The American Society of Mechanical Engineers

345 E. 47th Street, New York, NY 10017

NCA

Noise Control and Acoustics Division Newsletter

Fall 1986

Dear Outlines Accomplishments of NCAD During 1985–86

Terrence A. Dear

Having been one of the initial group members that worked to form our Division, I am most pleased by continued growth in technical strength and numbers. My primary objective as Chairman this year has been to contribute to the growth and prestige of our Division. As with other jobs of this kind, only history will determine to what degree this objective was met. Early in this chairman's year, the Council on Engineering (COE) issued a proposed revision of Society Policy P.8.1 that emphasized "head count" as the primary basis for maintaining Division status. This proposal contained several other adverse criteria that threatened the viability of our Division and the very principles upon which we were founded. We were successful in making known our views on this subject to the COE, and they subsequently revised the proposal to the extent that our Division is no longer in immediate danger of being dissolved. Despite this turn-around, we need to maintain a vigil in this area as COE continues to seek new ways of improving organizational effectiveness.

This was a year of firsts. At the Winter Annual Meeting (WAM) 85, we presented our first Best Paper awards to Dr. David G. Crighton, Dr. Jay Hardin, and Ms. J. P. Mason. Thanks to our Honors Chairman, Dr. Maurice Sevik.

Dr. K. Uno Ingard of MIT presented our first Distinguished Lecture in Noise Control and Acoustics in his Rayleigh Lecture on "Acoustics in Physics and Mechanical Engineering." This lecture was quite an experience for the large group in attendance, and Dr. Ingard is still receiving congratulatory notes and letters from many who were there. This was a special pleasure for me since Uno and I have been working together to solve industrial noise problems for the last 15 years or so.

The rise of our first Chairman, Dr. C. D. Mote, Jr., to Vice-President-elect of the Environment and Transportation Group is another first for a member of our Division. We look forward to Dan's vice-presidency with great anticipation, and we are certain that he will do another super job.

Our Technical Committees (TC) continue their excellent growth. The work of the TC on Flow-Induced Noise and Vibration, and its Chairman Dr. R. J. Hansen continue to be outstanding. Their program contributions at WAM 85 were first-rate in every aspect. I take this opportunity to welcome Jack as our newest member-elect of NCAD's Executive Committee.

The Numerical Techniques in Acoustics Forum organized by our Program Chairman, Dr. K. J. Baumeister, was something new for our Division, and it worked out extremely well. If you did not get a copy of the "extended abstracts" that Ken put together, you can contact Ken to see if there are any left.

We had another excellent technical program at WAM 85. We greatly appreciate the work of Dr. Baumeister as Program Chairman because, having done that job

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Sevik to Lead NCAD in 86–87, Offers Overview of Agenda

As chairman of the Noise Control and Acoustics Division for the year 1986–87, I extend my warm welcome to all our members and friends. The skill and dedication of those who have preceded me as chairmen has led to the creation of lively and dynamic organization which has quickly been accepted by engineers and scientists in the field of Noise Control and Acoustics as a worthy forum for presenting their accomplishments, ideas and views. However, the chairmen's initiatives could not have succeeded without the hard work and devotion of many, many members who organize, perform and contribute to the multiplicity of functions which are required to further the affairs of the Division and of the Society. In support of these endeavors, the staff at ASME headquarters has provided valuable help and assistance. During my tenure as chairman I look forward to continued cooperation with all of you.

Our Division has common technical and scientific interests with numerous sections of the ASME. This is due to the fact that Noise Control and Acoustics is based upon a large and varied set of scientific disciplines, which are principally represented in the Basic Engineering Technical Group. On the other hand, the practical applications of Noise Control and Acoustic technology are found mainly in the Environment and Transportation Technical Group. Clearly, we have a strong affinity with both. By encouraging

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Another Year of Firsts

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myself for several years, I can tell you that it is the most demanding job in our Division. Dr. Gerhard Reethof's ongoing assistance to our WAM Program content is also appreciated. Dr. Adnan Akay's work with the Journal has resulted in a marked increase in the prestige of our Division.

Another area in which we have been hard at work is to turn our meeting conflict with the Acoustical Society of America (ASA) at WAM 86 in Anaheim into a positive, cooperative and mutually beneficial joint effort. A potential crisis was thrust upon us when ASME changed the WAM 86 venue from San Francisco to Anaheim. Specific matters such as those pertaining to registration fees, session scheduling, and establishment of a cooperative atmosphere are being worked out in detail.

