

# Honors and Awards

presented by the

## **Institute of Noise Control Engineering of the United States of America**

with support from the

## **INCE Foundation**

**Fellows of the Institute of Noise Control Engineering of the USA**

**Distinguished International Members**

**INCE/USA Distinguished Noise Control Engineer Award**

**INCE/USA Outstanding Educator Award**

**INCE/USA Award for Excellence in Noise Control Engineering**

**INCE/USA Distinguished Service Medal**

**Martin Hirschorn IAC Prize - Best Paper Award**

**Martin Hirschorn IAC Prize - Graduate Student Project Award**

**INCE/USA Undergraduate Student Project Award**

**INCE/USA Student Papers Award**

**Leo Beranek Student Medal for Excellence in Noise Control Studies**

**Laymon N. Miller Award for Excellence in Acoustical Consulting**

**“Old Meets New” Presentation Award**

**Michiko So Finegold Award**

**Hallberg Foundation Award**

# **Fellows, Institute of Noise Control Engineering of the USA**

Fellowship in INCE/USA is to honor and recognize publicly any INCE-USA Member who has rendered conspicuous service to INCE/USA and has made notable or distinguished contributions to the advancement of noise control engineering and/or has notably promoted knowledge of noise control engineering.

<b>James D. Barnes</b>	<b>Robert D. Hellweg, Jr.</b>	<b>Richard J. Peppin</b>
<b>Leo L. Beranek</b>	<b>Ralph K. Hillquist</b>	<b>Marehalli G. Prasad</b>
<b>Robert J. Bernhard</b>	<b>Martin Hirschorn</b>	<b>Stephen I. Roth</b>
<b>Courtney B. Burroughs</b>	<b>David K. Holger</b>	<b>Jeff G. Schmitt</b>
<b>J. Stuart Bolton</b>	<b>Harvey H. Hubbard</b>	<b>Paul D. Schomer</b>
<b>William J. Cavanaugh</b>	<b>K. Uno Ingard</b>	<b>James G. Seebold</b>
<b>James Chalupnik</b>	<b>George W. Kamperman</b>	<b>Ben H. Sharp</b>
<b>Beth A. Cooper</b>	<b>Howard F. Kingsbury</b>	<b>Rajendra Singh</b>
<b>Joseph M. Cuschieri</b>	<b>Francis Kirschner</b>	<b>Louis Sutherland</b>
<b>Patricia Davies</b>	<b>William W. Lang</b>	<b>R. Bruce Tatge</b>
<b>Paul Donavan</b>	<b>Gerald C. Lauchle</b>	<b>Allan M. Teplitzky</b>
<b>Gordon Ebbitt</b>	<b>Robert Lotz</b>	<b>James K. Thompson</b>
<b>Kenneth M. Eldred</b>	<b>David Lubman</b>	<b>Nancy S. Timmerman</b>
<b>Jeffrey L. Fullerton</b>	<b>Richard H. Lyon</b>	<b>Greg C. Tocci</b>
<b>Lewis S. Goodfriend</b>	<b>George C. Maling, Jr.</b>	<b>Eric E. Ungar</b>
<b>Stephen A. Hambric</b>	<b>Alan H. Marsh</b>	<b>Istvan L. Ver</b>
<b>Carl E. Hanson</b>	<b>Steven E. Marshall</b>	<b>Henning E. Von Gierke</b>
<b>Andrew S. Harris</b>		<b>David, M. Yeager</b>

## Distinguished International Members

The status of INCE Distinguished International Member is conferred by the INCE Board of Directors upon eminent acousticians residing outside the U.S.A. who have personally made extraordinarily significant contributions to the theory and/or practice of noise control engineering.

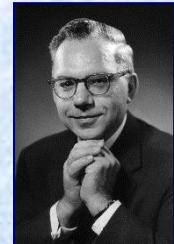
- |   |   |   |   |
|---|---|---|---|
| ❖ | <b>Australia</b><br>Louis Challis<br>Fergus Fricke<br>Colin Hansen<br>Leonard Koss  | ❖ | <b>Hungary</b><br>Andras Kotschy  |
| ❖ | <b>Austria</b><br>Judith Lang   | ❖ | <b>India</b><br>M. Munjal   |
| ❖ | <b>Brazil</b><br>Samir N. Y. Gerges   | ❖ | <b>Japan</b><br>Zyun Iti Maekawa<br>Seiichiro Namba<br>Toshio Sone  |
| ❖ | <b>Belgium</b><br>Gerrit Vermeir<br>Jean-Pierre Clairbois   | ❖ | <b>Korea</b><br>Yang-Hann Kim   |
| ❖ | <b>Canada</b><br>Gilles Daigle<br>Christain Giguere<br>Michael Stinson  | ❖ | <b>Portugal</b><br>Jorge Patrício   |
| ❖ | <b>Czech Republic</b><br>Josef Novák  | ❖ | <b>Russia</b><br>Vyacheslav Maslov  |
| ❖ | <b>Denmark</b><br>Birger Plovsing   | ❖ | <b>Singapore</b><br>Chiak Hwee Lim  |
| ❖ | <b>Finland</b><br>Kari Pesonen  | ❖ | <b>Sweden</b><br>Tor Kihlman<br>Conny Larsson<br>Nils-Åke Nilsson<br>Juha Plunt<br>Ulf Sandberg   |
| ❖ | <b>France</b><br>Michael Bockhoff<br>Daniel Commins<br>Jean Mattei  | ❖ | <b>The Netherlands</b><br>Jan Granneman<br>Tjeert ten Wolde   |
| ❖ | <b>Germany</b><br>Ulrich J. Kurze<br>Hugo Fastl<br>Klaus Genuit<br>Joachim Scheuren<br>Brigitte Schulte-Fortkamp<br>Werner Schirmer | ❖ | <b>United Kingdom</b><br>Jeremy Astley<br>Bernard Berry<br>Frank Fahy<br>John Ffowcs-Williams<br>Hugh Jones<br>H. Leventhall<br>A. Middleton<br>Philip Nelson |

