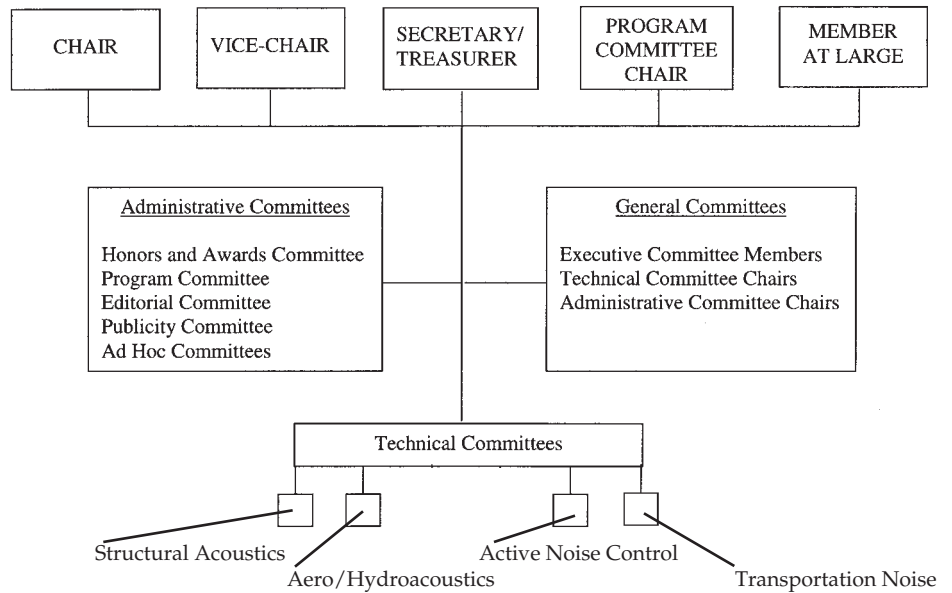
Ira Dyer

Dr. Ira Dyer, Professor Emeritus of Ocean Engineering of MIT, Fellow of both the Acoustical Society of America (ASA) and the Institute of Electrical and Electronic Engineers, and a member of the

National Academy of Engineering, will receive the Per Bruel Gold Medal at the 2002 ASME IMECE to be held in New Orleans, Louisiana from November 17 to 22. To find out more about Dr. Dyer and other awardees, please check the website at <http://www.asme.org/divisions/ncad/> for conference registration and hotel reservation information.

Also, Dr. Ilene Busch-Vishniac of Johns Hopkins University will give the 2002 Rayleigh Lecture at the 2002 ASME IMECE, and Dr. Richard F. Keltie will become an Associate Editor effective June 30, 2002.

NEW NCAD EXECUTIVE COMMITTEE STRUCTURE



NCAD Comparative Demographic Statistics

NCA Division Snapshot

A.S.M.E.

**Noise Control and Acoustics
Division**

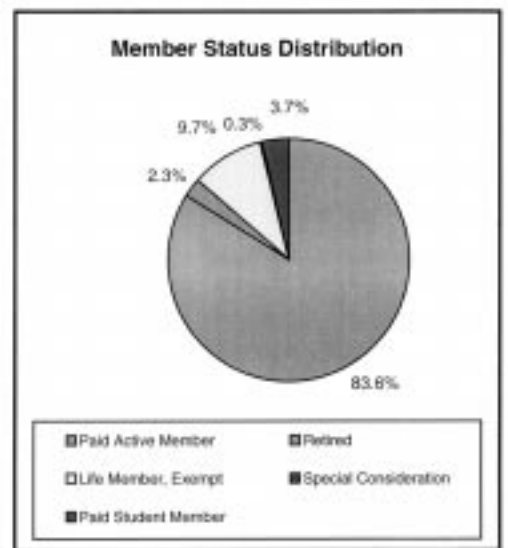
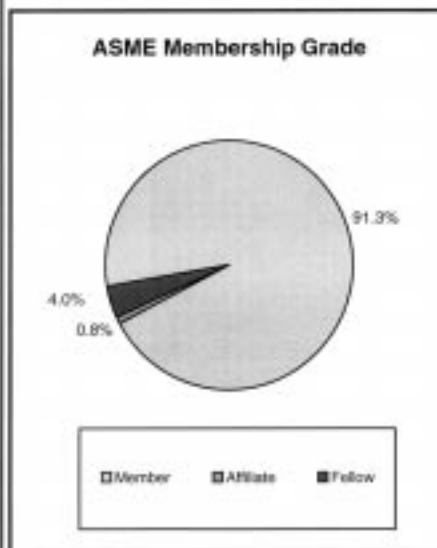
Demographics Report
as of
March 12, 2002

Total Membership - 4,141
Primary Membership - 779
Secondary Membership - 589
Other - 2,773

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Membership Grades		
Grade of ASME	Members	%
Member	3,781	91.3%
Affiliate	34	0.8%
Fellow	167	4.0%
Honorary Member	5	0.1%
Student	151	3.6%
Graduate Student	3	0.1%
Total	4,141	100.0%

Membership Status Distribution		
Membership Status	Members	%
Paid Active Member	3,462	83.6%
Retired	95	2.3%
Life Member, Exempt	401	9.7%
Life Member, Prepaid	9	0.2%
Reciprocal	0	0.0%
Unemployed	5	0.1%
Special Consideration	12	0.3%
Special Life Member	3	0.1%
Paid Student Member	154	3.7%
Total	4,141	100.0%



Congratulations!

