

ROBERT BRADFORD NEWMAN NEWSLETTER 2012

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

FUND'S 2012 YEAR AT A GLANCE

December 31, 2012 completed another successful year for the Newman Fund. Newman Medals were awarded to 20 students, bringing the total to 260 medals awarded at more than 55 schools of architecture, engineering, and music throughout the world since the program began in 1985.

Five student teams received Harry Wenger prizes in 2012 for their meritorious design work, juried and displayed at the ASA Student Design Competition held at the 163rd meeting of the Acoustical Society in Hong Kong.

Applications for the next Schultz Grant to be awarded in 2014 are due by December 31, 2013. Check newmanfund.org for announcements.

The appreciation of the Advisory Committee is extended to students, teachers, consultants, as well as other professionals and supporters whose extraordinary voluntary efforts make the work of the Fund possible and thoroughly enjoyable. Continuing appreciation is extended to the staff at the Acoustical Society in Melville, NY who help The Fund's operation run so seamlessly.

*Mary Shaw Newman
Carl Rosenberg
Lily Wang*

2013 NEWMAN FUND CONCERT UPDATE

This year's annual Newman Fund Benefit Concert will feature Professor J. Murray Gibson of Northeastern University. Dr. Gibson, a professor in physics, will present his September 2012 ASA talk: "Physics of the blues - Scales, harmony, and the origin of blues piano styles". The talk will be followed by a blues performance.

The Benefit will be held on the evening of Thursday, May 9th at the prairie-style residence of Parker Hirtle in Lexington, MA. Refreshments will be provided.

Please check the ASA Greater Boston Chapter website (www.gbcasea.org/word-press) for further details. We expect it to be a wonderful evening!

RECORD TWENTY NEWMAN MEDALS AWARDED IN 2012!

2012 was a banner year for the Newman Student Award Fund, with a record 20 students awarded Newman Medals. The medalists, their schools, advisors and research theses or senior projects follow:

Alba Losada Amor

Faculty Advisor: Stephen Dance
London South Bank University - UK
"Hearing loss in those working in the music and entertainment sectors"

John Paul Arpino

Faculty Advisor: Neal Thompson Shade
Peabody Institute of Johns Hopkins
"B-format room impulse response measurements and analysis"

Nathan Blinn

Faculty Advisor: Jeffrey Staats
Roger Williams University
"Acoustical analysis of the Roger Williams Performing Arts Center"

Benjamin Bridgewater

Faculty Advisor: Robert Coffeen
University of Kansas
"Methods for discovering problem room modes - A case study, Kansas Public Radio, Live Performance Studio"

Ryan Carey Cranfill

Faculty Advisor: Dominique J. Cheene
Columbia College Chicago
"Implementation of the user interface for the real-world transmission loss room and associated experiments"

Robert W. Henderson

Faculty Advisor: Ning Xiang
Rensselaer Polytechnic Institute
"Application of Bayesian inference to room-acoustic modal analysis"

Paul Herwin

Faculty Advisor: Stephen Dance
London South Bank University - UK
"Straw bale sound insulation - blowing the chaff away"

Ana Jaramillo

Faculty Advisor: Michael Ermann
Virginia Tech School of Architecture
"Linking air conditioning system type to elementary school student achievement"

Elizabeth L. Lamour

Faculty Advisor: Robert Coffeen
University of Kansas
"A comparative study of source locations, listener locations, and measurement devices in acoustical measurements"

Christopher M. Jasinski

Faculty Advisor: Michelle Vigeant
University of Hartford
"The effect of test method on the Just Noticeable Difference of Clarity Index (C80)"

Monica Alicea Matos

Faculty Advisor: Jonah Sacks
Rhode Island School of Design
"Waterman Grill: Adaptive reuse of restaurant as music performance venue"

Varsha Menon

Faculty Advisor: Jonah Sacks
Rhode Island School of Design
"Waterman Grill: Adaptive reuse of restaurant as music performance venue"

Continued on Page 2

SPOTLIGHT ON FUND ADVISOR TONY HOOVER



Tony received his BA in American Studies from Notre Dame in 1976, and with great good fortune was persuaded to apply to Penn State's Masters Program in Acoustics by Jiri Tichy, who offered nine months of undergraduate classes in physics and math before beginning graduate work, plus a research assistantship in underwater reverberation. Tony attended his first of several ASA meetings while in grad school, without fully appreciating their importance to his career.

SPOTLIGHT (CONT.)