## **INCE Distinguished Noise Control Engineer Award**

The INCE Distinguished Noise Control Engineer Award recognizes individuals who have rendered conspicuous and consistently outstanding service to the Institute and to the field of noise control engineering over a sustained period. This honor corresponds to the title "Distinguished Professor" in academia and to the Honorary Fellowship Award of professional societies such as the Acoustical Society of America.

❖ **1997 Leo L. Beranek**

For extraordinary and sustained contributions in engineering and practical applications in noise control engineering, in teaching, and publications for the education of noise control engineers, and for the formation, development, and sustenance of the Institute.



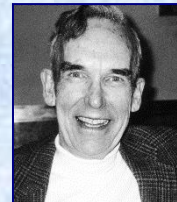
❖ **2001 George C. Maling Jr.**

For pioneering leadership in establishing noise control as an engineering discipline, and for exceptional contributions to the development of international and national noise control practice and standards.



❖ **2002 William W. Lang**

For leadership, nationally and internationally, in the establishment of industrial noise programs, noise control organizations, and standards for noise control.



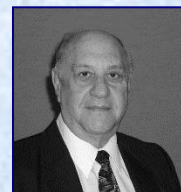
❖ **2003 Robert J. Bernhard**

For contributions to numerical, experimental, and active methods in noise control, and for exemplary service to noise control education and to INCE.



❖ **2004 Eric E Ungar**

World-class engineering scientist, consultant, teacher, and author with significant international contributions to acoustics, noise and vibration control, structural dynamics and damping.



❖ **2010 Alan H. Marsh**

For pioneering contributions to aircraft noise reduction, efforts to improve technical standards for sound level meters and for sustained service to INCE.



❖ **2012 Courtney B. Burroughs**

Professor, consultant, researcher, editor, INCE Board member; Dr. Courtney Burroughs has served the acoustical engineering community for nearly fifty years.



❖ **2014 J. Stuart Bolton**

For contributions to noise control technology and engineering through education, research and service to the Institute of Noise Control Engineering.



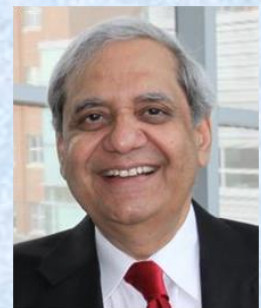
❖ **2014 James K. Thompson**

For leading international collaborations in reducing tire and brake noise and vibration, along with his leadership with INCE/USA and NNI.



❖ **2016 Rajendra Singh**

For his years as an outstanding researcher in the area of gear noise, an exemplary educator in the noise control industry, and for extensive contributions to INCE-USA and I-INCE that have enhanced professional discussions and connections within the industry.



## **INCE Outstanding Educator Award**

The INCE Outstanding Educator Award for Excellence in the Teaching of Noise Control Engineering is intended to honor a person who has significantly advanced the technology and practice of noise control engineering through unique contributions to the education of future noise control engineers, as demonstrated by one or more of the following qualifying accomplishments. The Award consists of a Certificate and a cash grant of \$2000.

Excellence in teaching, whether through the inspired dissemination of the principles of noise control engineering, or by inspiring students to attain high achievement in the field of noise control engineering.

The notable improvement of tools such as textbooks, laboratory experiments, courses, and student projects for the teaching of noise control engineering in a university.

Excellence in disseminating the principles of noise control engineering outside of a university setting through the teaching of short courses and seminars; by promoting cooperation among academic, industrial, or government sectors, or with other disciplines; or by advancing the public's understanding of the benefits of noise control technology.

Enhancing and diffusing the knowledge of noise control engineering through seminal research, scholarly publications, or patents; or the development of noise control materials, products, techniques, or programs.

Providing sustained and effective leadership for the educational programs and activities of the Institute of Noise Control Engineering.

### ❖ **1984 Robert F. Lambert**

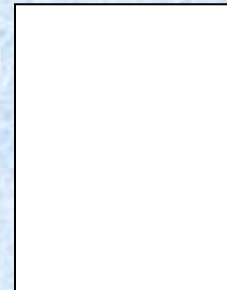
This first INCE/USA Education Award was presented in memory of John C. Johnson.

**For Excellence in Education of Noise Control Engineers**

### ❖ **1989 Rajendra Singh**

This second INCE/USA Education Award was presented in memory of founding member Ken S. Oliphant.

**For Excellence in Education of Noise Control Engineers**

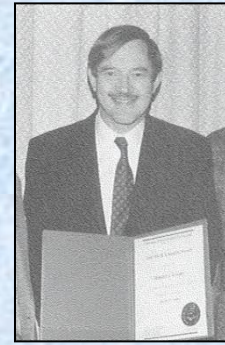


❖ **1992 Malcolm J. Crocker**

This third INCE/USA Education Award was presented in memory of Theodore J. Schultz.