Another "plus" that occurred in this region is a healthy increase in our Division's treasury. At WAM 85, Roy McDaniel presented a substantial check from the Industrial Silencer Manufacturer's Association (ISMA) representing funds that their members had agreed to transfer to our Division upon the dissolution of their Association. We are also extremely pleased that many ISMA members are now active members of our Division. We particularly appreciated Bill Golden's loyal efforts for the Division toward making these things happen.

I also want to make special mention of something that is obvious, namely the outstanding work Steve Pettyjohn and Pranab Saha are doing with our newsletters.

As an item of interest, ASME is working to assume a major role in the re-establishment of world leadership in manufacturing technology for the U.S.A. You have and will continue to see increasing ASME emphasis on this subject as the country continues its slide toward a "service" economy. Our Division will likely have some role to play in this activity since U.S.A. machinery is not well-known for its inherent quietness.

In undertaking this job it was not apparent that one of the major, mandatory accomplishments would be staying "even" with the absolute deluge of paper that comes to a Division Chairman. Without overtaxing the circular file, we have somehow managed to do tidal waves of correspondence some justice.

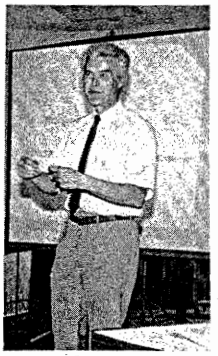
Our Division is known for its sustained growth in membership as witnessed by the ASME Membership Awards, albeit somewhat overdue, presented to H. A. Scarton and Dr. H. A. Evenson at our WAM 85 Wine and Cheese gathering. If we are to continue to grow, realizing that many of our colleagues are not ASME members, each of us must take some dedicated action. For example, if we each contact, cultivate, and "sign up" just one new member over the next year, think of what will happen! I leave you with this simple challenge and request for your specific contribution to our Division.

Finally, it is with great pleasure and confidence that I turn over the reins of our Division to the extremely competent and capable hands of Dr. Maurice M. Sevik. Dr. Sevik has already contributed much to our growth and development, and many key people have followed him into our ranks. I wish you all of the best, Maurice, as you take over!

Terrence A. Dear

Dr. Ingard Gives First Annual Rayleigh Lecture To Full House At WAM 85

The First Annual Rayleigh Lecture sponsored by NCAD featured Dr. Uno Ingard, Professor of Physics and of Aeronautics at Massachusetts Institute of Technology, and author of numerous papers and books related to acoustics. "Acoustics in Physics and Mechanical Engineering" was the topic of this special session held on Thursday, November 21, during WAM '85.



Dr. Ingard's talk was based to a great extent on research projects in Acoustics which he had supervised in the Physics and Aeronautics Departments at MIT.

Among the research topics carried out in the Aeronautics Department, his accounts of studies of acoustically-induced flow instabilities in control valves and air compressors were received with particular interest. In another area of current interest, he showed results of an analysis of sound transmission through multi-element partition walls from which the transmission loss in a diffuse sound field could be calculated for an arbitrary number of elements in the wall. Comparisons between calculated and measured results were shown, and the reasons for differences in results of transmission loss measurements in different testing facilities were discussed.

An extensive study of propeller noise and performance was also reported, in which a shock instability on a transonic propeller has been encountered, leading to an intense high frequency tone.

Among the acoustics research topics in the Physics Department, Dr. Ingard reported on studies on sound waves in plasmas and scattering of laser light by waves. Of special interest was an experimental technique of determining the wavelength and frequency of the thermal fluctuations of a liquid from which the surface tension and viscosity of the liquid was obtained. The physics studies included also wave propagation problems. In one case, a known solution of the Schroedinger equation in quantum mechanics enabled him to obtain exact solutions for propagation of acoustic wave modes in a class of converging-diverging ducts with subsonic flow. From these results, the higher order acoustic modes from the compressor in a jet engine inlet duct were discussed.

Throughout the lecture, references were made to the pioneering work in acoustics by Lord Rayleigh and to his contributions to science as a whole.

Biomedical Acoustics to Co-Sponsor Session at WAM 86

The Technical Committee on Biomedical Uses of Acoustics has six papers lined up for WAM 86 in Anaheim, California. This session will be jointly sponsored with the Bioengineering Division. Papers will be presented on a variety of topics including ultrasonic hyperthermia, ultrasonic and thermo-acoustic imaging, measuring whole body volume, and noninvasive motion measurement of auditory organs.

Reorganization Considered

This Technical Committee is composed of six members, with Dr. Kirk Shung as the chairperson. The committee sponsors a technical session every other year. The members come from a variety of backgrounds and have difficulty attending ASME winter annual meetings. As a result, meetings of the group are sporadic, with most interaction occurring over the telephone. Dr. Shung has decided to reorganize the Committee, and is seeking individuals with an interest in biomedical uses of acoustics who would be willing to serve. For further information, or to offer to serve on this committee, contact Dr. Shung at Pennsylvania State University, Bioengineering Department, 218 EEW, University Park, PA 16802, or telephone him at (814)-865-1407.