With an MS Acoustics in 1981, he ventured to Denver, CO to design and supply sound masking systems. Before long, he contacted Bill Cavanaugh and Greg Tocci, who he had met at ASA meetings, to discuss the potential for a future in acoustical consulting. After two calls and upon agreeing that the liberal arts writing discipline was of real value, especially for consulting, Tony became the first full-time consultant hired by Cavanaugh Tocci Associates (CTA).

Bill and Greg taught acoustics classes at architectural schools, agreeing with Bob Newman's vision that every architectural school should offer an acoustics class. Soon, Tony took over several of those classes, which were usually half of a combined acoustics/lighting class, including at the Boston Architectural Center. In 1986, Berklee College of Music asked Tony to expand the class to 3 credits, offer it twice per year, and address the full range of sound and audio issues of importance to sound engineers, music producers, and performance majors, while emphasizing architectural acoustics and maintaining basic math and engineering rigor. Although some concern arose over such effort for non-architects, this was clearly a unique opportunity.

Growing class sizes and copious handouts necessitated the creation of a class handbook, *An Appreciation of Acoustics*, whose completion was partially funded by a 1992 Theodore J. Schultz Grant from the Newman Award Fund.

Tony's professional society involvement led to such positions as Chair of ASA Technical Committee on Architectural Acoustics (TCAA) (2001-2004), President of The National Council of Acoustical Consultants (NCAC) (2002-2004), and Chair of ASA College of Fellows (2008-present) which hosts outreach-to-undergraduates programs and graduate student functions (and the ASA Jam).

After 25 years at CTA and over 40 semesters at Berklee, Tony joined Ron McKay and Dave Conant at McKay Conant Hoover, Inc. in California/Arizona. Although he does not presently teach a full college-level course, he continues to offer the Architectural Acoustics Short Course that he authored for TCAA, which is the only Continuing Education Unit for the American Institute of Architects funded and supported by the ASA. Moreover, in so many ways, consulting is teaching.

Tony has served as principal consultant on over 1,800 projects of all types, and lately has been involved mostly in large performing arts and courthouse facilities.

He remains especially proud of over 3,000 Berklee students of acoustics, a growing number of whom have earned advanced degrees in acoustics and work as educators and as acoustical consultants, and several of whom have earned Newman Student Medals. He is greatly indebted to so many wonderful teachers, colleagues, and friends. Tony considers himself to be exceptionally fortunate to be able to teach and consult in acoustics.

2012 MEDALS (CONT.)

Ana Ruiz Nava

Faculty Advisor: Daniel Butko
University of Oklahoma
"Acoustical research and design in mixed-use urban environments"

Jennifer Lee Nelson

Faculty Advisor: Gary Siebein
University of Florida
"A soundscape study of five healthcare environments"

Lisa Om

Faculty Advisor: Daniel Butko
University of Oklahoma
"Acoustical research and design in mixed-use urban environments"

Eric Powell

Faculty Advisor: Lily Wang and Siu-Kit Lau
University Nebraska-Lincoln
"Optimization of low frequency responses by modeling in rectangular rooms using absorption for damping"

Kevin Quinn

Faculty Advisor: Dominique J. Cheene
Columbia College Chicago
"Acoustical consultation for a proposed black box theater"

Graham Shaw

Faculty Advisor: Stephen Dance
London South Bank University - UK
"The Schultz Equation"

Keely M. Siebein

Faculty Advisor: Gary Siebein
University of Florida
"A comparison of source types and their effects on acoustical metrics"

Hong-Seok Yang

Faculty Advisor: Jian Kang
University of Sheffield - UK
"New approaches on controlling sound field using natural elements in urban spaces"

NEWMAN ADVISOR AND PAST MEDALIST MICHELL VIGEANT MOVES TO PENN STATE

Michelle Vigeant, a 2006 Newman Medalist, has been appointed as an Assistant Professor in the Graduate Program in Acoustics and the Department of Architectural Engineering at The Pennsylvania State University.

She currently teaches two architectural acoustics courses in Architectural Engineering and is conducting research in the area of sound perception in rooms, in particular related to the subjective impression of listener envelopment. Michelle is the current secretary for the Newman Fund Advisory Committee.

CORPORATE AND PROFESSIONAL SPONSORS

The Newman Fund is honored to be supported by the acoustics community through personal contributions, the support of the Advisory Committee, and outstanding Corporate and Professional Sponsors.

Our Professional Sponsors include Acentech Incorporated, Cavanaugh Tocci Associates, Charles M. Salter and Associates, Siebein Associates and Clayton Acoustics Group.

Our Corporate Sponsors include Pyrok, Riverbank Acoustical Laboratories, Shure Incorporated and the Wenger Foundation.

