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Noise Control and Acoustics Division Newsletter

Gary H. Koopmann, Editor

Spring 1993

Incoming Chair's Remarks —

This past year has been another successful and productive one for the Noise Control and Acoustics Division. The hard work and dedication of our Executive and Technical Committee chairs resulted in a very successful Winter Annual Meeting and great committee participation.



Bill Hanson

With this experienced leadership team conducting the business of our division, I am highly optimistic about the coming year.

We have an interesting program planned for WAM '93, scheduled for November 28 through December 3. Our Division activities occur on the first three days of WAM this year. With the technical sessions, committee meetings, Rayleigh Lecture, and social events all concentrated into three days, you will find it a full program.

The WAM is always well attended, with many of our division members participating in the technical sessions and presentations that interest them. If your participation is limited to these sessions, however, you're not gaining the full advantage of an active involvement in the organization. NCA is still small enough

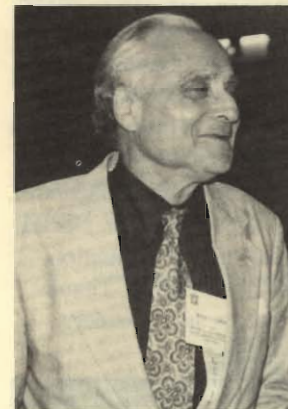
(Continued on page 3)

Junger Receives Per Bruel Gold Medal

WAM 92's recipient of the Per Bruel Gold Medal for noise control and acoustics was Miguel C. Junger, Sc.D., P.E., Chairman of the Board, Cambridge Acoustical Associates, Inc., Cambridge, Massachusetts. He was cited for his seminal work in the field of interaction of sounds and structures, and for extensive contributions to the field of noise control.

Dr. Junger earned a B.S. and M.S. in mechanical engineering from the Massachusetts Institute of Technology, Cambridge, in 1944 and 1946, respectively. He then worked on mechanical vibrations and shock at Barry Controls for three years before deciding to pursue research work in applied mechanics. In 1951 he received a Sc.D. from Harvard University, Cambridge, where his thesis centered on sound radiation and scattering by shells, an area he has continued to explore ever since.

Following graduation, Dr. Junger worked as a research fellow at Harvard Acoustics Research Laboratory for four years before founding Cambridge Acoustical Associates with his colleague Dr. P.W. Smith, Jr., in 1955. Even though he served as president from 1959 until 1989, when he was named chairman of the board, he remained active in research, primarily for the United States Navy, the National Aeronautics and Space Administration, and various corporations. He also worked in the area of noise control, developing a sound absorptive concrete block, marketed under the trade



Miguel C. Junger

name "Soundblox". In addition to his duties at Cambridge Acoustical Associates, Dr. Junger also was active as an educator, serving as senior visiting lecturer at MIT's Department of Ocean Engineering from 1968 to 1978. During a half year abroad in 1975, he taught as visiting professor in France at the Université de Technologie de Compiègne and also evaluated acoustics research in Europe for the United States Navy's Office of Naval Research.

Dr. Junger coauthored a monograph with D. Feit, "Sound, Structures, and Their Interaction" and a French textbook with M. Pérulli, "Eléments d' Acoustique Physique". He has published in the Journal of Acoustical Society of America, the Journal of Underwater Acoustics, Noise Control Engineering Journal, and the ASME's Journal of Applied Mechanics. He also has given short courses in structural acoustics at the von Karman Institute in Brussels, Belgium, and at the French Aerospace Agency.

An ASME Fellow, Dr. Junger was the 1987 Rayleigh Lecturer. He was

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News from WAM '92

Program Chairman's Report

R.F. Keltie

Thanks are extended to all the authors, session chairpersons and session developers for their outstanding efforts in contributing to the success of WAM '92 in Anaheim, California. A total of 64 technical presentations were given in 15 sessions sponsored by NCAD. In addition, the Rayleigh Lecture was given by Professor Allan Pierce of Penn State University. There were seven sessions as part of the Symposium on Vibroacoustic Characterization of Materials and Structures, three sessions as part of the Flow Induced Noise and Vibration Symposium, three sessions as part of the Symposium on Active Control of Noise and Vibration, and two sessions on Analysis Methods in Acoustics. All of the sessions were well attended, and most were followed by a lively question and answer period. The symposia were organized in conjunction with several other ASME divisions, including Applied Mechanics, Dynamic Systems and Control, Fluids Engineering, Heat Transfer, Nuclear Engineering, Nondestructive Evaluation, and Pressure Vessels and Piping. Thanks again to all contributors and attendees.