Sevik *(continued from page 1)*

commonly sponsored symposia and technical sessions, I shall strive to strengthen our interactions with divisions in all Technical Groups of the Society who have an interest in noise control. Attendance at joint sessions would be made easier if our Division's technical sessions were scheduled towards the middle rather than the end of the week, at the Society's Winter Annual meetings. This subject will be placed on the agenda at our next Executive Committee meeting in Anaheim and action will be taken, as appropriate.

WAM 86 promises to be a most interesting one for our Division. This year's Distinguished Lecturer will be Prof. J. E. Ffowcs-Williams whose Rayleigh lecture is entitled "Computer Aided Silence." Two special sessions will be devoted to papers by prominent scientists and engineers whose pioneering work "made a difference" to Acoustics in the recent past. More details of the program will appear elsewhere in this Newsletter.

The initiatives of our technical committees and their chairmen are essential to our continued success and future growth. Many members of our Division have expressed an interest in establishing new technical committees in such areas as "Machinery Noise and Vibrations," "Structural Acoustics," "Instrumentation and Acoustic Data Processing" and "High Intensity Acoustics." With your help, we shall implement these plans in the course of the coming months.

I start my tenure as new chairman with these objectives in mind. However, our Division - like our Society - exists for the good of its members and, in this spirit, I welcome any suggestions that you may have. In the near future, I shall be sending a personal letter to all our technical committee chairmen and shall attempt to have a meeting with most of them before WAM 86 in order to better understand their plans and thus provide better support.

I learned with regret that Pranab Saha and Steve Pettyjohn will be relinquishing their duties as Editor and Associate Editor of the Division's Newsletter. They have both made an outstanding contribution and their efforts have yielded an interesting and informative publication. They deserve our heartfelt thanks for a job well done.

I hope to see you all at WAM 86. ❁

Maurice M. Sevik

NSF Seeks Help Setting Priorities for Acoustics and Noise Research

The National Science Foundation (NSF) has requested the assistance of the Noise Control and Acoustics Division (NCAD) of ASME in establishing topics for research and setting priorities on these topics. Elbert Marsh, Head of the Dynamics & Control Division of NSF, presented this request during the NCAD General Committee meeting at WAM 85.

Acoustics and Noise is one of four areas under Marsh's direction. This area currently has a research budget of $400,000 out of a total of $2.7M. NSF is seeking information on what research should be supported and where that research should be heading.

Dr. Adnan Akay of Wayne State University was selected to be the NCA representative and to head up a committee that would send out a request for suggestions. A panel of 15-20 will meet in June 1986 to review all the material that have been received to develop a "working paper" on the needs of the acoustic and vibration community for further generic research.

This panel will comprise researchers from academia, industry and federal agencies and laboratories. One important facet of the review by this panel will be to show the importance of the suggested research areas to the competitiveness of U.S.A. industry and the welfare of the nation. ❁

Graduate Programs in Acoustics Available in North America; Features Differ

Many universities throughout the United States and Canada offer graduate courses in acoustics and noise control. Several of these universities have been profiled in earlier issues of this newsletter. The number of universities offering noise control and acoustics courses is large enough that to profile all of them is impossible in the near future.

The Acoustical Society of America (ASA) has made an effort to gather data on the status of acoustics education at the graduate level and to publish this information. Most recently this information was published in the January 1984 issue of the *Journal of the Acoustical Society of America* (JASA) with corrections given in the October 1984 issue.

A total of 99 universities responded to the ASA questionnaire and were listed in JASA with the ASA activity breakdown. Of these 99, seven were in Canada and the rest in the United States. Thirty-seven states, the District of Columbia plus five Canadian Provinces were represented. However, three USA universities and one Canadian university offered no courses pertaining to any existing or proposed Noise Control and Acoustics Technical Committee activities.

It is recommended that anyone interested in learning more about what universities offer graduate courses in acoustics and noise control refer to the JASA articles listed above. Readers who are associated with a university may want to check these two issues to insure that their university is represented or that the information is up-to-date. Corrections should be sent to Dr. Wayne M. Wright, Physics Department, Kalamazoo College, Kalamazoo, MI 49007.