Dr. Gary H. Koopmann, distinguished professor of mechanical engineering and director, Center for Acoustics and Vibration, the Pennsylvania State University, University Park, Pennsylvania, was awarded the 2001 Per Bruel Gold Medal for seminal contributions to the theory and practice of noise and vibration control of mechanical systems by passive and active means, and for successfully disseminating his knowledge and methods to his students and to industry. The Per Bruel Gold Medal for Noise Control and Acoustics was established in honor of Dr. Per Bruel, who pioneered the development of highly sophisticated noise and vibration measuring and processing equipment. The medal recognizes eminent achievement and extraordinary merit in the field of noise control and acoustics, including useful applications of the principles of noise control and acoustics to the art and science of mechanical engineering.

Dr. Jerry H. Ginsberg, the George W. Woodruff Chair, G. W. Woodruff School of Mechanical Engineering, Georgia Institute of Technology, Atlanta, Georgia was selected to give the 2001 Rayleigh Lecture on "Variational Solutions: What Rayleigh and Ritz Did Not Tell Us," at the ASME IMECE held in New York, November, 2001.

Dr. Sean F. Wu, Professor of Mechanical Engineering at Wayne State University, was elected to the Grade of Fellow of the ASME.



Gary H. Koopmann (center) was congratulated by the NCAD members for receiving the 2001 Per Bruel Gold Medal.



Jerry H. Ginsberg (left) was congratulated by Martin Pollack (right), Chair of the NCA Division, for delivering the Rayleigh Lecture at the 2001 ASME IMECE.



Sean F. Wu (left) was presented a plaque and certificate for being elected to the Grade of Fellow of the ASME from Adnan Akay (right), Vice President and Chair of the Environment & Transportation Group, at the 2001 ASME IMECE.



Luc Mongeau of Purdue University

Brian Minner, In-Su Paek, and James E. Braun, Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, Indiana.



Manmohan Moondra of Wayne State University

The Best Student Paper Award sponsored by the NCA Division at the 2001 ASME IMECE went to "Visualization of sound transmission into a vehicle passenger compartment," by Manmohan Moondra and Sean F. Wu, Department of Mechanical Engineering, Wayne State University, Detroit, Michigan.

NCAD WebPage

<http://www.asme.org/divisions/ncad/>

Those of you who visited the Division's WebPage may have noticed a major revision of the format since last fall. The ASME has recognized the important role the Internet plays in today's society and made a big push to upscale ASME's presence in cyberspace. One aspect of this has been to establish a common format for Division WebPages. Prior to this, each Division established its own WebPage according to the likes and skills of their volunteers. This led to some interesting and creative WebPages. However, navigating through individual WebPages to find desired information could be a learning experience on its own, which was very time consuming, frustrating, and unnecessary. This situation has been greatly improved with the establishment of a standard WebPage format that gives each WebPage a "common feel."

The ASME has done an excellent job in establishing a common Division WebPage format and at the same time providing a format that allows each Division to post information in a manner unique to the Division. I invite each of you to periodically visit the Division WebPage to get our latest information, and request that you forward suggestions on how to improve the quality and content of the WebPage to me at: FarabeeTM@nswccd.navy.mil. Our WebPage can only be as good as the level of support it receives from Division members.

Ted Farabee

Questionnaire:

Please take a look at the following questions and e-mail your answers and comments/suggestions to: swu@eng.wayne.edu, or mail them to: Dr. Sean F. Wu, Department of Mechanical Engineering, Wayne State University, Detroit, MI 48202; Tel: (313)577-3884; Fax: (313)577-8789.

1. Do you think that you can benefit more from attending (a) the ASME IMECE, (b) International Design Engineering Technical Conference, (c) Fluids Engineering Division International Summer Meeting, or (d) other ASME conferences (please specify)?
2. Do you prefer that the Noise Control and Acoustics (NCA) Division sponsors symposia at (a) the ASME IMECE, (b) International Design Engineering Technical Conference, (c) Fluids Engineering Division International Summer Meeting, or (d) other ASME conferences (please specify)?
3. If there are symposia on noise control and acoustics related topics in the ASME IMECE, International Design Engineering Technical Conference, and Fluids Engineering Division International Summer Meeting, which conferences will you most likely attend?