**For Excellence in Education of Noise Control Engineers**

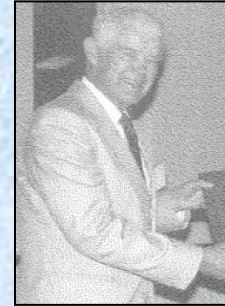
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❖ **1995 Uno Ingard**

This fourth INCE/USA Education Award was presented in memory of Fritz Ingersley.

**For Excellence in Education of Noise Control Engineers**



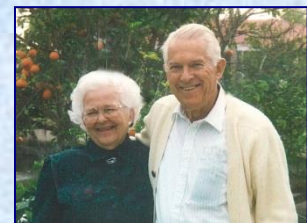
❖ **1999 J. Stuart Bolton**

**For Excellence in Education of Noise Control Engineers**



❖ **2008 Laymon N. and Lucy Miller**

For developing and teaching to thousands of professionals the longest-running and best-attended series of lecture courses on the principles and practical aspects of applied engineering noise control. Since 1969, the course has been taught at dozens of cities and companies throughout North America. Published extensive lecture notes expanding on and supporting his courses has served as a valuable reference for his students. He has also prepared outstanding published handbooks and manuals on industrial noise control engineering in use by engineers nationwide. He has served as a trusted and respected mentor for many less-experienced younger associates, and has provided his students and clients a better understanding and awareness of the importance and benefits of acoustics and noise control engineering. Over a period of 60 years, he has prepared numerous scholarly publications, and has given presentations at professional societies. Laymon Miller's course is now taught by Reggie Keith.



❖ **2011 Mohan Rao**

For teaching graduate and undergraduate courses in vibration, noise control engineering, and acoustics, advising dozens of Masters and PhD students, and exposing his students to real-world community, business, university, and industrial noise control problems. He has also taught short courses in noise control engineering to hundreds of professionals working in industry and institutions in the US and overseas. He has authored more than 100 technical articles for our profession and his research, and research by his students, has been sponsored by numerous government agencies and major corporations.



❖ **2015 Marehalli G. Prasad**

Who has significantly advanced the technology and practice of noise control engineering through unique contributions to the education of future noise control engineers.



## INCE Award for Excellence in Noise Control Engineering

To stimulate the development and/or recognition of noise control engineering technology for the ultimate benefit of society, the following award will be offered from time to time by INCE/USA. The award is intended to provide, and disseminate widely, recognition for one or more individuals or institutions who have demonstrated one or more contemporary and outstanding products or processes in the applied art of noise control engineering. The product or process should also be capable to making an effective contribution toward a quieter environment. This honorary award would be similar, in concept, to the Malcolm Baldrige Award program of the US Department of Commerce or similar awards by professional societies such as the American Institute of Architects (AIA) or the American Institute of Aeronautics and Astronautics (AIAA). However, the award would not be considered an endorsement by INCE of any specific product or process.

### ❖ **1999 Glenn Frommer, Mass Transit Railroad Corp, Hong Kong, China**

For noise control innovations incorporated into the Airport Railway in Hong Kong, including:

- a wheel/rail interface integrating the track and rolling stock design,
- the use of a Noise Assurance Plan to manage the noise design of the rolling stock,
- the use of aggressive specifications for the noise emissions, reverberation times, and building services within stations,
- the use of RASTI modeling to ensure proper design and delivery of the public address system,
- the use of floating track slabs and other trackforms to minimize the transfer of structure-borne noise from the railway platforms to the overlying developments, and
- specialist training in acoustics and vibrations.



floating slab track



translucent noise barriers

❖ **2009 Paul R. Donovan, of Illingworth & Rodkin, Inc. (I&R)**

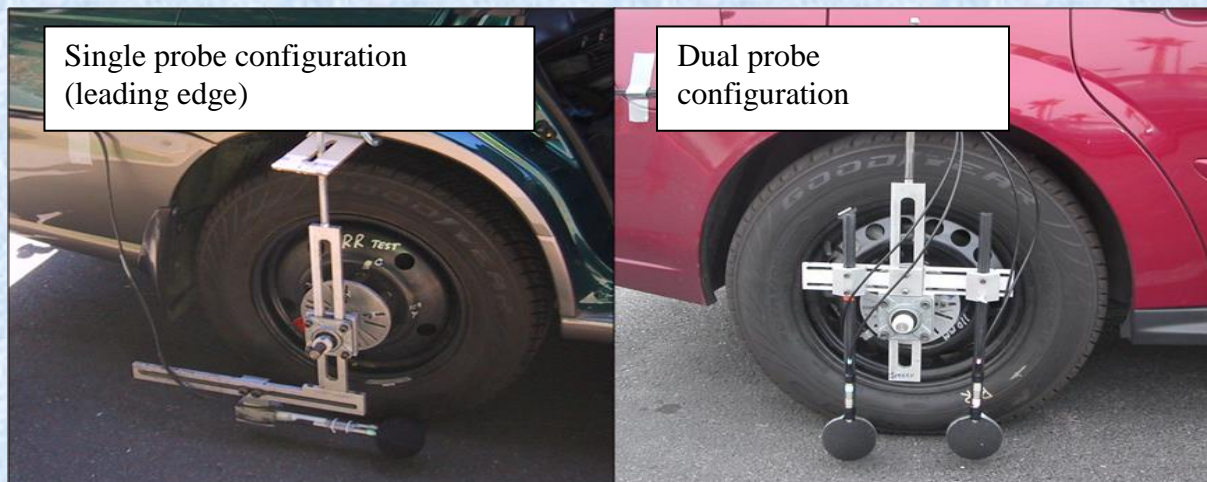
For development of On-Board Sound Intensity (OBSI) probes and decades of leadership and contributions to the measurement and understanding of tire/pavement noise at the source.