Future Winter Annual Meetings

November 28 December 3, 1993
New Orleans Hilton
New Orleans, LA

November 13-18, 1994
Hyatt Regency Chicago
Chicago, IL

November 12-17, 1995
San Francisco Hilton
San Francisco, CA

November 17-22, 1996
Atlanta Hilton & Towers
Atlanta, GA

November 16-21, 1997
Loews Anatole
Dallas, TX

November 15-20, 1998
Anaheim Hilton & Towers
Anaheim, CA

International Symposium On Vibroacoustic Characterization Of Materials and Structures

P.K. Raju

The International Symposium on Vibroacoustic Characterization of Materials and Structures was held as a part of the 113th ASME Winter Annual Meeting held in Anaheim, CA. The symposium was sponsored by the Noise Control and Acoustics, NDE and the Applied Mechanics Division of ASME. The aim of the symposium was to bring together recent advances in Vibroacoustic Characterization of Materials and Structures. The Techniques discussed in the symposium were acoustic emission, ultrasonic testing, vibration measurement, modal analysis and structural intensity. The scope of the international symposium consisted of twenty nine papers from different authors from five countries presented in seven sessions organized over three days. The papers presented at the symposium were edited into a volume (ASME-NCA-Vol-14) by P.K. Raju of Auburn University who was also the symposium chairman. The symposium created a lot of interest in the research community as was evident from the very well attended sessions. It brought together for the first time material scientists, acousticians, vibration and dynamic specialists, and NDE specialists in one forum which provided very good exchange in views as evidenced from the excellent discussions that followed the presentations. The symposium was inaugurated by Walter Eversman, chairman of the Noise Control and Acoustics Division of ASME. The highlights of the symposium are the results presented on the

application of various techniques of vibroacoustic characterization in studying the process monitoring of composites. Bruce Hartman and his colleagues at the Naval Surface Warfare Center in Silver Spring presented an interesting paper on "Tailoring Polyurethane Properties for Damping Applications". P.K. Raju and his Colleagues from Auburn University presented a very interesting paper on "Characterization and Process Monitoring of Carbon-Carbon Composites Using Vibration Measurements" Ronald Givson, Raju Mantena, D.A. Saravanos, Michael Pereria and their colleagues provided very interesting papers on Vibration Damping studies of advanced composites. Krishnan Balasubramanian, J. Qu, Robert Hickling and Vinay Dayal presented interesting papers on the application of Ultrasonic Testing for characterization of composites. Roger Clough, S.I. Rokhlin, H.L. Chen and their colleagues discussed Acoustic Emission studies relating to composite structures including concrete bridges. Yapa Rajapakse of the Office of Naval Research gave an overview of the activities of the Mechanics Division at ONR in the area of Characterization of Composites. Overall, this symposium was very well organized with quality papers and sessions filled with stimulating discussions. A copy of the proceedings can be obtained from ASME, 345 East 47th Street, United Engineering Center, New York, NY 10017.

Junger Receives Per Bruel

(Continued from page 1)

named a Gordon McKay Fellow by Harvard University in 1950 and was the recipient of the Acoustical Society of America's Trent-Crede Medal in 1987. He is a Fellow of the Acoustical Society of America and a founding member of the American Academy of Mechanics.

Dr. Junger is a registered professional engineer in the commonwealth of Massachusetts.



