

ROBERT BRADFORD NEWMAN

NEWSLETTER 2015

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

2015 AT A GLANCE

December 31, 2015 completed another successful year for the Newman Fund. Newman Medals were awarded to 14 students, bringing the total to 304 at more than 58 schools of architecture, engineering, music and music technology since the program began in 1985. Of particular note is the increased participation from schools and programs outside North America.

Five student teams received Wenger prizes in 2015 for their meritorious design work juried and displayed at the ASA Student Design Competition (SDC) held at the 169th meeting of the Acoustical Society in Pittsburgh, PA. There were thirteen total entries submitted to the SDC from a number of different universities.

The Advisory Committee extends its appreciation to students, teachers, consultants, professional supporters and friends of the Fund whose extraordinary voluntary efforts make the work of the Fund possible and thoroughly enjoyable. Corporate sponsors with interest in the realm of architectural acoustics have been especially supportive recently. We would also like to make special note of our appreciation to the staff at the Acoustical Society offices in Melville, NY who help the Fund's operation run so seamlessly.

Lily Wang

Carl Rosenberg

Co-Chairs of the Newman Fund Advisory Committee



University of Hartford 2015 alumna Ginny Demske with pinna cookies at their annual Don't Go Deaf Day

2015 NEWMAN MEDALS

In 2015, 14 students were awarded Newman Medals.

Eric Bustamante

Faculty Advisor: Stephen Dance
London South Bank University
"Application of sustainable materials for the treatment of an open-plan space"

Peter Dodds

Faculty Advisor: Ning Xiang
Rensselaer Polytechnic Institute
"The effects of noise of physician cognitive performance in a hospital emergency department"

Matthew Gelowitz

Faculty Advisor: Umberto Berardi
Ryerson University
"Canadian concert hall book publishing"

Andrew Hulva

Faculty Advisors: Lauren Ronsse & Dominique Cheene
Columbia College Chicago
"Normal operation listening level of personal listening devices and resultant risk of noise induced hearing loss"

Joonhee Lee

Faculty Advisors: Lily Wang & Erica Ryherd
University of Nebraska - Lincoln
"Impact of tones in building mechanical system noise on human annoyance perception"

Eric W. McGowan

Faculty Advisor: Bob Coffeen
University of Kansas
"A comparison of results from three mechanical system noise prediction computer programs when analyzing several installed HVAC systems, and how each prediction compares to the actual measured noise levels"

Mallory Morgan

Faculty Advisor: David T. Bradley
Vassar College
"Numerical prediction of sound scattering from fractal surfaces"

Markus Mueller-Trapet

Faculty Advisor: Michael Vorländer
RWTH Aachen University
"Measurement of surface reflection properties - Concepts and uncertainties"

Matthew Todd Neal

Faculty Advisor: Michelle Vigeant
Pennsylvania State University
"Connecting the sense of envelopment to specific components of the sound field using perceptually motivated auralizations"

Reinhard Neubauer

Faculty Advisor: Jian Kang
University of Sheffield
"Subjective estimation of airborne sound insulation"

Anna Pavia

Faculty Advisor: Umberto Berardi
Ryerson University
"Canadian concert hall book publishing"

Behzad Ranjbari

Faculty Advisor: Mendel Kleiner
Chalmers University of Technology
"New metrics for the characterization of stage acoustics in concert halls"

Louena Shtrepi

Faculty Advisor: Arianna Astolfi
Politecnico di Torino
"Measurement traceability of sound scattering coefficient of diffusive surfaces used in room acoustics and virtual acoustical environments"

Sami Weller

Faculty Advisor: Michael Ermann
Virginia Tech School of Architecture + Design
"Architectural Acoustics Youtube videos"



2015 Newman Medalists Anna Pavia and Matthew Gelowitz (Ryerson University) with faculty advisor Umberto Berardi

SPOTLIGHT: FUND ADVISOR KENNETH P. ROY



Ken is a Senior Principal Research Scientist in Exploratory Research at the Building Products Technology Lab of Armstrong World Industries in Lancaster, PA. He received a Bachelor's degree in Electrical Engineering from the University of Maine at Orono, a Master's degree in Architectural Engineering from Pennsylvania State University, and continued at Penn State to earn his Ph.D. in Architectural Acoustics.

After several years working as an acoustical consultant with the firm of P. S. Veneklasen & Assoc. of Santa Monica, CA, Ken redirected his interest into buildings research on which he has been focused for the last 35 years.

Ken's current responsibilities are in the field of architectural building products and systems, with a focus on the interaction between architectural design, electronic sound systems, and human performance. Recent research topics include 3-D architectural modeling and auralization of design spaces, speech intelligibility and speech privacy in office and healthcare environments, and speech intelligibility and student perception in schools.