He has employed his innovative sound intensity probes during measurements from automobiles and trucks operating at speeds up to 60 mph (100 km/hr) along hundreds of in-service highways in California, Arizona, Nevada, and four European countries.



A recent configuration of the probe includes one or two pairs of phase-matched ½” diameter condenser microphones fitted with nose cones and spherical foam windscreens and located near the side wall of the test tire adjacent to the leading and trailing edges of the tire contact patch. The sound intensity level is analyzed in 1/3 octave bands in real time and the signals are also stored on a digital recorder. Photographs are shown below of the OBSI equipment installed on test vehicles.

The OBSI probes when located directly adjacent to a moving tire are well-suited to measure noise generation and radiation because it is able to localize individual noise sources, reject background noise, detect propagating energy in the acoustic nearfield, reduce contamination by flow-induced noise, and provide repeatable consistent measurement results.



Measurements using the OBSI probes are leading to better understandings of tire/pavement noise generation and radiation at a wide range of pavement types and are providing the information and insights needed in the development of quieter tires and pavements. The California Department of Transportation is currently implementing a program to build quieter highways throughout the State of California. One California highway environmental official has stated that “Dr. Donovan’s efforts in creating a quieter highway environment have put Caltrans at the forefront of this specialized field.”

With Paul’s participation, the OBSI methodology is being adopted as a measurement standard by the American Association of State Highway & Transportation Officials, the American Society for Testing Materials, and the Society of Automotive Engineers. Additional information is available at National Cooperative Highway Research Program (NCHRP) Report 630.

❖ 2013 Jack Mowry, editor and publisher *Sound and Vibration Magazine*



*Sound and Vibration* magazine has every month for 45 years contributed to the noise control engineering profession by providing without charge timely and informative technical articles and access to useful product data to many thousands of readers world-wide. Subscribers represent design engineering, testing and evaluation, research and development, consulting and engineering services, equipment reliability, occupational safety and health, and educational professionals. It serves as a primary source of information for practicing noise control engineers.

## INCE/USA Distinguished Service Medal

The INCE/USA Distinguished Service Medal will be presented to individuals who have shown exceptional dedication and service (above and beyond the call of duty) to INCE/USA. It is an award that acknowledges volunteers who provide significant and sustained help to INCE/USA and thus also the profession. First awarded in 2009.

### ❖ **2009 Courtney B. Burroughs**

Courtney had this great idea to make INCE conference papers available electronically, so that people with particular noise control problems could perform a search and see what people had done and find people to contact. I am not sure that Courtney knew how much work this would be when he had the thought several years ago, but he volunteered to do it. This effort has, and continues to be, very time consuming. However, he sees the benefits of it to INCE members as well as others and is gradually working through older proceedings (not so electronically friendly) and getting them prepped for insertion into the database. Having started on that, he also became the Editor of the Noise Control Engineering Journal. Courtney has helped for many years with reviewing and preparing new Board Certification exam questions and sample problems, and in the tedious process of grading exams taken by candidates. Again his focus has been on helping to advance the technical proficiency of the INCE membership. He also works with George Maling and the Technical Chairs of the INCE/USA conferences to put the current conference proceedings on CDs. Last but not least, Courtney has volunteered to serve as Technical Program Chair of Noise-Con 2010, just to fill in his remaining “idle” hours; this is one of many times that Courtney has helped in the organization of conferences for INCE.



### ❖ **2009 Joseph Cuschieri**

“I don’t know when Joe sleeps”, said one Board member. Where would INCE be without him through the transitions with the various business offices? Joe has become the source of information for INCE, and all questions on day-to-day issues with the INCE business office get funneled through Joe. Joe is the Executive Director of INCE, but he doesn’t get paid for that job; this saves INCE a significant expense. In particular, his handling of the transition to the new INCE Business Office through Noise-Con 2008 was amazing; this was a difficult time, but Joe was always there to make sure things got done. He updated the website, set up the on-line registration, and has continued to implement much of the INCE website editing and conference website co-ordination since then. Over the years, Joe has also run several of our national and international conferences. What people perhaps don’t realize is that he has done a lot of the work of putting the conference on himself. Most of us need secretarial and IBO help to do that, but Joe has always done most of that work himself, even though he has a full time “day job”. Joe has also served as president of INCE. His responsiveness to everyone is admirable, particularly when you realize how busy he must be. As one member said, “If an email message is sent out by someone with a question or problem needing attention, it seems that Joe is the first to respond with the most logical answer or solution.”