For the near future, we will continue to profile acoustics and noise control programs at one or two universities each year. Readers who would like to see their university on profile should send a full description of the programs available. This should include the types of courses available, the type of research programs being undertaken, something on the facilities, and material on the faculty. This information should be sent to Steve Pettyjohn, 4600 Minnesota Ave., Fair Oaks, CA 95628. ❁

NCAD Executive and General Committee Meetings Announced

The following meeting announcements have been made. The Executive Committee of NCAD will meet on Friday, August 8, 1986, in Cleveland, Ohio. Dr. K. J. Baumeister is making arrangements for a suitable conference room at NASA's Lewis Research Center. The meeting is scheduled to start at 9 A.M. Members of the Executive Committee are requested to attend.

A meeting of the General Committee of NCAD has been scheduled at WAM 86 on Wednesday, December 10, 1986, between the hours of 12 noon and 4 P.M. All interested members are invited to attend. More information on the agenda for this meeting will be published in the fall newsletter or will be available from Maurice Sevik, Chairman. ❁

NCAD Receives Membership Growth Awards

From left: Harold Evanson, Terry Dear, and Henry Scarton. WAM 85 NMDC Awards.

Presentation of National Membership Development Committee (NMDC) awards to NCAD occurred at the Wine and Cheese Party at WAM 85. NCAD has consistently shown the largest growth in membership during the past three years.

David Blaine presented NMDC awards to Harold Evenson, Membership Development Committee Chairman, for the years 1984–85 and for 1982–83. Terry Dear gave Henry Scarton the award for the year 1983–84.

ASME members can join NCAD by selecting number 32 as their first division choice when they complete their dues applications. Non-ASME members will also have the chance to make the Noise Control and Acoustics Division their first choice when they elect to become a member of ASME.

General Committee Meeting Offers Reports From All NCAD Committees

All the committees within NCAD are given the opportunity to present progress reports and to offer comments and invite questions at the General Committee meeting (GMC). The 1985 GMC was held on Wednesday, November 20, during WAM 85 in Miami Beach, Florida.

Much of the meeting was taken up with administrative matters such as selecting people to fill vacant positions and listening to the reports. Readers may be interested to know that NCAD has agreed to participate in ASME's Manufacturing Science and Technology Program.

Concern was expressed at the meeting by the cancellation of the forum and demonstration on active noise control chaired by Dr. Glenn E. Warnaka. The Air Force has requested cancellation of the program so that they could hold a contractors meeting on the topic. The ASME event had been scheduled prior to the request from the Air Force. A request for a full explanation for the cancellation was to be requested of Dr. Warnaka. It is hoped that the forum can be held at WAM 86.

Minutes of the General Committee Meeting are available from the NCAD Secretary, Dr. Gary Koopman. You can contact him at the University of Houston, Department of Mechanical Engineering, 4800 Calhoun Boulevard, Houston, Texas 77009.

Sevik Named ASME Fellow

It has been learned that Dr. Maurice M. Sevik has been named a Fellow of The American Society of Mechanical Engineers. Dr. Sevik will be Chairing the NCA Division for the 1986–87 year. We offer our congratulations to Dr. Sevik and wish him success in the coming year.

Please send information on others within NCAD who receive awards and special recognition to Steve Pettyjohn, 4600 Minnesota Avenue, Fair Oaks, California 95628 or telephone (916) 967-6312.

Location of WAM 87 and 88 Announced

The WAM 87 meeting will be in Boston, MA, at the Sheraton Boston Hotel on Dec. 13–18, 1987. At the present time, three technical committees have released a call for papers including Duct Acoustics and Silencers, Flow-Induced Noise and Vibration, and Numerical Methods in Acoustics, and have requested sessions for WAM 87. More session sponsors are still needed.

Our general call for papers, which is sent out to the international acoustics field, will be updated this year to include a brief description of the ASME Noise Control and Acoustics Division. The entire acoustics community will be given a personal invitation to become active members of our Society. The new call for papers was presented to the executive committee at the Technology Executives' Conference (TEC) 86 in March for approval.

The 1988 Winter Annual Meeting of ASME will be held in Chicago, Illinois. The date for WAM 88 is November.

Ken Baumeister

Numerical Methods TC Has Good Year—Plans Symposium for WAM 86

One of the newer committees within the NCA division is Numerical Methods in Acoustics. There are currently about 20 active members and several more within the Division who have interests in this area. The Committee has met annually at the WAM for the past several years. The present chairman is Prof. Walter Eversman of the University of Missouri-Rolla. The intent of the committee is to promote interest and technical interchange in the rapidly advancing applications of finite element, boundary element, finite difference, and other numerical techniques in real problems in acoustics.