NCAD Chairman Hanson gives award to outgoing program chairman, K.H. Hsu

Technical Committee Notes

Flow Induced Noise and Vibration

T. Farabee

The Flow Induced Noise and Vibration Technical Committee participated in the sponsorship of the 1992 International Symposium on Flow-Induced Vibration and Noise. This was the third time this symposium was held and it was again co-sponsored by six Divisions of ASME and by JSME, CSME (Canada), IMechE and IAHR. The symposium consisted of over 100 papers from 16 countries. Primary credit for the success of this symposium goes to the symposium coordinator, Professor Paidoussis of McGill University. The NCAD sponsored sessions, titled "Flow Structure and Flow-Sound Interaction" (Volume 3), contained 14 excellent papers. Judging by the attendance at the sessions the presentations were well received. The organizers thank the paper authors, those who helped in the review process, and those who attended the presentations for contributing to another successful symposium.

The technical committee meeting held during WAM '92 was again well attended. As a result of the excellent ideas forwarded at this meeting the committee was able to chart plans for involvement in future WAM's.

Instrumentation and Signal Processing

Mardi Hastings

The Technical Committee for Instrumentation was rejuvenated in 1992 and became the "Instrumentation and Signal Processing Technical Committee" by vote at the NCAD general meeting in Anaheim during WAM 92. One session on New Developments in Instrumentation and Measurement Techniques is planned for WAM 93 in New Orleans. Papers for this session will primarily be about new fiber optic or microelectromechanical microphones and hydrophones.

Two sessions are planned for WAM 94. One on Novel Uses of Instrumentation and the other on Recent Developments in Signal Processing. Anyone interested in submitting a paper for either of these sessions or becoming involved in the Instrumentation and Signal Processing Technical Committee should call or write to the new Chairperson: Professor Mardi C. Hastings, The Ohio State University,

Department of Mechanical Engineering,
206 West 18th Avenue, Columbus, OH
43210-1107, (614) 292-2271 or fax (614)
292-3163.

Incoming Chair's Remarks

(Continued from page 1)

to be receptive and responsive to the interests of our members. The key, of course, is that we must know of your interests! It is for this reason that I encourage attendance at the General NCAD meeting. By attending the General meeting, you can learn more about the division and have an opportunity to serve on the technical committees, where key decisions are made on the future direction and activities of NCAD.

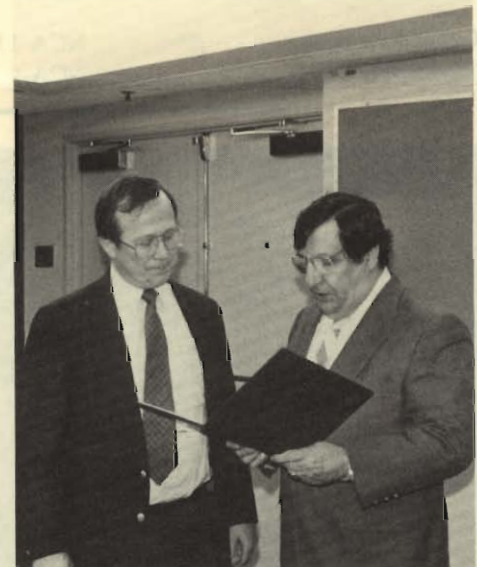
We have an outstanding group of professionals in charge of our activities this year. Our technical committees are chaired by innovating and energetic people who are assembling stimulating sessions for WAM '93. The Executive Committee is a blend of seasoned leaders and new members who will enhance the team. We will miss the contributions of Walt Eversman, who has served for the past five years, twice as chairman. But we are fortunate to be gaining the skills and insights of two new Executive Committee members, Andy Seybert and P.K. Raju. In addition, Dick Keltie will serve as Program Chairman for 1993, and Andy Seybert for 1994. Gary Koopmann, currently the editor of our newsletter, has agreed to serve as Associate Editor for the Division.

To add variety to the WAM program, we have changed the format of several sessions. In addition to the Rayleigh Lecture and the traditional technical sessions, we are offering four symposia, a New Developments session, a forum on Industrial Acoustics, and a student papers competition. The symposia will cover a broad range of subjects, including one on Flow Noise Modeling: Measurement and Control; another on Structural Acoustics; and a third on Characterization of Composites. The fourth is an international symposium on Bubble Noise and Cavitation. We are pleased to have Dr. David Crighton, the recipient of our Best Paper Award at WAM '85, as the Rayleigh lecturer for WAM '93. Dr. Crighton has just been elected a Fellow of the Royal Society. This variety assures us of an interesting and dynamic program.