❖ **2009 George C. Maling Jr. and Norah Maling**

An incorporator and founding member of INCE/USA, George Maling has for 39 years tirelessly devoted an enormous amount of his own time to INCE/USA. He and Norah ran the organization as volunteers for many years. George and Norah always knew what to do so that things ran efficiently and smoothly. To this day George continues to contribute to INCE/USA. Among other things, he edited Noise/News and still edits Noise News International, attends INCE Board of Directors meetings, and also helps put together the CDs for the conference proceedings. George actually led the effort to place early issues of NCEJ and past issues of NOISE Control/Sound onto CDs. George also helped to form the INCE Foundation and has served as the president. His tireless efforts leading the NAE panel on Technology for a Quieter America are another example of his selfless dedication to the Noise Control Community. He also continues to be an important source of information, advice, and support for the INCE board, officers, and committees. Throughout this, Norah has been at his side, both directly helping INCE and indirectly through her support of George which enables him to dedicate long hours to INCE and the noise control community. Without George and Norah, INCE/USA would not be the fine organization that it is today; they are the personification of altruism and we are fortunate that they have focused on making INCE/USA successful.



## **Martin Hirschorn IAC Prize** **Best Paper Award**

Awarded for the best paper on new and/or improved cost-effective noise control and/or acoustical conditioning products published in the two years preceding the award.

❖ **2000 Murray Hodgson**

*Scale-Model Evaluation of the Effectiveness of Novel Absorber Treatments for Industrial Noise Control, NCEJ*

❖ **2002 Gerald C. Lauchle and Timothy A. Brungart, Pennsylvania State University**

*Modifications of a Handheld Vacuum Cleaner for Noise Control, NCEJ*

❖ **2004 Kent L. Gee and Scott D. Sommerfeldt**

*A compact active control implementation for axial cooling fan noise, NCEJ*

❖ **2006 Michael Yang, George Lesieutre, Stephen Hambric, and Gary Koopman, Pennsylvania State University**

*Development of a design curve for Particle Impact Dampers, NCEJ*

❖ **2006 Penelope Menounou, Department of Mechanical Engineering, The University of Texas at Austin and Jeong Ho You, Department of Mechanical and Industrial Engineering, The University of Illinois at Urbana-Champaign**

*Design of a jagged-edge noise barrier: Numerical and experimental study*

❖ **2008 Nikola Holecek, Brane Sirok, Marko Hocevar, Rudolf Podgornik and Rok Grudnik, Gorenje and University of Ljubljana in Slovenia**

*Reducing the noise emitted from a domestic clothes-drying machine, NCEJ*

❖ **2010 Mark A. MacDonald, Jessica Gullbrand, Yoshifumi Nishi, and Eric Baugh, INTEL Corp**

*Notebook blower inlet flow and acoustics: Experiments and simulations, NCEJ*

❖ **2012 Dan Palumbo and Jacob Klos, NASA Langley Research Center**

*The effects of voids and recesses on the transmission loss of honeycomb sandwich panels, NCEJ*

❖ **2014 Franck Pérot, Min-Suk Kim, Vincent Le Goff, Xavier Carniel, Yvon Goth, and Christian Chassignon**

*Numerical optimization of the tonal noise of a backward centrifugal fan using a flow obstruction, NCEJ*

- ❖ **2016 Anita Gidlöf-Gunnarsson (Örebro University, Sweden), Evy Öhrström (University of Gothenberg, Sweden), Tor Kihlman (Chalmers University of Technology, Sweden), and Jens Forssén (Chalmers University of Technology, Sweden)**

*Noise responses before and after noise abatement measures in a residential intervention project, NCEJ May-June 2015*

## **Martin Hirschorn IAC Prize** **Graduate Student Project Award**

Awarded as a contribution to the education of a graduate student studying noise control engineering in the United States of America who proposes a project related to an application of noise control engineering and/or acoustical conditioning of architectural spaces.

- ❖ **1999 Hyeong-seok Kim, Department of Architecture, University of Florida**

*Study of Community Noise from Cooling Towers and Condensing Units*

- ❖ **2001 Erica Bowden, University of Nebraska**

*Investigation of Complex Background Noise Spectra in Normal and Hearing-Impaired Persons*

- ❖ **2003 Ferdy Martinus, University of Kentucky**

*Reconstruction of Acoustic Particle Velocity on an Open-Ended Duct*

- ❖ **2005 Jonathan Rathsam, University of Nebraska**

*Validation and Modeling of Diffraction around Three-dimensional Surfaces using 3D Boundary Element Method*

- ❖ **2007 Brent W. Rudd, University of Cincinnati**

*Noise Reduction for Magnetic Resonance Imaging (MRI) Patients*

- ❖ **2009 Selen Okcu, Georgia Institute of Technology**

*Development of New Acoustic Metrics for Complex Hospital Sound Environments*

- ❖ **2011 Jie Duan, University of Cincinnati**

*Development of a Novel Active Sound Quality Control System*

- ❖ **2013 Zhao (Ellen) Peng, University of Nebraska-Lincoln**

*Investigation of room effects on the comprehension of speech from English-as-a second-language (ESL) talkers and native English-speaking listeners*

- ❖ **2015 Hyun Hong of the University of Nebraska - Lincoln**

*Subjective perception of varying reflection density in room impulse responses*

- ❖ **2017 Dan Hemme, University of Texas at Austin**

*Characterization of Sound Power Level Spectra Produced by HVAC Chillers with Double Helical Rotary Screw Compressors Under Various Operating Conditions*

# **INCE Undergraduate Student Project Award**

The objective of these awards is to recognize undergraduate students undertaking independent studies project work in noise control engineering and related topics and to provide them with nominal grants to cover expenses that otherwise would not be available from the university resources.