As the first major contribution of the Committee, Dr. Ken Baumeister of NASA Lewis Research Center, organized a Numerical Techniques in Acoustics Forum at WAM 85. The forum, staged as a single evening session, consisted of ten short presentations backed by extended abstracts which were published as NASA Conference Publication 2404. The presentations ranged from reports of completed work to discussions of work in progress in acoustic source modelling, acoustic propagation and transmission, and acoustic data analysis.

At WAM 86 the Committee will organize a Symposium on Numerical Methods in Acoustics and Wave Propagation with the joint sponsorship of the Applied Mechanics Division. Abstracts have been submitted and it appears that three sessions will be arranged (12 papers). Final plans will of course depend on the submission of manuscripts and on the review process. A symposium volume will be published by ASME.

We fully expect interest in Numerical Methods in Acoustics to continue to expand as has happened in Fluid Mechanics. It is thus probable that many participants in NCAD and even in other related divisions in ASME will increase their interest in our activities. The present Committee size of about 20 members is probably appropriate so that we envision a rotating membership structure in the future in which the Committee has a formal nucleus and a number of affiliates. For the present, all ASME members interested in the Numerical Methods in Acoustics Committee should contact Prof. W. Eversman, Department of Mechanical and Aerospace Engineering, University of Missouri-Rolla, Rolla, Missouri 65401, (314) 341-4670.

Walter Eversman

Operation and Plans of Flow-Induced Noise and Vibration TC Explained

This technical committee is currently the largest in the Noise Control and Acoustics Division, with membership of thirty-two engineers, scientists, and administrators. The academic, industrial, and government laboratory communities are all well-represented on the Committee. Several countries besides the United States are represented on the Committee including Canada, England, Switzerland, and Israel.

The Committee has one primary meeting per year during the Winter Annual Meeting. It is devoted in part to planning future sessions and symposia and in part to a discussion of technical issues of interest to the members. At our last meeting, for example, members who had attended the 1985 IUTAM Symposium on Hydroacoustics reported on the technical highlights of the meeting.

The technical committee sponsored a one-day Symposium on Shear Flow-Structure Interactions at the 1985 Winter Annual Meeting. The Symposium was chaired by Dr. M. M. Reischman of the Office of Naval Research, and consisted of ten papers. Participation was excellent, even though the Symposium was on the last day of the Winter Annual Meeting.

At the 1986 Winter Annual Meeting the technical committee is cosponsoring (with Fluids Engineering) the International Symposium on Cavitation and Multiphase Flow Noise. Professor Roger Arndt (University of Minnesota) and Dr. William Blake (David W. Taylor Naval Ship Research and Development Center) are the members of our technical committee responsible for its organization. Currently, it appears that this Symposium will consist of four sessions.

Additionally, the technical committee is organizing a Forum on Flow-Induced Noise and Vibration for WAM 86. Its purpose is to provide a means of communicating new or preliminary research results pertaining to flow-induced noise and vibration with minimal delay. Dr. Maurice Sevik is organizing the 1986 Forum.

In subsequent years the committee anticipates sponsoring technical sessions or symposia in such areas as (a) vibrational source localization in complex mechanical systems by acoustic means; (b) turbulent buffeting; (c) applications of nonlinear dynamical systems concepts to flow-induced noise and vibration phenomena.

Jack Hansen

Profile of Jack Hansen, Newest Executive Committee Member

Robert J. (Jack) Hansen is a native of Houston, Texas. He also lived in Kansas and New Mexico while growing up. He received a B.S. degree from Stanford University (1962), and M.S. (1964), M.E. (1965) and Sc.D. (1968) degrees from M.I.T. All Degrees were in Mechanical Engineering.

Jack Hansen

Following graduate school, Jack went to the Naval Research Laboratory (NRL) on a National Research Council Post-doctoral Fellowship (1968–1970). Thereafter, he became an employeee of NRL and has continued working there to the present time. He is currently Head of the Boundary Layer Hydrodynamics Section of the Fluid Dynamics Branch. In this position he supervises research in such diverse areas as transitional and turbulent flows, hydroacoustics, duct acoustics, transonic aerodynamics, rheologically complex flows, nonlinear dynamical systems, and fluid-structure interactions. He has authored or coauthored over sixty papers on these subjects. Recently, he has placed particular emphasis on the role of large scale computing to address such problem areas.

He has received a number of awards in recognition of his research and research supervision. These have included a Stanford School of Engineering Prize (1961), Whitney and NSF fellowships at M.I.T. (1962–1968), election to Phi Beta Kappa (1961) and Sigma Xi (1972), and four NRL awards for outstanding research publications (1970, 1976, 1980, 1984). He is also listed in *Who's Who in the East*.