Our division has continued in its steady growth, but there is much work ahead to ensure our long-term success. Our renewed efforts to recruit new members will focus particularly on engineering students. We will also continue to solicit industrial member participation, to help promote the exchange of technical information with those who apply it. What better way to allow researchers, educators and practitioners to meet and discuss relevant issues on Noise Control and Acoustics?

Finally, we will coordinate our activities with those of other societies that may be of interest to our members. Meetings are scheduled with INCE and ASA representatives to improve our communications on subjects of interests to both us and them.

With all of this activity as a backdrop, and with the enthusiasm and dedication of our current committee chairs, we can be assured of a very interesting and enjoyable year. I would urge our members, both academic and industrial, to join us in our efforts to promote the interchange of ideas and technical information in the field of Noise Control and Acoustics.



Vice-President Terry Dear of the Environment and Transportation Operating Board gives service award to Henry Scarton

A look at

TENTATIVE WAM '93 PROGRAM

Flow Induced Vibration and Noise Technical Committee

T. Farabee

NCAD Program	Session	Date	Time
Flow Noise I	NCA-10	Wed	7:45-9:15 am
Flow Noise II	NCA-12A	Wed	11:15 - 12:45 am
Flow Noise III	NCA-15	Fri	3:45-5:15 pm
Bubble Noise (Co-Sponsor - FED) (Arndt)			
Bubble Noise I	NCA-13	Wed	2:00-3:30 pm
Bubble Noise II	NCA-14	Wed	3:45-5:15 pm
Structural Acoustics (Cunefare)			
Structural Acoustics I	NCA-4	Mon	2:00-3:30 pm
Structural Acoustics II	NCA-5	Mon	3:35-5:15 pm
Structural Acoustics III	NCA-12B	Wed	11:15-12:45 am
Characterization of Composites (Co-Sponsor - AMD)(Raju)			
Composites I	NCA-1	Mon	7:45-9:15 am
Composites II	NCA-2	Mon	9:30-11:00 am
Composites III	NCA-3	Mon	11:15-12:45 am
Composites IV	NCA-6A	Tues	7:45-9:15 am
Composites V	NCA-7A	Tues	9:30-11:00 am
Flow Acoustics (Zaman)			
Flow Acoustics	NCA-6B	Tues	7:45-9:15 am
Instrumentation (Hastings)			
Instrumentation	NCA-6B	Tues	7:45-9:15 am
Noise Control and Plant Design(Pelton)			
Noise and Plant Design	NCA-11B	Wed	9:30-11:00 am
Student Paper Competition (Hastings)			
Student Papers	NCA-8	Tues	11:15-12:45 am
General Acoustics			
Rayleigh Lecture	NCA-11A	Wed	9:30-11:00 am
	NCA-9	Tues	3:45-5:15 pm

For WAM '93 the committee is co-sponsoring two symposia with the Fluids Engineering Division (FED). Dr. R. Arndt is the Division organizer for the 4th International Symposium on Cavitation Noise and Erosion in Fluid Systems which will have 3 sessions, 2 from NCAD and 1 from FED. Division organization for the second symposium, titled Symposium on Flow Noise Modeling, Measurement and Control, is being handled by Dr. T. Farabee. This symposium is a follow-on to the symposium by the same name held at WAM '91 and will consist of 5 sessions, 3 from NCAD and 2 from FED. Both symposia should be excellent, ones that members of NCAD will not want to miss.

For WAM '94, the committee plans to participate in sponsoring two symposia. Mr. A. Fagerlund of Fisher Controls Intl. [(515) 754-3582] is organizing a symposium on Piping and Valve Noise. Dr. T. Farabee is organizing the committee's activities in co-sponsoring the 1994 Symposium On Active Control of Noise and Vibration. Both organizers solicit your thoughts and support - it is never too early to begin organizing a symposium.

The committee will again meet during WAM '93. This meeting is open to all who wish to attend. If you have suggestions on technical areas this committee should be pursuing, I invite you to attend the committee meeting to discuss them or give me a call. In order to fully serve the technical community we need your input. For further information about committee activities and plans, I can be reached at: Dr. Theodore M. Farabee, Naval Surface Warfare Center, Carderock Division, Code 742, Bethesda, MD 20084-5000, Tel: (301) 227-1731, or FAX (301) 227-4405.



