

ROBERT BRADFORD NEWMAN NEWSLETTER 88

S T U D E N T A W A R D F U N D

Introduction

This is the first Newsletter to keep the friends of the Robert Bradford Newman Student Award Fund aware of our progress and activities. Fund contributors and followers, and others interested in architectural acoustics will be included on the Newsletter mailing list and are invited to submit news items of interest. It is hoped that this annual Newsletter can be a lively and informative channel of communication. ■

About the Design of the Medal

by Richard H. Bolt

When Bob Newman died in 1983 I lost a professional colleague, a former student, a distinguished partner, and a treasured friend. No wonder that I welcomed the opportunity to honor Bob when Mary Newman asked if I would design the projected medal for the Robert Bradford Newman Award.

At the same time, Mary asked if I might include a tuning fork in the design, because Bob always carried one with him. Her suggestion seemed especially appropriate, because the tuning fork offers a rich mixture of attributes and symbolic implications relevant to the purpose of this medal.

The tuning fork is used extensively for tuning musical instruments and for ascertaining standard pitch of musical sounds. Also, the tuning fork can serve as a convenient tool in connection with audiometry and other acoustical measurements. As a device for controlling quality in the frequency domain, the tuning fork could symbolize the achievement of quality in acoustical endeavors. Further, the continuous flow of sound from the fork could symbolize the continuously expanding knowledge in architectural acoustics. Taken together, these attributes and symbolic possibilities of the tuning fork provided inspiration for the design.

I sought a solution that would be both aesthetically satisfying and objectively correct. Bob and I persistently pursued this pair of criteria in our projects together. He was especially outspoken against the phoney. Some preliminary sketches for the medal indicated that these criteria might be met by using contours of sound pressure level to portray the

sound field radiated by the tuning fork. I was unable to find such contours in the literature. So I bought a new tuning fork, 440.0 Hz, and prepared to measure its sound field.

I conducted the experiment in my office at BBN, with expert assistance by colleague Bruce Murray. We mounted the tuning fork in a horizontal position slightly above a table top. The tuning fork was maintained in steady state vibration by means of a magnet device prepared for this purpose. We used a probe tube microphone to measure the sound pressure level at many points in the plane of the two prongs. On paper laid just below the tuning fork, we recorded each of the points and the associated sound pressure level. The array of values covered a range of about 50 dB.

These values provided objective data with which a wide variety of designs could be developed. The design variables included the scale and amount of the tuning fork to be shown on the medal, and the number and values of the sound level contours. They should be numerous enough to illustrate the overall shape of the sound field without looking crowded.

The final design of the medal shows the tuning fork at three-eighths of its actual size. The design portrays the entire length of the prongs and one-eighth of the length of the handle. The design focuses on the open end of the prongs and the immediately surrounding contour, along which the measured sound pressure level was 100 dB. The receding curves are spaced 5 dB apart at 95, 90, 85, 80, and 75 dB respectively.

Parts of the 80 and 75 dB contours disappear under the border of the medal, which carries in raised letters the words "ROBERT B. NEWMAN AWARD FOR MERIT IN ARCHITECTURAL ACOUSTICS"

The obverse side of the medal shows the continuation of the 80 and 75 dB contours, and adds one more contour at 70 dB. This side carries the message "For Excellence in the Study of Acoustics and in its Application to Architecture this Medal is Awarded to . . ." under which the names of the recipient and the school are engraved in the same letter style.

The medal is cast in solid bronze, with a diameter of three and one-eighth inches and a thickness of about one-quarter inch. A picture of the medal is on the back. ■

1988 Medalists Announced

This is the third year medals have been awarded, and from the inception of the program, the work of these students has shown a wide diversity in architectural acoustics applications. The seven medalists for 1988 and the titles of their projects are:

Lincoln Berry, Rhode Island School of Design
"Media and Telecommunications Facility Design"

Mark E. Holloway, University of Florida
"An Evaluation of the Jacksonville Civic Auditorium as a Concert Hall Using Acoustical Scale Modeling"

Vidas Juzenas, Georgia Institute of Technology
"Loudspeaker Placement in Small Rectangular Shaped Enclosures"

Kay Ivah Mason, Clemson University
"Study of a Flexible Studio Facility for Dance at the University of South Carolina"

Frank A. McClure, III, Clemson University
"Design of a 2500-seat Concert Hall for Charleston, S.C."

James P. Oglesby, Boston Architectural Center
"The Boston Conservatory — A Music Teaching Facility with Three Auditoria and Numerous Practice Rooms"

Norliah Othman, Oklahoma State University
"Center for the Performing and Studio Arts, Holland Hall School, Tulsa, Oklahoma"

Two new universities are represented with the 1988 awards: Georgia Institute of Technology and Oklahoma State University. These join the Schools of Architecture at Clemson University, Florida State University, the Boston Architectural Center, Massachusetts Institute of Technology, Harvard Graduate School of Design, Rhode Island School of Design and the School of Engineering at Pennsylvania State University. There has been encouraging and widespread interest by many other schools throughout the country and abroad, and we expect the program to continue to grow in the years ahead. We trust that in the future more and more practicing architects and building professionals will be applying good acoustical design principles to their buildings, an underlying objective of the Newman Student Award Program. ■