Elected an Acoustical Society Fellow in 1999, Ken continues to contribute as a member of the Technical Committee on Architectural Acoustics and Technical Committee on Noise. Outside of the ASA, he participates extensively in both national and international standards development and is affiliated with several international standards organizations, including ASTM, ASHRAE, ANSI, ISO, and USGBC. Ken is currently the Head of US Technical Advisory Group to ISO TC43/SC2 on Building Acoustics.

Years of research and experience have led to lecture invitations at 17 universities in 6 countries, and presentations of over 180 seminars on Architectural Acoustic Design in 18 countries. Ken is also responsible for over 100 publications on "Architecture & Acoustics" in 30 journals, conference proceedings, and trade publications.

When he's not busy advancing acoustics and educating future generations, Ken enjoys cruising on horses, Harleys, and kayaks.

2015 STUDENT DESIGN COMPETITION

The 2015 international Student Design Competition for the Robert Bradford Newman Fund was held at 169th meeting of the ASA in Pittsburgh, Pennsylvania.

The competition challenged participants to design a performance venue addition to a casino and hotel facility in downtown Pittsburgh, and 13 entries were received from all over the world.

Annually entries are of an increasingly high quality and we would like to recognize the effort and thoroughness of the entries.

Special thanks go to our judges for Pittsburgh: Steve Roth, *Roth Acoustical Associates*, Jeff Babich, *Babich Acoustics*, Gregory Galford, *Chatham University*, Felicia Doggett, *Metropolitan Acoustics*, Paul Graf, *Avon Graf Architects*.

All of the participants are congratulated on a job well done.

FIRST HONORS

(\$1250 Wenger Prize)

Johan Dahlberg and Johanna Isaksson
Chalmers University of Technology
Göteborg, Sweden

COMMENDATIONS

(Four \$700 Wenger Prizes)

Jay Bliefnick
University of Nebraska - Lincoln
Lincoln, Nebraska, USA

Virginia Demske, Ethan Bourdeau, and Thomas Szarkowicz
University of Hartford
Hartford, Connecticut, USA

Sofie Jönsson, Alexandra Toivonen, and Aleksandra Pyzik
Chalmers Institute of Technology
Göteborg, Sweden

Jeong Sik Yoo and Mitchell Crammond
Yale School of Drama
New Haven, Connecticut, USA

PROF. ERMANN JOINS SDC

The SDC Committee is also pleased to welcome our new team member, Michael Ermann, associate professor at Virginia Tech's School of Architecture + Design, who recently published the textbook "Architectural Acoustics Illustrated."

2016 STUDENT DESIGN COMPETITION ANNOUNCED

The 171st ASA meeting in Salt Lake City, UT (May 23 – 27, 2016) will host the annual Student Design Competition. The competition involves the design of a multipurpose center for the arts and is described in greater detail in the program for the meeting, and on the Newman Fund website (newmanfund.org).

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

Please contact the organizers at sdcc@newmanfund.org for further information and details of the Student Design Competition program.

PAST NEWMAN MEDALISTS: WHERE ARE THEY NOW?

Andrew Carballeira
Berklee College of Music - 2003 Medalist
Cavanaugh Tocci Associates
acarballeira@cavtocci.com

Andy is fortunate to work in many diverse areas of sound and vibration, as both an engineering consultant and an educator. Some days find him working on the design of broadband absorption systems for recording studios; others developing experimental rigs for aerospace component fatigue testing. No two days are the same!

Andrew Miller
University of Kansas - 2006 Medalist
BAi
amiller@baiaustin.com

Andy works primarily on traditional and contemporary religious facilities and Performing Arts facilities, providing acoustics and audiovisual systems design services. He also co-chairs the Acoustical Society of America's annual Student Design Competition.

Elizabeth Lamour Croteau
University of Kansas - 2012 Medalist
Cavanaugh Tocci Associates
elamour@cavtocci.com

Liz has been working on several audiovisual designs for university classrooms and conference rooms, as well as sound systems for multipurpose performance spaces and athletic facilities. She is also an Assistant Professor at Berklee College of Music, chair of the Greater Boston Chapter of the ASA, and is the Newman Fund Newsletter Editor.

Robert Connick
Rensselaer Polytechnic Inst. - 2013 Medalist
Acentech
rconnick@acentech.com

Bob has been working on a number of projects including the acoustical design of schools, environmental noise assessment, and acoustic modeling of event spaces. He is currently the treasurer of the Greater Boston Chapter of the Acoustical Society of America.