Bill Hanson, X.F. Wu, Allison Flatau, Mary Sinnott meet at the NCAD social hour

*** REMINDER ***

Plan to attend the NCAD's technical committee meetings during WAM '93. Times and locations will be available in the WAM '93 publication.

WAM '93

Young Engineers Forum

As part of the public events at WAM '93, ASME is holding the Young Engineers Forum (YEF) on Sunday, November 28, 1993 in the New Orleans Hilton, New Orleans, Louisiana.

The Forum, designed for young engineers with 0-10 years experience, is intended to provide technology transfer at an appropriate level and answer questions about education, career advancement and opportunities in new and different areas. The YEF is also an ideal place for young engineers to make contacts in industry and among peers.

The presentation format of YEF sessions consists of case studies and panel discussions on practical "on the job" experience. There will also be a reception where the presenters make themselves available for informal discussions. When possible, the presenters themselves will be young engineers.

Topics that will be addressed at YEF '93 include the environment, transportation, computers and sessions relevant to the WAM Highlight Topic, "Managing Technological Risks". Plans are also underway for "hot topics" pertaining to the New Orleans area, perhaps concerning the engineering behind such New Orleans landmarks as the Water Board's pumps and/or the Super Dome.

For more information about the Young Engineers Forum, contact Elio Manes, Technical Program Administrator, at (212) 705-7797.

Forum On Noise Control and Plant Design

Bill Hanson

The Technical Committee on Industrial Acoustics is planning a forum on Noise Control and Plant Design for WAM '93. Several noted consultants will discuss their activities in this area and describe issues which must be considered in implementing an effective program to control noise in industrial plants. The Technical Committee on Industrial Acoustics will meet on Monday, November 19, 1993. Anyone who is interested in joining the technical committee to help select topics for future Winter Annual Meetings should plan to attend.

Student Paper Competition Planned

Mardi Hastings

In efforts to promote student member participation and interest, NCAD will have a special session at WAM 93 in New Orleans for paper presentations by students at the senior BS and MS level. Papers may pertain to any area of noise control and acoustics. The student must be the first author and make the presentation at WAM 93. At least two cash awards will be given for outstanding papers.

Another competition is planned for WAM 94. Anyone interested in submitting a paper or helping organize the session should contact Professor Mardi C. Hastings, The Ohio State University, Department of Mechanical Engineering, 206 West 18th Avenue, Columbus, OH 43210, 614-292-2271.

Turbomachinery Noise Technical Committee

Bill Swim

Membership — A membership drive is underway. People interested in noise from all types of turbomachines; pumps, fans, compressor, blowers, turbines, etc., are encouraged to participate in the committee's activities. Interest could be in research, design, applications, trouble shooting and/or measurements. The turbomachinery noise could be from the machine alone or as part of a system. To join the Committee and participate in it's activities, send a note to Bill Swim, Mechanical Engineering Department, Tennessee Technological University, Box 5014, Cookeville, TN 38505-5014 or fax to 615-372-6172. There are no committee dues and ASME membership is not required. Committee meetings are held at the ASME Winter Annual Meetings — the next one is in New Orleans on November 28 through December 3 — but meeting attendance is not required. You may participate in committee activities via mail and/or in person.

Forum on Turbomachinery Noise — An Open Forum on Turbomachinery Noise is being planned for the 1993 Winter Annual Meeting of ASME, to be

held in New Orleans on November 28 through December 3. Forum contributions are solicited on all aspects of turbomachinery noise including, but not limited to, work in progress, current noise problems and/or solutions, lab or field measurements, and new test methods. The Forum will offer an opportunity to share insights and challenges with others working in the field. Discussion will also deal with the how, needs and directions, of solving turbomachinery noise problems. Technical programs and assistance that NCAD might provide could also be discussed. If you are interested in making a presentation, send a note to Bill Swim, Department of Mechanical Engineering, Tennessee Technological University, Box 5014, Cookeville, TN 38505-5014. A written paper is not required.