- ❖ **2008 Michael W. Lunoe and Nicholas Statzer, with Professor Robert D. Celmer, University of Hartford**

Acoustic modeling of data center noise

- ❖ **2008 Jared Liette, with Professor Raj Singh, Ohio State University**

Anatomy of high speed brake judder phenomenon using analytical and experimental methods

- ❖ **2012 Adam Steinbach, with Professor Lily Wang, University of Nebraska-Lincoln**

Pilot Study on Determining Annoyance Thresholds of Tones in Noise

- ❖ **2012 Andrew Hubbard, with Professor Jay Kim, University of Cincinnati**

Noise Control Study of Pneumatic Framing Nailers

- ❖ **2013 Rachel Parlock and Tiffany Stahura, with Professor Robert D. Celmer, University of Hartford**

Long Term Sound Measurements in Hospital Patient Units

- ❖ **2013 Yingxiang Jiang, with Professor Patricia Davies, Purdue University**

Improving Simulations of Sonic Booms Heard Indoors and Outdoors and Explore How the Sound Characteristics Affect Annoyance.

- ❖ **2017 Weimin Thor, Purdue University**

A Desktop Procedure for Measuring the Transmission Loss of Automotive Door Seals

# **INCE Student Papers Awards**

Student Paper Prize Competition for INTER-NOISE and NOISE-CON conferences.

- ❖ **1989 D. A. Ufford, Purdue University**

*A Signal Processing Technique to Identify the Number of Incoherent Sources in a System*

- ❖ **1989 S. E. Smith, Stevens Institute of Technology**

*Evaluation of Fan Noise Loudness Using A-weighted Sound Level and Zwicker's Model*

- ❖ **1989 D. S. Mandic, Purdue University**

*Active Noise Control in Damped Elastic Cylinders Using Vibrational Force Inputs*

- ❖ **1989 W. S. Chiu , Pennsylvania State University**

*Subsonic Axial Flow Fan Noise and Inflow Velocity Disturbance*

- ❖ **1989 R. W. Andrews, Purdue University**

*Mechanisms of Sound Generation in Helical Twin-Screw Compressors*

- ❖ **1990 Peter Konieczny, Purdue University**

*A Broadband Noise Prediction Scheme for Low-noise Centrifugal Blowers*

- ❖ **1990 Delores E. Brown, Purdue University**

*Multi-piston Compressor Noise Source Identification Using Parametric Multichannel Spectral Techniques*

- ❖ **1990 Jerry E. Farstad, Ohio State University**

*Guidelines for the Effective Use of Refrigeration Discharge Mufflers*

- ❖ **1991 Barry L. Agee and Allan D. Kelly, Virginia Polytechnic Institute**

*Finite Element Model Updating Using Laser-based Experimental Dynamics for Noise Prediction Purposes*

- ❖ **1991 Ming-Ran Lee, Ohio State University**

*Identification of Pure Tones Radiated by a Computer Disk Drive*

- ❖ **1991 Jinko Lee, University of Illinois**

*Compact Sound-absorbing Structures for Low Frequencies*

- ❖ **1991 Wei Wei, University of Mississippi**

*Gated Sound Power Measurement Using Sound Intensity*

- ❖ **1991 G. Wesley Blankenship, Ohio State University**

*Development of a Signal Processing Technique for the Objective Rating of Gear Noise*

- ❖ **1992 Chuan-Chiang Chen, Ohio State University**

*Noise Reduction in Automotive Power Steering Transmission Lines*

- ❖ **1992 D. L. Hallman, Ray W. Herrick Laboratories, Purdue University**

*Multi-referenced Nearfield Acoustical Holography*

- ❖ **1992 Alan R. Masters and Sung Jin Kim, Ray W. Herrick Laboratories, Purdue University**

*Experimental Investigation into Active Control of Compressor Noise Radiation Using Piezoelectric Actuators*

- ❖ **1992 Peter J. Nashif, Pennsylvania State University**

*An Active Control Strategy for Minimizing the Energy Density in Enclosures*

- ❖ **1992 Z. Hu, Ray W. Herrick Laboratories, Purdue University**

*The Propagation of Sound from an Arbitrarily Oriented Dipole over a Finite Impedance Plane*

- ❖ **1993 Kelly Kay, Pennsylvania State University**

*Error Induced in Bending Wave Power Measurements Resulting from the Presence of Longitudinal Waves Part 2*

- ❖ **1993 Seungbae Lee, University of California at Los Angeles**

*Computation of Aerosound from Turbulent Flow Fields using Large-eddy Simulation*

- ❖ **1993 Chandramouli Padmanabhan, Ohio State University**

*Influence of Clutch Design on the Transmission and Perception of Automobile Transmission Rattle Noise*

- ❖ **1993 Y. J. Kang and W. Tsoi, Purdue University**

*The effect of Mounting on the Acoustical Properties of Finite-depth Polyimide Foam Layers*

- ❖ **1994 Craig M. Heatvole, Purdue University**

*Prediction of Multiple-input Active Control of Road Noise in Automobile Interiors*

- ❖ **1994 Gary S. Madaras, University of Florida in Gainesville**

*Techniques for Interaural Cross-correlation Measurements*

- ❖ **1994 Todd E. Rook, Ohio State University in Columbus**

*Analysis of Structure-borne Noise Power Flow through Bearings in a Gearbox*

- ❖ **1994 Thomas J. Royston, Ohio State University in Columbus**

*Shaped PVDF Sensors for Intelligent Measurement of Acoustic Pressure in Liquid-filled Pipes*