ASA Books to be Given to 1988 Medalists

The Fund Advisory Committee Authorized the purchase of copies of three publications in architectural acoustics available from the Acoustical Society of America:

Halls for Music Performance, Two Decades of Experience, Ed. R.H. Talaske, E.A. Wetherill, W.J. Cavanaugh (1982)

Acoustics of Worship Spaces, Ed. D. Lubman, E.A. Wetherill (1985)

Theaters for Drama Performance, Recent Experience in Acoustical Design, Ed. R.H. Talaske, C.R. Boner (1987)

This trilogy represents a wealth of information in architectural acoustics and on specific projects, and were given in addition to the individual medals to the seven 1988 medal recipients. One day, when the endowment for the Fund has increased sufficiently, it may be possible to provide monetary awards to go along with the medals. ■

Benefit Concert at MIT Planned for February 1989

A second benefit concert event in the Cambridge/Boston area on behalf of the Newman Student Award Fund is planned for early February 1989. The successful first concert was held on February 8, 1988 at MIT and featured Luis Leguia, a principal cellist of the Boston Symphony Orchestra; with piano accompaniment by Carmen Rodriguez-Peralta. The 1989 concert will again be held in the new Elizabeth Parks Killian Hall at the Charles Hayden Memorial Library Building on the MIT Campus in Cambridge. A reception will follow the recital, and we are anticipating another successful event to enliven the Boston/Cambridge mid-winter season. Carmen Rodriguez-Peralta has accepted an invitation to be the principal performer for the 1989 recital and the preliminary planning is well underway. ■

Donation from NCPMA

The Noise Control Products & Materials Association (NCPMA) has made a generous contribution to the Robert Bradford Newman Student Award Fund in remembrance of the late Joseph Emme.

Joe contributed significantly to NCPMA as Chairman of the Technical Committee and in many other ways. Many of the members had the opportunity to work with Joe for over 10 years. Joe was recognized in the industry as being a fair and competent competitor, a fine engineer and straight shooter. His dedication to improving the quality of our acoustical environment is worthy of the highest praise. We are confident that Joe would be proud to know that others who follow will further this effort. ■

Future Plans:

Fund to Support Grant for Teachers and Researchers in Architectural Acoustics Education

The Fund advisory committee is currently developing a monetary grant program which would award a grant to teachers of architectural acoustics every two or three years. While the details have not yet been completely formulated, it is anticipated that the first grant in the amount of \$3,000 will be awarded in 1990 and would enable the successful applicant to develop improved teaching methods and new curricula, or to support research in architectural acoustics education. Applicants should have a teaching experience in architectural acoustics at an established school of architecture or architectural engineering, and should manifest a strong desire to develop improved architectural acoustics educational methods.

To apply, teachers should send a curriculum vitae plus a letter of not more than two pages describing their plan for utilizing the grant, including a brief budget showing the expenses for which support is requested. Mail to the Robert Bradford Newman Student Award Fund, P.O. Box 349, Lincoln Center, MA 01773. Deadline for the receipt of applications for the 1990 award will be December 31, 1989. Interested applicants may discuss their proposals in advance with William J. Cavanaugh, Cavanaugh Tocci Associates, Inc., 327 F Boston Post Road, Sudbury, MA 01776 (508-443-7871) or any other members of the Fund Advisory Committee.

Comments and Suggestions Sought

Aside from the support and maintenance of the annual student medal award presentations, the Fund is committed to supporting development of improved teaching methods in every possible way, as well as research in the field of architectural acoustics education. The advisory committee invites suggestions and recommendations from all friends and supporters of the Fund for new programs and initiatives that the Fund may consider undertaking, now, or in the foreseeable future.

For example, shortly before his death, Bob Newman along with Ted Schultz, participated in a Public Television documentary produced in connection with the opening of the Meyerhoff Hall in Baltimore, Maryland. The video tape has some very descriptive and clearly articulated details on the process of "acoustical tuning" of halls for music. David Egan has suggested that this might be edited and developed into a valuable video teaching aid for courses in architectural acoustics at schools of architecture. The Fund may be able to support this kind of initiative and make the videos available for distribution at cost to schools throughout the country.

On a more ambitious level, some have suggested that the Fund might be able to support the

development of a complete video basic course in architectural acoustics which might be made available to those universities which are unable to find an experienced faculty member or visiting lecturer to teach the course. In any event, members of the advisory committee are always open to suggestions, and welcome ideas to carry on the work of diffusing knowledge and spreading the word in architectural acoustics which was so effectively done by Bob Newman throughout his professional life. Please call or write any of the advisory committee members at any time on matters even remotely related to the teaching of architectural acoustics or the objectives of the Robert Bradford Newman Student Award Fund. ■

Robert Bradford Newman Student Award Fund

Advisory Committee:

Lawrence B. Anderson
William J. Cavanaugh
M. David Egan
Mary Shaw Newman
Theodore J. Schultz

Richard H. Bolt
John A. Curtis
Gary A. Hampel
Carl J. Rosenberg
Ewart A. Wetherill

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National Council of Acoustical Consultants
MIT School of Architecture and Planning
Technical Committee on Architectural Acoustics ASA

Please address correspondence to:

RBN Student Award
P.O. Box 349
Lincoln Center, MA 01773
617-259-9299