Crighton to Give Rayleigh Lecture at WAM '93

The Rayleigh Lecture for WAM '93 will be given by Dr. David Crighton of Cambridge University, United Kingdom. The lecture will take place on Tuesday, November 30, 1993 at 3:45 p.m., followed by the traditional Wine and Cheese Reception.



New Executive Committee member, Andy Seybert, talks with K.H. Hsu and Dick Keltie

Outgoing Chair's Remarks

The Second Time Around: A Summation

W. Eversman

Here it is time to sum up a second stint as chairman of the division. Time flies when there is fun to be had! It is without hesitation that I note that the past year has been one in which the management of the division has been a cooperative one. Because of the manner in which Bill Hanson and I exchanged the responsibility, each ending up with a split two-year appointment, it has been hard to tell where one gave up responsibility and the other assumed it. In his role as vice chair during the past year, Bill has continued to carry more than his share of the load and I have found my job considerably simplified. This experience has strengthened my belief that a well defined rotation leading to the chairmanship should be a part of the executive committee structure. ASME is a complicated organization and it takes more than passive participation on the executive committee to be prepared to deal with the chairmanship. My second year was much easier than the first, partly because of my own extra experience, but also because of the added experience and dedication of the vice chair.

In an attempt to institutionalize the idea of gradual immersion in the organization we are presently on a schedule which has the technical program chairmanship as an essential step in the "training" for the divisional chairmanship. This begins with a year as an assistant program chair after which the program chairmanship is assumed. Following this, vice chairmanship of the division is envisioned, followed by the divisional chairmanship. In this way, the NCAD chairman has experience in all facets of our activities. We have been operating with a six or seven member executive committee so that a defined succession is neither automatic nor required over a five year term. However, the flexibility is there to meet most eventualities. It is my hope that this new procedure will be retained for a fair trial, and perhaps improved upon if necessary.

Our year is best summed up by reviewing the very successful Winter Annual Meeting. The technical program was highlighted by three international symposia. The Symposium on

Vibroacoustic Characterization of Materials and Structures was sponsored jointly with Nondestructive Evaluation and Applied Mechanics. Organized for NCAD by Dr. P.K. Raju, the symposium consisted of seven sessions with 28 papers. It was one of the best attended offerings of our division in recent years, and many favorable comments were received. Dr. Eric W. Hendricks organized the 1992 Symposium on Active Control of Noise and Vibration which consisted of three sessions with 15 papers. This represents a commitment by the division to be actively involved in this important new technology. The co-sponsors of this symposium were Dynamic Systems and Control and the Design Division. As has become a tradition, NCAD participated in the Third International Symposium on Flow Induced Noise and Vibration (The "Paidoussis Symposium"). Dr. Ted Farabee organized three sessions with 14 papers for NCAD. Other sponsors were Applied Mechanics, Fluids Engineering, Heat Transfer, Nuclear Engineering, and Pressure Vessels and Piping. An additional two sessions in analysis methods in Acoustics with six papers were organized by Dr. Andy Seybert.

The Rayleigh Lecture was delivered by Dr. Allan Pierce, of Pennsylvania State University. He spoke to a large audience on the subject of the evolution of the wave concept in acoustics. His lecture was followed by the annual Wine and Cheese social event.

The division sponsored Per Bruel Medal was awarded to Dr. Miguel Junger for his pioneering work in structural acoustics.

The Executive Committee of the division added Dr. P.K. Raju and Dr. Andy Seybert to fill vacancies. They join Dr. Walt Eversman, Dr. Bill Hanson, Dr. Bill Swim, Dr. Dick Keltie, and Dr. Adnan Akay on the committee.

The technical committee structure is now operating very smoothly, thanks to the enthusiasm of a group of exceptionally dedicated young committee chairs. A new committee under the chairmanship of Dr. P.K. Raju will deal with Materials Characterization Using Acoustical Techniques. Dr. Allan Pierce will head the Analysis Methods in Acoustics and Dr. Mardi Hastings has assumed the chairmanship of the Instrumentation Committee. Another new committee deals with Active Noise

Control and is under the chairmanship of Dr. Eric Hendricks. Geoffrey Main has assumed the chairmanship of the Structural Acoustics Technical Committee. We can look forward to strong technical offerings in the coming years.