- ❖ **1994 Lisa R. Taylor, Stevens Institute of Technology**

*Acoustical and Fluid Dynamic Similarity for Air-moving Device Measurements on the ANSI Test Plenum*

- ❖ **1995 Jonathan D. Blotter, Virginia Polytechnic Institute and State University at Blacksburg**

*Identification of Energy Sources and sinks to Enhance Noise Control in Plates*

- ❖ **1996 Bryan H. Song, Ray W. Herrick Laboratories, Purdue University**

*Effect of Circumferential edge constraint in the transmission loss of glass fiber materials.*

- ❖ **1996 Shuo Wang, Ray W. Herrick Laboratories, Purdue University**

*A zero order energy finite element method: theory, applications, and similarity to SEA.*

- ❖ **1997 Troy Hartwig, Ray W. Herrick Laboratories, Purdue University**

*Effects of Refraction on Short Range Outdoor Propagation over Asphalt Surfaces.*

- ❖ **1998 Fen Hai, Ray W. Herrick Laboratories, Purdue University**

*Energy Flow Analysis of Flow-Induced Vibrations of Plates*

- ❖ **1999 Byan H. Song, Ray W. Herrick Laboratories, Purdue University**

*Effect of Circumferential Edge Constraint on the Transmission Loss of Glass Fiber Materials.*

- ❖ **1999 Manish Vaishya, Ohio State University**

*Experimental Study of the acoustic field near gear meshing zones.*

- ❖ **1999 Shuo Wang, Ray W. Herrick Laboratories, Purdue University**

*A Zero-order Energy Finite Element Method: theory, applications, and similarity to SEA.*

- ❖ **2000 Laralee G. Ireland, Brigham Young University**

*Modeling the normal modes and acoustics of a jet engine.*

- ❖ **2000 Junhong Park, Ray W. Herrick Laboratories, Purdue University**

*Transmission loss of bulb seals.*

- ❖ **2001 Theodore M. Kostek, Purdue University**

*Eigenvector analysis for vibration isolation.*

- ❖ **2001 Kenneth Kaliski, Ayorkor Mills-Tetty, and Efrosyni Seitaridou, Dartmouth College**

*Low-complexity continuous noise monitoring system for communities, small airports, and remote areas.*

- ❖ **2002 Manmohan Moondra, Wayne State University**

*Visualization of vehicle interior noise using HELS based NAH.*

- ❖ **2002 Jinho Song, Purdue University**

*Modeling of Membrane Sound Absorbers.*

- ❖ **2002 T.C. Kim, Ohio State University**

*Frequency Domain Analysis of Rattle in Gear Pairs and Clutches.*

- ❖ **2002 Kent L. Gee, Brigham Young University**

*Multi-Channel Active Control of Axial Cooling Fan Noise.*

- ❖ **2002 Moohyung Lee, Purdue University**

*Application of Cylindrical NAH to the Visualization of Aeroacoustic Sources.*

- ❖ **2003 Daniel A. Hicks and Kha Vu, Michigan Technological University**

*Study and Reduction of Noise from a Pneumatic Nail Gun.*

- ❖ **2003 Kenji Homma, Virginia Tech Vibration and Acoustics Labs in Blacksburg**

*Broadband Active-Passive Control of Small Axial Fan.*

- ❖ **2003 Jeong Woo Kim, Ray W. Herrick Laboratories, Purdue University**

*Sound Transmission through Lined Composite Fuselage Structures: Formulation of Anisotropic Poro-elastic Theory.*

- ❖ **2004 Andrew R. Barnard, Michigan Technological University**

*Measurement of Sound Transmission using a Modified Four Microphone Impedance Tube*

- ❖ **2004 Jason D. LaLonde, Michigan Technological University**

*Study and Reduction of Noise from an Electric Router*

- ❖ **2004 Kiho Yom, Purdue University**

*Sound Radiation Modes of a Tire on a Reflecting Surface*

- ❖ **2004 Vivake Asnani, Rajendra Singh, and Stephen Yurkovich, Ohio State University**

*Active Control of Modulated Sounds in a Duct*

- ❖ **2004 H. Super, University of Twente, The Netherlands**

*Feedforward Control of Broadband Disturbances on a Six-degrees-of-freedom Vibration Isolation Set-up*

- ❖ **2005 Ferdy Martinus, University of Kentucky**

*An Advanced Noise Source Identification Technique Using the Inverse Boundary Element Method*

- ❖ **2005 Andrew Kankey, Pennsylvania State University**

*Proposed Piezoceramic Array for Rotational and Translational Structural Mobility*

- ❖ **2005 David Moenssen, Pennsylvania State University**

*Determination of Shell-Radiated Noise of an Automobile Engine Air Intake System Using Numerical and Experimental Techniques*

- ❖ **2005 Peter Shapiro, Pennsylvania State University**

*Subjective Response to Low-Frequency Aircraft Noise*

❖ **2005 Todd Thompson, Iowa State University**

*Evaluating the Bonding Conditions of NASA Spray on Foam Insulation (SOFI) Using Audio Frequency Sound Absorption Measurements*

❖ **2007 Connor Duke, Brigham Young University**

*Optimization of Control Source Locations in a Free-field Active Noise Control Application using a Genetic Algorithm*

❖ **2007 Song He, Ohio State University**

*Improved Gear Whine Model with Focus on Friction-induced Structural-borne Noise*