The Fund will be encouraging additional sponsors during the year, and contributions can be made to:

The Robert Bradford Newman Student Award Fund
c/o The Acoustical Society of America
2 Huntington Quadrangle, Suite 1N01
Melville, NY 11747

2014 SCHULTZ GRANT

Applications for the next Schultz Grant to be awarded in 2014 are due by December 31, 2013. Visit newmanfund.org for application information.

2012 STUDENT DESIGN COMPETITION RESULTS

The 2012 Student Design Competition was judged in May at the 163rd ASA Meeting in Hong Kong. Twenty teams competed for five awards, one First Honors and four Commendations. A distinguished panel of acoustical consultants, architects and educators evaluated each entry.

Participation in the competition requires an enormous amount of effort, and each of the entries demonstrated an extraordinarily high quality of student work and understanding of acoustic design. Each of the participants is congratulated on a job well done.

FIRST HONORS

(\$1250 Wenger Prize)

**Liu Yiyi, Pan Lili,
Wang Yunyong**

Faculty Advisor: Zhao Yuezhe
South China University of Technology
Guangzhou, China

COMMENDATIONS

(Four \$700 Wenger Prizes)

**Per Bergström, Erik Olsson,
Viktoria Henriksson**

Faculty Advisors: Mendel Kleiner &
Morten Mose Lund
Chalmers University of Technology
Göteborg, Sweden

**Maria Hult, Petrus Torstenson,
Einar Himmelmann**

Faculty Advisors: Mendel Kleiner &
Morten Mose Lund
Chalmers University of Technology
Göteborg, Sweden

**Mizuki Inoue, Hidehiko Kondo,
Saori Masuda**

Faculty Advisors: Profs. Yasushi Shimizu,
Yoshiki Nakamura, Hiroshi Furuya
Tokyo Institute of Technology
Tokyo, Japan

Grant Price

Faculty Advisor: Robert Coffeen
University of Kansas
Lawrence, Kansas, USA

2013 STUDENT DESIGN COMPETITION AT ASA IN MONTREAL

The 165th meeting of the Acoustical Society in Montreal, Quebec, Canada (June 2-7, 2013) will host the annual Student Design Competition. The design problem is described on the Newman Fund website (newmanfund.org), and in the program for the meeting.

Through the continuing generosity of the Wenger Foundation, there will again be one First Honors Wenger Prize of \$1250, and four Commendation Wenger Prizes of \$700 each, awarded to outstanding student design team posters, selected by a jury of distinguished professionals.

Please contact the following Student Design Competition Chairs with any questions.

Norman Philipp
Pittsburgh State University
nphillipp@pittstate.edu

Andy Miller
BAi, LLC
amiller@baiaustin.com

Dave Woolworth
Oxford Acoustics, Inc.
dave@oxfordacoustics.com

THE NEW MEDALIST PACKAGE

In light of the outstanding new publications supported by the Acoustical Society Technical Committee on Architectural Acoustics (TCAA), the Advisory Committee has decided to expand the range of books awarded to each Newman Medalist.

Starting in 2013, this package will include the bronze engraved medal (the obverse is inscribed with the medalists name; the front of the medal is shown on the back of this newsletter); a \$300 stipend; and a total now of six TCAA publications: "Acoustics of Worship Spaces," "Halls for Music Performance, Volume I (1962-1982)," "Theatres for Drama Performance: Recent Experience in Acoustical Design," "Acoustical Design of Music Education Facilities," "Halls for Music Performance, Volume II (1982-2002), and "Acoustical Design of Theaters for Drama Performance (1985-2010)."

These fine editions make a wonderful start to a fulfilling architectural acoustics library, and will be treasured by the medalists for many years to come.

PHOTOS FROM MEDALIST PROJECTS

The following photos are from a project completed by 2012 Medalist Benjamin Bridgewater at the University of Kansas.



Ben in the studio



Benjamin Bridgewater and Bob Coffeen

ANDY CARBALLEIRA PASSES NEWSLETTER EDITOR ROLE TO ALICIA WAGNER

After many years of outstanding service as the Newman Fund Annual Newsletter Editor, Andy Carballeira is passing on the editorship to Alicia Wagner.

Andy currently teaches courses in acoustics at Berklee College of Music and The New England Institute of Art. He is a Director of The Record Company, a non-profit recording studio in Boston, MA.

Andy will continue as a member of the Advisory Committee. He has the deep appreciation of the Newman Fund Advisory Committee and friends of the Fund, as well as our sincere best wishes for the future.