An extensive technical program for the 1993 Winter Annual Meeting is in the works and includes: 1) Symposium on Flow Noise Modeling, Measurement and Control (with FED); 2) 4th International Symposium on Bubble Noise and Cavitation (with FED); 3) Symposium on Structural Acoustics; 4) Symposium on Characterization of Composites (with AMD); 5) Sessions on Flow Acoustics Interaction and Fluid Flow Control; 6) New Developments in Instrumentation and Measurement Techniques; 7) Student Paper Competition; 8) Sessions on General Acoustics; 9) Rayleigh Lecture and Wine and Cheese Social.

Dick Keltie is technical program chair and is assisted by Andy Seybert. Andy will have responsibility for WAM 94 and has already started on the planning.

ASME statistics show that division membership is up 4% to 641 primary members. This is attributable to the strength of the technical activities of the division. This strength is due to the exceptional dedication of our technical committees and to the hard work of the program chairs. Recent experience has emphasized that we have the most successful programs when we offer sessions and symposia which are topical and relevant. We should retain the classical areas of interest, but we need to recognize and accept the fact that emerging technologies are what expand our horizons and bring us into contact with a new clientele.

Ffowcs Williams Selected as Rice Lecture at WAM '93

Professor Sean. Ffowcs Williams has been selected as the Calvin W. Rice Lecturer at WAM '93. Dr. Ffowcs Williams is from Cambridge University, United Kingdom.

Electronic Mail Directory

Bill Swim

An electronic mail directory is being compiled for NCAD personnel, both members and others interested in noise control and acoustics. Please send your e-mail address to Bill Swim at WBS7801 via Bitnet or WBS7801.EDU via Internet. Most universities will have Bitnet service, but since it is restricted to educational institutions, others may have Internet service. The E-mail directory will be made available to participants to use in NCAD activities.

New Executive Committee Member Profiles

P.K. Raju received his Ph.D. degree in Mechanical Engineering with specialization in acoustics and vibration in 1977. Before joining Auburn University in the fall of 1984, Dr. Raju served on the faculty of the Catholic University of America, Washington, DC, Purdue University, West Lafayette, IN, and on the faculty of several different universities in India. In 1991, Dr. Raju received a NASA award for creative development of a technical research innovation for his work on damping studies on composite materials. He was also the recipient of the NSF international travel award in 1990 and the NSF Novel Research Award in 1989. Dr. Raju, along with Dr. Ronald Gibson of Wayne State University is organizing an International Symposium on Dynamic Characterization of Advanced Materials, for the ASME WAM '93 in New Orleans, Louisiana. This symposium is being co-sponsored by the Applied Mechanics and NDE divisions.

Andrew F. Seybert is Professor and Chairman of the Department of Mechanical Engineering at the University of Kentucky. He has been at the University of Kentucky since 1977. Dr. Seybert received his BSME degree from the University of Cincinnati and his PhD degree from Purdue University in 1975. He has worked for Cummins Engine Company and continues to consult with industry. Dr. Seybert is a Fellow of the Acoustical Society of America and has been and member of the American Society of Mechanical Engineers for 21 years.

ASME Noise Control and Acoustics Division ASME WAM Program Schedule

Planning technical sessions is the major activity of all NCAD technical committees. To clarify the scheduling for potential authors, we have listed the various deadlines that must be met to ensure the success of the WAM meetings. Please save this important schedule, copy it, and pass it along to your colleagues so that we can all be aware of the planning process.

Action	MonthDue	Action By
Call for Papers/Abstracts to ASME	April	WAM Program Chmn
Number of Planned Sessions to WAM Program Chairman	October	Committee Chairmen Session Developers
Preliminary Program to ASME	December	WAM Program Chmn
Abstracts to Session Developers or Paper Review Chairman	January	Authors/Developers
Draft Manuscripts due to Paper Review Chairman	March	Authors/Developers
Session/Paper Titles to WAM Prgm Chmn	March	Developers
Paper Review Completed	April	Paper Review Chairman/ Reviewers
Completed 1337 Forms to WAM Program Chairman	April	Developers/Paper Review Chairman
Completed 1337 Forms to ASME	May	WAM Program Chmn
Final Program ASME	July	WAM Program Chmn
Final Manuscripts on Mats to Paper Review Chairman	July	Authors/Developers
Final Manuscripts on Mats to ASME	July	Paper Review Chairman

