

NEWSLETTER 91 ROBERT BRADFORD NEWMAN

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

Thirteen Medals Awarded to Students During 1991

During 1991, the sixth year of the Robert Bradford Newman Student Award Medal program, thirteen students were selected to receive the medal "For Merit in Architectural Acoustics." Among the list of recipients below, six new architectural schools are represented.

These include: Kent State University, University of Arizona, University of Auckland, University of California at Los Angeles, University of Western Australia, Virginia Polytechnic Institute, bringing the six-year total of schools represented to twenty-five.

Following is a list of recipients of medals and their projects, including three listings not previously given: Thirteen Medals Awarded to Students During 1991

Kelly Lem

University of California at Los Angeles
The Ballet Opera House, Toronto

1989

Gary Warren Hulin

Clemson University
Design of Music Education Facility

1990

Marco Eduard den Breems

Jacqueline Marie Roke

Michelle Jane St. George Waugh

University of Auckland
Design for the University of Auckland
Council Rooms

1991

Mark Burginger

University of Arizona
Acoustical Analysis of Noise and
Room Echoes Using a Computer

Kevin Scott Burns

Pennsylvania State University
Acoustical Investigation--The Upper
Merion Township Municipal Building,
King of Prussia, PA



Recipients of The Medal at The University of Auckland with Dr. Leo L. Beranek.
left to right: Dr. Leo L. Beranek, Jacqueline Roke, Jane St. George Waugh,
Marco den Breems.

Wei-hwa Chiang

University of Florida
Acoustical Model Studies Comparing
the Results of Tests in Computer
Models, Physical Models, and
Full-size Rooms

Kevin J. Godwin

Iowa State University
Educational Presentation Auditoria
and Instructional Spaces,
Incorporating Acoustics, Lighting
and Media for the Year 2000

Mark Ian Hughes

Clemson University
Modern Opera House for St.
Petersburg, USSR

Corina Yuan Shiu Lee

Virginia Polytechnic Institute
Virginia Tech Campus Multipurpose
Theater

Gary S. Madaras

Kent State University
Ideal Reverberation Time Curves for
Classic and Romantic Symphonies:
An Acoustical Evaluation of
Severance Hall, Cleveland

Andrew Marsh

University of Western Australia
CAD Modelling Technique for Auditoria

Peter May

University of Maryland
Acoustical Analysis of U.S.
Pension Building Office Space

Chris W. Neugebauer

Boston Architectural Center
Jazz Arts Center of New England

David Poorman

Princeton University
Design for Addition to Manhattan
School of Music, New York City

Kenichi Shinagawa

Rhode Island School of Design
Music School

Providence, Rhode Island

May Deanna Tsai

Massachusetts Institute Of Technology
Taipei Terminal Rail Station
Appendix: Acoustical Considerations

Concert Hall Acoustics, 1991 **by Leo L. Beranek**

During the years since my book, *MUSIC, ACOUSTICS & ARCHITECTURE*, was published in 1962 several new architectural alternatives for the design of concert halls have emerged from research studies conducted worldwide.

The familiar rectangular hall, "shoebox" in shape and relatively narrow, is still chosen often because it fits naturally into many building structures, and because the orchestral sound is reflected to the audience from sidewalls and balconies that are not far distant from any listener. The secret is that listeners hear reflected sound from many directions, shortly after the arrival of the direct sound from the orchestra.

An alternative is the wide, fan-shaped hall, such as the Tanglewood Music Shed in Western Massachusetts, which meets these requirements, both with suspended, sound-reflecting, triangular panels above the orchestra and the front part of the audience, and with stage sidewalls that are properly located, modulated and sloped so as to reflect sound in many directions into the audience area.

Another alternative is the "vineyard" type, built with segmented, multi-level audience spaces, each surrounded by exposed sidewalls that reflect sound waves to listeners from many directions, soon after the arrival of the direct sound. Also, the audience in each section does not see many rows of people between it and the stage.

Finally, there is the oval-shaped hall with many large, multiple, inwardly-sloped panels on the sidewalls above a single, horizontal balcony creating a sound field similar to that found in a shoebox hall. This so-called directed-lateral-reflection-type hall obviates the need for a stage enclosure, requiring only a partially open canopy over the orchestra.

In the second edition of *MUSIC, ACOUSTICS & ARCHITECTURE*, to be published by the Acoustical Society of America in late 1992, numerous new halls of these several types will be included along with most of the older halls included in the first edition.



Mary Crowe

1992 Benefit Concert Planned For 5 February at MIT

The Fifth Annual Benefit Concert will be held on Wednesday, February 5, 1992, in the Elizabeth Parks Killian Hall at M.I.T. Mary Crowe, soprano, will present a program of Theater Songs.

