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Last year the Noise Control and Acoustics Division held the NCAD-2008 conference as it joined up with the Institute for Noise Control Engineering (INCE) at NoiseCon 2008 during July in Dearborn, MI. Under the Program Chair Stephen Hambric's guidance, the meeting went extremely well and was profitable with increased attendees for our symposia. The hiatus from IMECE — our usual venue since 1981—was undertaken to expose other noise control and acoustic engineers to the technical strengths of ASME and our division in particular. It is hoped that some NoiseCon participants would find aspects of ASME's symposia beneficial and join us for future NCAD conferences. In general, members of the NCAD Executive committee think joint meetings with other ASME divisions and other acoustic societies is a good idea every couple of years. However, for the upcoming year, we are excited to return the IMECE. The conference this year will be held in Orlando, Florida from November 13-19 and will be chaired by Jeff Vipperman.



Currently our Division is comprised of the Aero-Hydroacoustic, Structural Acoustics, and the Active and Passive Noise Control Committees. A few years ago, we added the new field of phononics to our division through the hard work of Dr. Liang-Wu Cai from Kansas State University. I am pleased to announce that Dr. Cai will be the newest member of the NCAD Executive Committee. I would like to extend my appreciation to the experienced Ted Farabee for suddenly serving as Chair and now Vice-Chair after the departure of Joe Gavin from the Executive Committee.

The Executive and Technical committees of NCAD are trying to provide symposia and events of interest to our membership. I am soliciting you as members to actively participate with our division by volunteering on the technical committees or providing the executive committee with your constructive comments. You can email me at mxj6@only.arl.psu.edu

Report from joint ASME NCAD / NoiseCon 2008 Meeting ~ Stephen Hambric



Last year's ASME Noise Control and Acoustics Division (NCAD) Annual Conference, held for the first time in conjunction with NoiseCon 2008 (organized by the Institute of Noise Control Engineering – [INCE](#)), featured more than 200 technical papers written by noise control experts across a wide range of disciplines, presented in more than 40 sessions in Dearborn, Michigan, 28-31 July 2008. ASME NCAD contributed 47 papers to the conference, which are available on a [CD](#). The remaining papers from the NoiseCon 2008 proceedings are available from INCE on a CD, or individually online (see www.inceusa.org for details).

About 80 ASME NCAD members attended the conference, and many attendees enjoyed renewing acquaintances with INCE members. Both ASME NCAD and INCE are pleased with the joint venture, and future combined meetings are likely.

Krista Michalis wins ASME student paper award



Krista Michalis of Duke University won the ASME best student paper award for her paper "Prediction and Modification of Broadband Interior Noise in Enclosures Using Energy-Intensity BEM and Absorption Scaling". Krista is advised by Dr. Donald Bliss and Dr. Linda Franzoni. The abstract of her paper follows.

Enclosures with diffuse reflection boundaries are modeled with an energy-intensity boundary element method using uncorrelated broadband directional sources. Input power is assumed to enter the enclosure through the walls, which are also absorptive. An absorption-based perturbation analysis is used to analyze the spatial variation of the acoustic field, which is shown to obey certain scaling laws. A series expansion in terms of spatial-average absorption gives separate boundary integral problems at each order. For the primary spatial variation, the effects of the relative distributions of absorption and input power are linear and uncoupled. These distributions can be expressed in terms of constituent spatial modes corresponding to the ways absorption and input power can be distributed. These amplitudes can be adjusted to tailor the spatial variation subject to system constraints. Examples include how to distribute absorption to minimize sound levels in one location, or how to achieve a uniform interior field.

Dr. Martin Pollack gives Rayleigh Lecture

Dr. Martin Pollack presented a History of ASME NCAD as the Rayleigh Lecture at the ASME NCAD 2008 meeting. The talk was given as one of the morning plenaries at NoiseCon 2008. Below is the abstract of Dr. Pollack's talk.

In 1978, the idea emerged of establishing a Division within ASME to focus on noise control and acoustics. Since then the Noise Control and Acoustics Division (NCAD) has evolved into a strong organization with focused technical committees, extensive technical sessions at its annual meetings, tutorials and invited lectures, and a journal serving to disseminate key information through peer reviewed technical papers. An overview of the history and evolution of NCAD was presented in this lecture. The growth in scope and membership of the division was described, along with the diversity of organizations involved. Major technical thrusts of NCAD were discussed, as well as its organization structure. Key technical contributions by NCAD members were highlighted, and select past Rayleigh lectures and tutorials were revisited. NCAD participation in the Journal of Vibration and Acoustics, and interaction with other acoustics professional societies were summarized. An overview of the current NCAD Division was provided, including its organization structure and view to the future.



Dr. Pollack is the Corporate Scientist at Applied Physical Sciences (APS) Corporation. He received his BS in Aerospace Engineering from Polytechnic Institute of Brooklyn in 1972, his MS in Applied Mechanics from Polytechnic Institute of Brooklyn in 1973, and his PhD in Applied Mechanics from Polytechnic Institute of Brooklyn in 1975. Prior to joining APS, Dr. Pollack served as Senior Advisory Engineer in Acoustics & Technology Integration at the Lockheed Martin Knolls Atomic Power Laboratory (KAPL). He was responsible for methods development and validation in the areas of structural acoustics, fluid acoustics, and fluid-structure interaction, and for the integration of those methods into the design process. Dr. Pollack was responsible for the acoustic design of several propulsion systems, including the integration of advanced technology into the process. He also has extensive experience in machinery and system silencing.