Jack became involved with the Noise Control & Acoustics Division about three years ago, when he first discussed with the Executive Committee a Technical Committee on Flow-Induced Noise and Vibration, to be jointly sponsored by NCA and Fluids Engineering. Such a committee was authorized, with Jack as Chairman. It has grown into the largest technical committee in NCA, with a membership of thirty scientists and engineers of the highest stature from the U.S.A., Canada, the U.K. and Switzerland.

Jack's wife Pat is a Registered Nurse and works part-time at a local hospital. She is also the Volunteer Coordinator for Renewing Love, an organization that assists women in fulfilling their responsibilities as wives and mothers. Jack and Pat's daughter, Krista, is a sophomore in high school and seems to have majored in cheerleading for the 1985–86 year.

Among Jack's extracurricular activities are teaching a Bible class for young married couples at Grace Brethren Church of Greater Washington, bicycling, and serving as program Chairman for the citizens association where he lives.

Ffowcs-Williams Rayleigh Lecturer At WAM 86, Full Slate of Sessions

Plans for the technical program at WAM 86 in Anaheim, California, December 7–12, 1986, are on track. As of March 1, 1986, over 28 journal grade technical papers had been received by Editorial Chairman Adnan Akay and had entered the review process. Based on these papers, preliminary sessions are planned on numerical acoustics, duct acoustics, structural noise, combustion noise, and general noise control. This is a bumper crop of papers. Approximately 3 times larger than in past years. Gary Reethof's training session at SAM 85 (Summer Annual Meeting) for organization of technical sessions has paid dividends, as has our new world-wide mailing list which distributes the call for papers to the active acoustic research community.

In addition, Jack Hansen and Maurice Sevik will be sponsoring two sessions of invited papers on flow noise and vibrations. Kurt Shung will have an invited session on Biomedical Uses of Acoustics. A few of the exciting paper titles are "Ultrasonic Hyperthermia," "Ultrasonic Imaging," and "Thermoacoustic Imaging." Gen Warnaka has 10 abstracts for a session, or two, on active noise control — an exciting new area of acoustics. The Rayleigh Lecture for this year will be J. E. Ffowcs-Williams, a leading British authority on acoustics.

The authors and session organizers are to be applauded for their efforts to date.

Ken Baumeister

NCAD Extends Call for Papers for WAM 1987

Papers are solicited for WAM 87 by NCAD. Boston will play host to the winter meeting during December 13–18, 1987. All events are to take place at the Sheraton Boston Hotel. Three Technical Committees have formally requested papers with announcements given below. However, articles in all of the following areas are requested:

1. Active Noise Control,
2. Instrumentation & Data Analysis,
3. Impact Noise,
4. Machinery Noise & Mechanical Noise,
5. Combustion Noise,
6. Biomedical Uses of Acoustics,
7. Rotating Machinery Noise, and
8. All other areas of noise control and acoustics.

Prospective authors are requested to submit three copies of an abstract (100 to 200 words) to the chairman of the technical committee. If the chairman is unknown contact Dr. Adnan Akay at (313) 577-3884. Abstracts are due by January 15, 1987. If the abstract is accepted, full-length articles will be due by March 1, 1987. Acceptance of the articles is based on a review of the full-length paper.

Flow Induced Noise and Vibration TC

The Technical Committee on Flow Induced Noise and Vibration invites researchers to submit abstracts for review on the topic of "Vibration Source Localization in Mechanical Systems by Acoustic Means." The TC will sponsor one or more technical sessions on all apsects of this topic at WAM 87. The session(s) will be organized by David Steininger of the Electric Power Research Institute. Potential authors should contact him for further information. Abstracts will be due by January 15, 1987. He can be contacted at 3412 Hillview Ave., P.O. Box 10412, Palo Alto, CA 94303, (415) 855-2019.

Duct Acoustics and Silencers TC

Papers on all aspects of theoretical and experimental duct acoustics and silencers are solicited for presentation at WAM 87. Prospective authors are requested to send abstracts (100–200 words) to Dr. M. G. Prasad, Department of Mechanical Engineering, Stevens Institute of Technology, Castle Point Station, Hoboken, NJ 07030 or to telephone (201) 420-5571. Abstracts must be received by January 15, 1987.

Numerical Methods in Acoustics TC

The Numerical Methods in Acoustics Committee of NCAD plans to sponsor several sessions at the 1987 WAM. One or more technical sessions will be directed at "Statistical Energy Analysis in Acoustics" as applied to noise generation and transmission problems. Papers related to noise source determination, path characterization, noise level predictions and control in buildings, ground vehicles, aircraft, spacecraft, ships, and propulsion systems are of special interest, as well as noise radiation from machinery. Prospective authors are requested to submit three copies of their abstract no later than January 15, 1987 to either Dr. K. H. Hsu, Nuclear Equipment Division, Babcock & Wilcox Company, Barberton, OH 44203, (216) 860-2653 or Dr. D. J. Nefske, Engineering Mechanics Dept., General Motors Research Laboratories, Warren, MI 48090, (313) 565-3335.