This performance will be presented under the auspices of the Greater Boston Society of the Acoustical Society of America, as their monthly meeting.

Schultz Grant Recipient Completes Video Tape for Teaching Architectural Acoustics

Professor Gary W. Siebein, Associate Professor at the University of Florida, Department of Architecture, and Director of its Architectural Research Center, has produced the first draft of the video tape, partially funded by the 1990 Theodore John Schultz Grant, awarded by the Student Award Fund.

The video demonstrates basic acoustical principles, using ultrasonic scale models, a major focus of Siebein's research and professional papers for the past ten years. In its final edited format, the video--or series of shorter videos--will be made available to schools of architecture or individuals at interested universities that teach courses in architectural acoustics.

For further information, contact Carl J. Rosenberg at the Fund address. The nominal charge for final editing, reproduction, and shipping is expected to be approximately \$50 per video tape.

Auckland University Students Receive Medals from Dr. Beranek

On March 18, 1991, Dr. Leo L. Beranek presented medals to three Auckland University students who had been selected by the Robert Bradford Newman Student Award Fund. The Presentation, made at the University in Auckland, New Zealand, preceded a lecture by Dr. Beranek on concert hall acoustics, given before an audience of several hundred university students and architects.

The honored students were awarded for their design for the University of Auckland Council Rooms, using scale models of rooms and modern sound measuring equipment.

Theodore John Schultz Grant for 1992 is Announced

In late 1992, the Newman Student Award Fund will award its second grant, available to teachers and researchers in architectural acoustics education. The grant is named in memory of the late Dr. Theodore John Schultz, a distinguished architectural acoustician and charter member of the Newman Fund Advisory Committee. (See also report on first Schultz Grant recipient, included in this newsletter).

The grant enables recipients to develop improved teaching methods and new curricula, or to support research in architectural acoustics education. Applicants must have teaching experience in architectural engineering, and should manifest a strong desire to develop improved methods of teaching architectural acoustics.

Applicants should send a curriculum vitae, a two-page letter describing how the grant will be used, and an outline budget, indicating expenses for which support is being sought. Applications and attachments should be postmarked no later than June 30, 1992, and mailed to:

Schultz Grant
c/o Newman Student Award Fund
P.O. Box 349
Lincoln Center, MA 01773

For Further information, applicants are encouraged to contact Carl Rosenberg (617/499-8052) or Bill Cavanaugh (508/443-7871).

ASA Donates New Publication to Eight Boston-Area Institutions

In 1991, the Greater Boston Chapter of the Acoustical Society of America distributed copies of the book, *ACOUSTICAL DESIGN OF MUSIC EDUCATION FACILITIES*, to the libraries of eight local institutions.

This new ASA publication contains acoustical design information on forty recently completed music department facilities built in the United States and abroad. The book is an excellent resource for anyone involved in the planning of such a facility. Copies were sent to the architecture schools at MIT, Harvard, Rhode Island School of Design, Yale, Roger Williams College, and to the Boston Architectural Center, the Berklee School of Music, and the University of Lowell.

Exemplary Work of Past Newman Medalists Reviewed at ASA Meeting

At the November 1990 ASA meetings in San Diego, during a special invited session on education in architectural acoustics, Bill Cavanaugh reviewed the first five years of the Newman Student Award Medal program. Since 1986, a total of forty-five medals had been awarded to outstanding students at twenty schools of architecture, including the Fund's first overseas school, the University Ricardo Palma in Lima, Peru.

The student work of medalists has shown extraordinary breadth and depth, including that from architectural acoustics research groups at schools such as the University of Florida, and more modest, yet distinguished, projects from participating schools where only a single course in architectural acoustics is available to students. Several projects have involved sophisticated computer simulation studies on concert hall acoustics. One thesis project for a Master of Architecture degree involved extensive objective and subjective measurements and analyses of several performance spaces in a major university school of music.

The first five years of the Newman Student Medal program has fulfilled, beyond the most optimistic expectations, the basic objectives of the program--the recognition of excellence in the study of acoustics and its application to architecture.

Professional Sponsors of Newman Student Award Fund

In 1990, the Newman Student Award Fund initiated a program to assure continuing financial support for its Student Medal and Schultz Grant programs. Professional sponsors of these programs were also asked to support related liaison activities and assistance to local schools of architecture which teach courses in architectural acoustics.

Sponsors pledge to contribute a minimum of \$100 a year, and to be available to architectural schools in their immediate geographical area to assist in the development of programs in architectural acoustics, and to make teachers aware of the Newman Student Medal program.

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