Technical Paper Review Chairman

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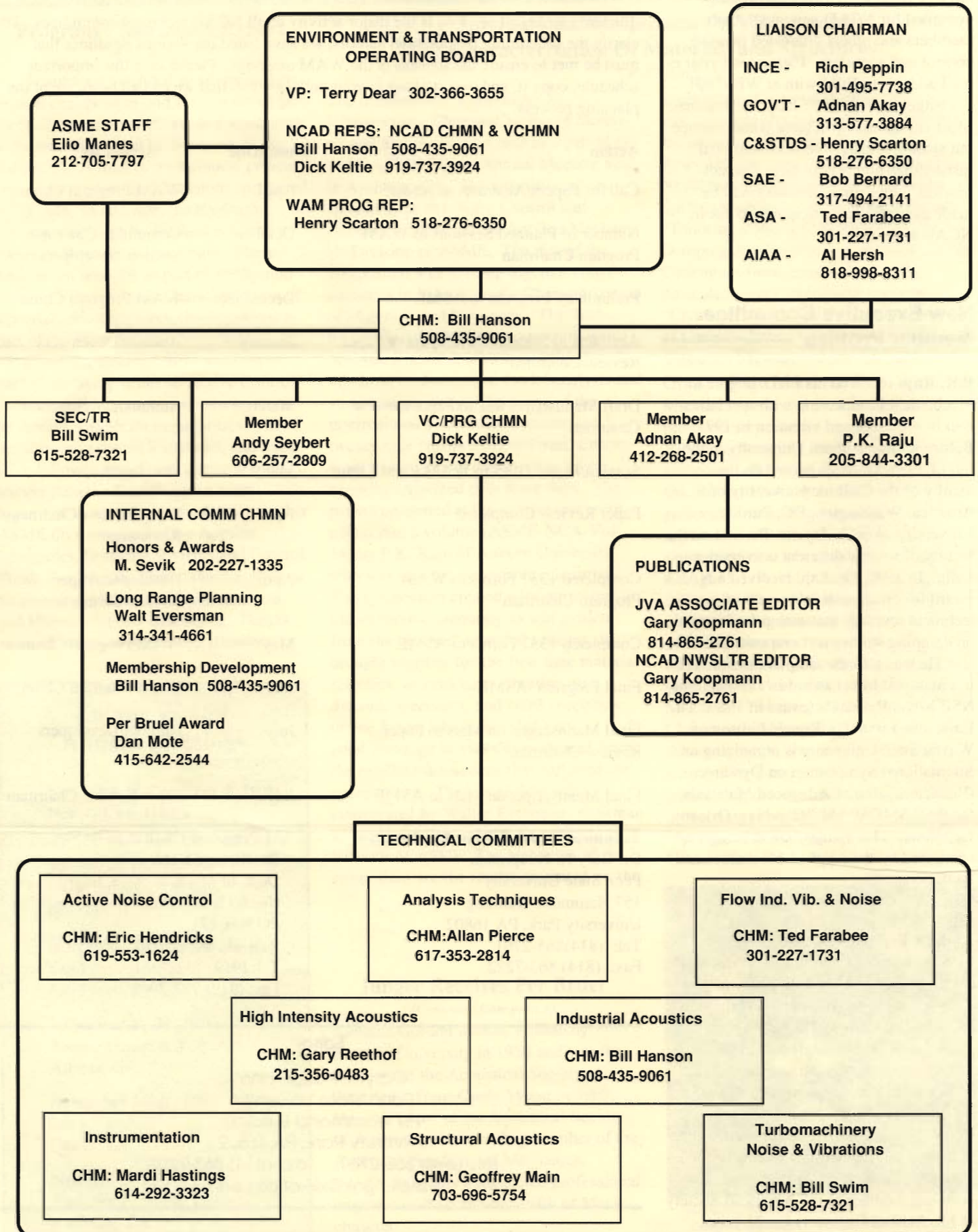
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