Papers are also solicited in all areas of application of numerical methods to problems in source modeling, propagation radiation, transmission, structural-acoustic interaction, noise control, and data analysis. The purpose of the sessions is to exchange information on current research in these areas. Abstracts of 100–200 words should be sent to Prof. W. Eversman, Department of Mechanical and Aerospace Engineering, University of Missouri-Rolla, Rolla, MO 65401 by January 15, 1987. Abstracts which are accepted should then result in a manuscript submittal by March 1, 1987 to Dr. Adnan Akay, Mechanical Engineering Dept., Wayne State University, Detroit, MI 48202.

Reasons Given for NCA Sponsored Continuing Education Courses

There have been some questions as to why the NCAD sponsors continuing education courses and on what ground certain topics are selected. What follows is an explanation of the decisions made by the Continuing Education Committee, Chaired by Robert Hickling.

The main factors governing ASME continuing-education short courses are:

(a) To cover costs including overheads, minimum attendance has to be from twenty to twenty-five. Less attendance is permitted for new courses or when expenses are less.
(b) Courses should be of at least two days and preferably three days duration.
(c) Preferably there should be not more than two instructors. These receive an honorarium, depending on attendance, plus expenses.
(d) New courses are encouraged. About 25% of the courses offered are new. These require approval by a subcommittee of the Board on Professional Development and are carefully screened.

Competition from outside sources is a major factor, particularly if these sources are well-known and established. ASME has certain recognized strengths, for example, boiler codes, gas turbines and heat transfer. Courses in these areas have been consistently successful.

In the past, courses on the fundamentals of noise control have not been successful, largely because of competition. Recently we had a successful course on acoustic intensity measurement which lasted about two years. However, this had to be run in conjunction with meetings of the Acoustical Society and the Institute of Noise Control Engineering rather than at ASME meetings. Eventually it had to be abandoned because of competition.

We are currently attempting to develop new courses which will serve the interests of our members and build up our position in ASME. One of these is on "The Use and Selection of Industrial Silencers." We feel that such a course would have practical broad-based appeal. To ensure its success the course has to be carefully planned, particularly in the choice of instructors. We would like to invite suggestions and ideas from readers of the newsletter for this and other short courses. ❁

Robert Hickling

Explaining the WAM Experience

Gary Koopmann leads an informal discussion at WAM '85.

The Noise Control and Acoustics Division sponsors or co-sponsors an extensive program of technical sessions during two days of the week-long Winter Annual Meeting (WAM) of the American Society of Mechanical Engineers (ASME). Papers are presented dealing with topics ranging from current research in analytical and computational methods for modeling acoustic systems to advances in the state of the art of machinery noise control. The Rayleigh Lecture, given by a leading researcher in the acoustic field, is also a highlight of the WAM meeting. Because of the broad scope of the WAM meeting, you will also find technical sessions in noise-related areas of fluid mechanics, vibrations, and heat transfer. Symposia on topics of current special interest, such as flow-induced vibration in structures and acoustic intensity measurement techniques, are also offered.

A complimentary wine and cheese reception precedes the technical sessions. During this friendly, informal gathering and the technical sessions which follow, you have the opportunity to meet and discuss current activities and exchange important new ideas with engineers whose interests are in noise abatement and vibration analysis. The Division conceives and executes its technical activities through its Technical Committees. You are cordially invited to attend our Technical Committee meetings and become actively involved with generating technical programs in your area of interest. If you have an even broader interest in continuing education, government regulations, codes and standards, research needs, etc., in the acoustic and vibration field, you are invited to attend the NCA Division's General Committee meeting also held at WAM.

Come join us at WAM for the experience and the exposure. It should be both fun and educational.

Ken Baumeister

Program Chairman Duties Explained

The program chairman has responsibility for coordinating the technical program at the WAM meeting. The following brief discussion illustrates some of the steps involved in this organization process for a typical WAM meeting.

About 2 years ago at WAM 84, technical committee chairpersons were asked to sponsor technical sessions for WAM 86. Call for papers were published in *Mechanical Engineering* in the summer of 1985 and personal contact was made with possible authors. In addition, in the fall of 1985 over 600 general call for papers were mailed world-wide to active researchers in the acoustic field. Next, based on the latest program estimates available at WAM 85, the NCA chairman Terry Dear requested ASME headquarters for 15 technical sessions at WAM 86.