**SPECIAL FEATURE:
2014 NEWMAN MEDALIST
FIONA M. SMYTH**



2014 Newman Medalist Fiona Smyth with Donal Lennon, Manager of the Built Environment Laboratory at University College Dublin

Fiona M. Smyth was awarded a Newman Medal in 2014 for a Ph.D. dissertation completed in Ireland and awarded by University College Dublin. Fiona trained as an architect at University College Dublin, before beginning her Ph.D. research under the joint supervision of Professor Hugh Campbell at University College Dublin (architecture) and Professor Henry Rice of Trinity College Dublin (Engineering). The dissertation for which Fiona received the Newman Medal was an examination of interdisciplinary developments in architectural acoustics in early twentieth-century Britain and Ireland. The dissertation combined historical research with applied analysis and site studies using three-dimensional terrestrial laser scanning to create detailed spatial surveys to parallel the acoustic studies. The sites Fiona studied were three Anglican cathedrals: Christchurch and St Patrick's in Dublin and St. Albans's in Hertfordshire, England.

Fiona is presently in the US where she is furthering her acoustic work through the lens of the history of science as part of a Marie Skłodowska-Curie Postdoctoral Fellowship at Harvard. While at Harvard she is working under the mentorship of Professor Peter Galison in the Department of the History of Science. Her present Fellowship was awarded by the European Commission and allows her to hold positions at both Harvard University and Trinity College Dublin.

At Harvard, Fiona is expanding the work for which she was awarded the Newman medal into a book on the emergence of acoustics as a branch of modern building science in Britain. Early twentieth century research in architectural acoustics in Britain followed quite a different path to work in the US. The earliest twentieth-century research was centralized at a government facility for building science where the primary focus was on health and housing. Parallel research into 'designing for musical tone' was implemented by acousticians in conjunction with a number of noted musicians, but on an unofficial – or else privately-commissioned

- basis. Fiona's work at Harvard looks at the links between US and UK research in acoustics and examines how the disparate strands of research were interwoven over the first five decades of the twentieth century.



Figure 1: spatial (point cloud) study



Figure 2: site work for Ph.D. research

**CHRG JOINS TCAA AS
SUBCOMMITTEE**

As of July 2015, the Concert Hall Research Group (CHRG) is officially a subcommittee of the ASA Technical Committee on Architectural Acoustics. CHRG has existed for many years as an unofficial subcommittee with strong ties to ASA, TCAA, and the Newman Fund Committee. CHRG chair Tim Foulkes explained that the new status will help assure the continuity of CHRG independent of the current leadership. As part of the arrangement, CHRG funds will be managed by the ASA, and CHRG will have official status as a non-profit.

CHRG also has a new web site (www.CHRGASA.org) hosted on the ASA web server. The CHRG site contains information on CHRG history, activities, concert hall measurement data, and past summer institutes.

Going forward, CHRG will continue to have strong ties with the Newman Fund Committee, sharing interests and membership.

The Concert Hall Research Group was founded in 1992 as an ad-hoc group of acoustical consultants and researchers to develop more consistent methods for acoustic measurements in concert halls. Funded by contributions from acoustical consulting firms, CHRG paid expenses for acoustic measurements in 15 significant concert halls across the US. This data has been used as the basis for many papers including presentations at ASA meetings and published in JASA and other print media. The measurement data was

published on a CD ROM and is now available on the new CHRG web site.



Tim Foulkes, former CHRG Chair and current Vice Chair

**CHRG ANNOUNCES NEW
CHAIR**

During the November ASA meeting in Jacksonville, CHRG Chair Tim Foulkes announced that Robin Glosemeyer Petrone would be the new Chair of the Concert Hall Research Group. Tim will stay on the committee as Vice Chair, to assist with planning future activities. Current members of the CHRG committee are Robin Glosemeyer, Tim Foulkes, Michelle Vigeant, Carl Rosenberg, and Paul Scarborough.

Robin has a long history with CHRG as a student attendee at the first Summer Institute in 1999, co-organizer of Saratoga 2003, attendee at Aspen 2006, and co-organizer of Chicago 2014. Tim Foulkes said "Robin truly understands the essence of what it takes to create a great summer institute for CHRG. She also has the potential to develop more initiatives in research and measurements while also continuing the highly regarded Summer Institutes."



Robin Glosemeyer Petrone, new CHRG Chair



Jonathan Laney (Threshold Acoustics) and Rick Talaske (Talaske) speaking to the CHRG 2014 group seated in the Choir Section on stage at the Pritzker Pavillion in Chicago

NEW NEWMAN FUND ADVISORY MEMBERS

Robin Glosemeyer Petrone

Robin is a Principal with Threshold Acoustics. She earned her Bachelor of Science in Architectural Engineering with an emphasis in Acoustics from the University of Kansas in 1999. Prior to joining Threshold, Robin was a Principal and the Director of West Coast Operations with Jaffe Holden Acoustics. Robin is a member of the ASA Press Editorial Board and plays an active role in the Concert Hall Research Group, including having organized the Summer Institutes in Saratoga Springs in 2003 and Chicago in 2014.