REMEMBERING DICK CAMPBELL

Dick Campbell, an avid supporter of the Newman Fund and a member of long standing of the Advisory Committee, passed away in October 2012. Following is a tribute to Dick from Eric Reuter, a long time student, friend and colleague.

I first met Dick Campbell when I was a sophomore in the electrical engineering department at Worcester Polytechnic Institute. Dick taught one regularly scheduled course, simply called "Audio", which was a comprehensive collection of topics, including room acoustics, transducers, audio electronics, speech intelligibility, and many other related things. My head was spinning by the end of it, but I was hooked. Dick became an advisor for several independent study projects, and eventually introduced me to Cavanaugh Tocci Associates, where I started my career as an acoustical consultant.

In the years since, Dick and I remained close. Many of you who knew him (and knew him for decades longer than I did) likely understand when I say that there were questions that would come up about audio, acoustics, instrumentation, etc., to which, it seemed, Dick would be the only one who'd know the answer. And I always knew that he'd cheerfully provide it. In my journey into the real world, and right up until his passing, Dick was a constant source of support and wisdom. My career path would have been very different if not for his inspiration and encouragement.

And so I thought I knew Dick pretty well. After his death, though, I made contact with several other people whose lives he had also touched, and learned for the first time how diverse his talents and contributions had been. He was very humble, and had accomplished so many things of which I'd never known.

What follows is excerpted from Dick's obituary:

Richard Hugh (Dick) Campbell was as close to a Renaissance man as is possible these days, and he did it all, until his death on October 11, 2012.

Dick was born February 17, 1937 in Manchester, New Hampshire, the son of Hugh and Celia Campbell. At 15, he won the New Hampshire state science fair prize for building a Van de Graaff generator. He was also an honor student, conducted his high school orchestra, and was an accomplished percussionist.

In college, at Worcester Polytechnic Institute, he became interested in acoustical engineering and began designs for one of his specialties: voice communication systems for environments with high ambient noise. He designed headsets for potato chip factories and landing decks on Navy aircraft carriers, and he designed voice communication systems for the Gemini and Apollo programs.

He delighted in seeing his headsets in almost any movie or TV program involving helicopters.

As a young man, Dick flew small planes towing banners and was an avid horseman, showing his two horses and trail riding through the New Hampshire woods. For many years he worked at the David Clark Company in Worcester, MA designing voice equipment, but weekends he spent at his lifelong love: sailing. He would sail his Alden ketch, Otter, out from Marblehead along the coast, trapping lobsters and exploring. On one of his forays he sailed into Eel Pond and fell in love with Woods Hole.

In 1972 he sold Otter to buy the Woods Hole Marine boatyard with two partners: Arthur (Buzz) Harvey and Arthur (Pinky) LaBlond. The trio dreamed of a schooner tied up at the dock that they would sail at the end of the day. Instead they spent the summers repairing broken boat parts or crawling around in the bilge of boats whose motors needed fixing. In the late fall they would haul out moorings and replace them with winter sticks so the ice wouldn't take them out to sea, then reverse it all in the spring. Dick could lift onto the deck of the barge a heavy mushroom anchor dragged off position by a storm, motor to where it belonged, and roll it back into the water.

For many years, Dick worked seven days a week at three jobs: David Clark, the boatyard, and his own acoustical engineering company, Bang-Campbell Associates. In addition, from 1981 until 2008 he taught a course on acoustics at Worcester Polytechnic, his alma mater.

As side projects, he designed the first carbon dioxide scrubber for the Navy Sealab capable of diving to 1,200 feet and a de-icer for snow-making equipment on ski slopes. He worked on solar energy projects for USAID in Mali, Malaysia and Morocco.

For the last seven years of his life, Dick "drove a wheelchair". Through it all, he kept active, participating in committees, testifying in lawsuits, teaching his class in acoustical engineering at WPI, developing software, manufacturing specialized microphones, and designing concert halls. Never complaining, he delighted in visitors, and always, always had a story to tell of his own adventures or of oddities from obscure corners of the globe.

Dick was a devoted father and member of the community. He served as president of the Associated Scientists of Woods Hole, Chair of the Curriculum Committee of the Woods Hole Science School and Chair of the Falmouth Economic Development and Industrial Corporation (EDIC).

He is survived by his daughter, Monika Bang-Campbell, sister Patricia Jarvi, niece Tami Carlow and nephew Shawn Carlow. A memorial service and celebration of his life was held on October 21 at the Church of the Messiah in Woods Hole. Donations in Dick's memory can be sent to the Children's School of Science or the Woods Hole Library.

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* Past Newman Medalists

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