At the Technology Executives' Conference meeting (TEC) on March 14–16, 1986, the program chairman and vice chairman lay out the preliminary technical program for WAM 86. The preliminary program is based on the actual number and scope of papers received by the editorial chairman as well as invited papers which may not be published by the ASME in preprint form. This year our requested number of sessions is approximately correct. If more or fewer sessions are required, all the technical divisions meet on Saturday morning of the TEC to bargain for more sessions or exchange unneeded sessions.

Some time in the late spring, after the editorial chairman has received the peer reviews of all the manuscripts, the finalized program for WAM 86 will be sent to ASME headquarters for publication in the Advanced Program. At this time, the chairperson and vice chairperson of the technical sessions will be determined.

As a final follow-up, each author who participates in WAM 86 will be sent a personal letter inviting him or her to our complimentary wine and cheese party and an invitation to attend our technical and executive committee meetings in order to become actively involved with our division.

Ken Baumeister

Duct Acoustics and Silencer TC Plans for WAM 86 Sessions

The Duct Acoustics and Silencers Committee had its meeting during the November WAM 1985 in Miami, Florida. The Committee had discussions on technical items such as acoustical source characterization in regard to silencers, criteria for selection of industrial silencers, etc. The Committee also felt that both duct acoustics and silencers are topics of an interdisciplinary nature which relate to both academic and industrial work. The Committee has organized sessions during the 1986 Winter Annual Meeting to be held during December 1986 in Anaheim, CA. Further details about the sessions and activities can be obtained from the Chairman, **Dr. M. G. Prasad, Department of Mechanical Engineering, Stevens Institute of Technology, Hoboken, New Jersey 07030, (201) 420-5571.**

M. G. Prasad

ASEE Seeks Members for Acoustics Area

The American Society of Engineering Education technical committee on "Engineering Acoustics and Vibrations" invites active participation from ASME members interested in the areas of Acoustics, Vibrations and Noise Control. The ASEE technical committee on Engineering Acoustics has expanded its scope of activities to include vibrations. Accordingly, the name of the committee has changed to "Engineering Acoustics and Vibrations" (previously it was Engineering Acoustics).

The committee has organized three technical sessions on Diagnostics and Modal Analysis during the ASEE annual conference at the University of Cincinnati to be held during June 22–26, 1986. The Engineering Acoustics and Vibration sessions will be held on June 24, 1986.

The executive committee consists of Dr. J. Darrell Gibson, Department of Mechanical Engineering, Rose-Hulman Institute of Technology, Terre Haute, IN 47803, phone, (812) 877-1511 (Chairman); Dr. J. Blaine Davidson, Department of Ocean Engineering, Florida Atlantic University, Boca Raton, FL 33431 (Secretary/Treasurer); Dr. M. J. Crocker, Department of Mechanical Engineering, Auburn University, AL 36849 (Program Chairman); and the other members of the executive committee are Dr. S. Dunn of Florida Atlantic University, Dr. C. J. Hemond of University of Missouri at Rolla, and Dr. M. G. Prasad of Stevens Institute of Technology. Further details about the activities and membership for the ASEE Engineering Acoustics and Vibrations Committee can be obtained from the Chairman, Dr. J. Darrell Gibson at (812) 877-1511.

M. G. Prasad

Cooperative Registration for ASA/ASME Sessions

The Acoustical Society of America (ASA) and the American Society of Mechanical Engineers (ASME) will meet during the same week in December. Fortunately the two meetings are both occurring in the same city, Anaheim, California, and will take place in hotels across the street from one another.

NCAD has worked to minimize the conflict and to receive permission from ASME to permit a cooperative registration program. This has been accomplished, permitting ASA registrants to attend ASME Noise Control and Acoustics sessions at no charge. Showing your ASA member registration badge will be necessary to attend these sessions. Conversely, ASA will permit those individuals with ASME badges to attend their sessions at no charge.

The winter ASA convention takes place on Monday through Friday. The technical sessions of NCAD occur on Thursday and Friday with the wine and cheese party on Wednesday evening.

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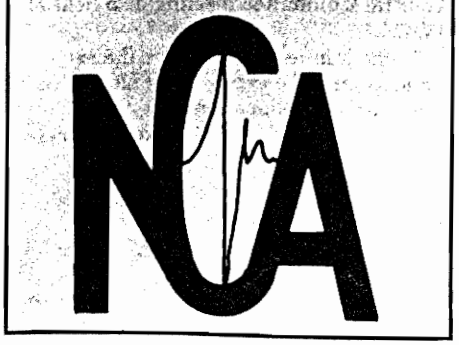

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