David Woolworth

David is a principal consultant at Roland, Woolworth & Associates in Oxford, MS. He guest lectures regularly at the University of Mississippi, Mississippi State University, and Louisiana State University in architectural acoustics, physics, and engineering. David has recently co-authored a companion booklet for architects for ANSI-ASA S12.60 the National Classroom Acoustics Standard.



CAVANAUGH NAMED 2015 MILLER MEDALIST

The 2014 Newman Fund Newsletter featured an article on plans for honoring Laymon Miller's outstanding contributions to acoustics by The Acoustical Society of America, The Institute of Noise Control Engineering of the USA, and the National Council of Acoustical Consultants. INCE / USA and NCAC have jointly developed a new medal award, THE LAYMON MILLER MEDAL FOR EXCELLENCE IN ACOUSTICAL CONSULTING, to be awarded in odd numbered years by NCAC and in even numbered years by INCE / USA. Since the inaugural year was to be 2015, NCAC had the honor of making the first award which was to be presented at NCAC's annual meeting held in New Orleans the weekend prior to INCE/ USA's NoiseCon 2015. Since INCE / USA was not making its first award until 2016, many of the officers and directors of INCE/ USA were able to attend the NCAC 2015 presentation which was held at a Saturday evening dinner at the famous La Mer restaurant on Pier 1.5 of the Embarcadero. The details

of the evening as well as the details of the award encomium for Bill are fully described in the Summer 2015 issue of the NCAC Newsletter. Bill, with typical genuine modesty, says that he was on the nominating team for another NCAC member who was in his opinion, far more qualified for the award than he. Bill says he will be rooting for his nominee again in 2017 when NCAC awards its next Laymon Miller Medal.

Meanwhile stay tuned for INCE / USA's 2016 Laymon Miller Medal Awardee for Excellence in Consulting to be awarded at NoiseCon 2016 in Providence, RI during the coming summer.

TRIBUTE FOR EWART (RED) WETHERILL MARCH 17, 1928 - NOV. 14, 2015



Ewart (Red) Wetherill, longtime Newman Fund Advisory Committee member and distinguished Fellow of the Acoustical Society of America and Consultant in Architectural and Environmental Acoustics, passed away peacefully at home in his sleep on November 14th. In the acoustics community, with a mere mention of his name just about everyone immediately knew who you were talking about. Obituaries have already appeared in recent issues of Acoustics Today, Sound and Vibration Magazine, and other technical as well as local publications in his hometown of Alameda, California where he was active as Chair of a committee to protect residents from excessive aircraft noise from a nearby airport. The Newman Fund had the honor of publishing his autobiography in its 2007 annual newsletter SPOTLIGHT ON FUND ADVISOR WETHERILL. What better way to learn about his life in acoustics than from Red himself!

Red is survived by his wife Jinny, his brother William, and granddaughter Nikki. He will be greatly missed by his many friends in acoustics and all whose lives he touched.

Informal memorial services are planned in the San Francisco Bay area this spring and summer. A Tribute Session at a future ASA meeting is being planned by the Technical Committee on Architectural Acoustics.

ROBERT BRADFORD NEWMAN STUDENT AWARD FUND

ADVISORY COMMITTEE:

William Cavanaugh, Co-chair Emeritus
Mary Shaw Newman, Honorary Chair
Carl Rosenberg, Co-chair
Lily Wang*, Co-chair
Elizabeth Lamour Croteau*, Newsletter Editor (elamour@cavtoccio.com)

Christopher Blair	Timothy Foulkes
David T. Bradley*	Ronald Freiheit
Daniel Butko*	Robin Glosemeyer Petrone
Andy Carballeira*	K. Anthony Hoover
Robert Celmer	Norman Philipp*
Robert Coffeen	Kenneth Roy
Stephen Dance	Gary Siebein
Peter D'Antonio	Michelle Vigeant*
M. David Egan	David Woolworth
Donna A. Ellis*	Ning Xiang

* Past Newman Medalists

SPONSORS:

The Newman Fund is part of the Acoustical Society Foundation Fund under the aegis of the ASA Technical Committee on Architectural Acoustics. The 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. We would like to extend our sincere gratitude to the individuals and organizations that make this fund possible.

The Fund encourages donations during the year. Tax deductible donations can be made to:

The Robert Bradford Newman Student Award Fund
c/o The Acoustical Society of America
1305 Walt Whitman Road, Suite 300
Melville, NY 11747-4300

Tel: 516-576-2360

Fax: 631-923-2875

Email: asa@acousticalsociety.org

Donations can also be made securely online at:

<http://www.newmanfund.org/sponsors/>