At APS, Dr. Pollack has been responsible for developing advanced methods for predicting the acoustic performance of motors and actuators. He is heavily involved in both the methods development and in their validation with test data. Dr. Pollack has also developed physics based models for the dynamic performance of Air Cushion Vehicles. He is Participating Faculty at Union Graduate College and a Fellow of ASME. Dr. Pollack was the 2001-2002 Chair of the ASME Noise Control & Acoustics Division.



ASME IMECE 2009, 13-19 November 2009, Lake Buena Vista (Disneyworld), Florida

Calls for papers are listed at:

<http://www.asmeconferences.org/Congress09/CallForPapers.cfm>

Abstract deadline: March 2, 2009

Draft paper submission deadline: June 1, 2009

Final paper submission deadline: August 17, 2009.

This year, NCAD will return to the ASME IMECE, to be held near Disneyworld in Orlando.

ASME NCAD is planning sessions on flow acoustics, structural acoustics, and passive and active noise control for the conference. To learn more about them, visit the conference website at <http://www.asmeconferences.org/Congress09/CallForPapers.cfm>, where you can submit your abstract for a session (abstracts are due 2 March 2009). ASME NCAD will have our own track - Track 20: Sound, Vibration, and Design.

We will also hold a student paper competition, with a \$1,000 prize for the winner. Please be sure to let me know (email me at jsv@pitt.edu) if you're a student and have submitted a paper so we can consider it in the competition.

New ASME NCAD Website, Archived Newsletters

ASME has updated all of its division websites. Our new site is located at: <http://divisions.asme.org/NCAD/> The new site is easier to navigate, and it's particularly easy to find and purchase our past conference proceedings from ASME. Look at the lower left of the webpage for links to recent conference publications.

We're also excited to announce that we've found and scanned several old NCAD newsletters dating back to 1986. They'll be put on the website shortly (look under the news and information link). Why not open a few of the older ones and enjoy the photos of some of our (now) senior members when they were younger? If any of you have copies of newsletters that aren't currently on the website, please consider sending them to us so we can scan and post them. We'll be sure to treat them with care and return them to you. Contact [Steve Hambric](#) if you have any old newsletters to share.

NCAD Information

Founded in 1979, and established as a **Division in 1981**, The Noise Control and Acoustics Division meets yearly, usually at the ASME IMECE. Our division works in noise and vibration control, using computational techniques and measurements to study complex aero-acoustic, hydro-acoustic, and structural-acoustic systems. Our symposia usually include sessions on flow-induced vibration and sound, structural acoustics, and active control. Recently, we've run successful symposia on band-gap materials (sometimes called 'phononic structures') and sound quality – see our 2006 newsletter for more on these emerging areas in NCAD.



668 ASME members list NCAD as their primary division, 631 members list NCAD as their secondary division, and NCAD has 2805 other members (3rd through 5th choices of division). NCAD is part of ASME's Environment and Transportation Group. Our website is: <http://divisions.asme.org/ncad> The website

includes past newsletters, along with selected Rayleigh lecture and tutorial presentations from past conferences.

ASME Journal of Vibration and Acoustics

Two ASME NCAD members, Jeff Vipperman and Steve Hambric, are Associate Editors for ASME's [Journal of Vibration and Acoustics](#). Jeff and Steve encourage authors of well reviewed ASME NCAD conference papers to submit their work to the journal. We will work with you to minimize review times by using, as much as possible, the reviewers of the conference papers. Final papers are usually published in the journal about six months after acceptance.

Please contact [Jeff](#) or [Steve](#) if you'd like to pursue submitting your work to the journal.

Technical Committees and Chairs:

- **Flow Acoustics** – [Brent Paul](#)
- **Structural Acoustics** – [Liang-Wu Cai](#)
- **Active and Passive Noise Control** – [Adam Smith](#)

If you'd like to become involved with any of these committees and help plan future meetings, please contact the chairs.

Executive Committee Members:

[Ted Farabee](#), NSWCCD, Vice-Chair

[Michael Jonson](#), ARL/Penn State, Chair

[Stephen Hambric](#), ARL/Penn State, Secretary/Treasurer

[Jeff Vipperman](#), University of Pittsburgh, Program Chair – NCAD 2009 meeting (at IMECE 2009)

[Bob Tomko](#), Bettis Atomic Power Lab, Member

NCAD Per Bruel Award

THE PER BRUEL GOLD MEDAL FOR NOISE CONTROL AND ACOUSTICS was established in honor of Dr. Per Bruel, who pioneered the development of 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.

Anyone wishing to nominate deserving engineers for the Per Bruel award is welcome to do so by submitting the form at: http://www.asme.org/Governance/Honors/SocietyAwards/Per_Bruel_Gold_Medal_Noise.cfm

In Memorium

The Division regrettably notes the death of one of its members with the passing of **Dr. Michael C. Goody** on 20 January 2009. Michael began working in acoustics in 2001 when he started employment at the Naval Surface Warfare Center (Carderock Division) shortly after completing his Ph.D. at Virginia Polytechnic Institute and State University (Virginia Tech). Since that time he was a member of the Aero/Hydro Acoustics Technical Committee, contributing technically and administratively to activities sponsored by the Committee and the Division. Michael's death is a great loss to not only his family and friends, but also to the engineering community.