❖ **2007 Geon-Seok Kim, Pennsylvania State University**

*Prediction of Diesel Engine Cooling Fan Noise*

❖ **2007 Kamal Idrisi, Virginia Polytechnic Institute and State University**

*Passive Control of Sound Transmission through a Double Panel using Heterogeneous (HG) Blankets, Part II: HG Parametric Studies*

❖ **2007 Portia Peters, University of Southern California**

*Loss Factors of Honeycomb Sandwich Structures: An Experimental Approach*

❖ **2008 Asim Iqbal, Ohio State University**

*Effect of Flow on the Acoustic Attenuation Characteristics of Helmholtz Resonators*

❖ **2008 Jinghao Liu, University of Kentucky**

*A Simplified Two-load Method for Measuring source Impedance*

❖ **2008 Brent Rudd, University of Cincinnati**

*Evaluation of MRI Compatible Headphones for Active Noise Cancellation*

❖ **2008 Taewook Yoo, Purdue University**

*Absorption of Finite-sized Microperforated Panels with Finite Flexural stiffness at Normal Incidence*

❖ **2009 Philip W. Robinson, Rensselaer Polytechnic Institute, USA**

*A Synthesized Aperture Goniometer for Diffusion Coefficient Measurements*

- ❖ **2009 Yoon-Shik Shin, Purdue University, USA**

*Inflow Treatment for Small Scale Axial Fans under Unfavorable Inflow Conditions*

- ❖ **2009 Jeremy Charbonneau, University of Windsor, CA**

*Comparison of loudness calculation procedure results to equal loudness contours*

- ❖ **2009 Csaba Huszty, The University of Tokyo, JA**

*An algorithm to adjust the clarity of room impulse responses for subjective tests*

- ❖ **2009 Matthew Shaw, Brigham Young University, USA**

*Acoustical analysis of an indoor test facility for a 30-mm Gatling gun*

- ❖ **2010 Joseph Corcoran, Virginia Tech, USA**

*Output-only modal testing of simple residential structures and acoustic cavities using the response to simulated sonic booms and ambient excitation*

- ❖ **2010 Tyler Dare, Purdue University, USA**

*Noise generation in contraction joints in Portland cement concrete*

- ❖ **2010 Jie Duan, University of Cincinnati, USA**

*A novel delayless frequency domain filtered-x least mean square algorithm for vehicle powertrain noise control*

- ❖ **2010 Wenwei Jiang, University of Cincinnati, USA**

*Two-substructure, Time-Domain Transfer Path Analysis of Transient Dynamic Response of Mechanical Systems with Nonlinear Coupling*

- ❖ **2010 Logesh Kumar Natarajan, Wayne State University, USA**

*Enhancing accuracy in reconstruction of vibro-acoustic responses of a complex structure using Helmholtz equation least squares based nearfield acoustic holography*

- ❖ **2011 Brian Choi, Virginia Polytechnic Institute, USA**

*Acoustic source localization using matched-field processing-based enhanced MVDR beamforming in a 3d-complex urban environment*

- ❖ **2011 Wael Elwali, University of Cincinnati, USA**

*Effect of beam boundary condition on sound radiation inside planar acoustic cavity*

❖ **2011 Andrew Jessop, Purdue University, USA**

*Calculation of pressure distribution of the interior acoustical mode of deformed tires*

❖ **2011 Christina Naify, University of Southern California, USA**

*Transmission loss of membrane-type acoustic meta-materials with varying mass configurations*

❖ **2011 Andrew S. Willemsen, Michigan Technological University, USA**

*Enhanced noise and vibration dissipation by nanocomposite polyurethane foams synthesized with dispersed carbon nanotubes*

❖ **2012 Bruno Campolina, Université de Sherbrooke, CA**

*Effect of mechanical links on the transmission loss of lightweight double-walls under diffuse acoustic field: Measurements and SEA*

❖ **2012 Michael Hayward, Purdue University, USA**

*Connecting the input values of an input cross-spectral density matrix to noise sources of a diesel engine*

❖ **2012 Kuba Mazur, Université du Québec, CA**

*The development of an individual dosimetric hearing protection device*

❖ **2012 Alexander Sell, Penn State University, USA**

*Using broadband, ship-radiated noise in shallow water environments to perform physics-based localization*

❖ **2012 Guohua Sun, University of Cincinnati, USA**

*Modified Filtered-x LMS Algorithm for Active Control of Vehicle Road Impact Noise*

❖ **2013 Andrew Wixom, Boston University**

*Efficient analysis of modifications to complex structures for vibration reduction*

❖ **2013 Yitian Zhang, University of Kentucky**

*Enhancing muffler or silencer performance by adding bypass ducts*

❖ **2013 Glenn Pietila, University of Cincinnati**

*Identifying varying preferences in a paired comparison jury study using unsupervised clustering techniques*

❖ **2013 Rui Cao, Purdue University**

*Effect of rotation on the natural frequencies of coupled tire structural-acoustic modes*

❖ **2013 Seungkyu Lee, Purdue University**

*Testing of fans with microperforated housings*

❖ **2014 Philip Feurtado, The Pennsylvania State University**

*A Design Parameter for Acoustic Black Holes*

❖ **2014 Olivier Robin, Université de Sherbrooke**

*Measuring sound absorption coefficient under a synthesized diffuse acoustic field*

❖ **2014 Bao Tong, Purdue University**

*Atmospheric Effects on Noise Propagation from an En-route Aircraft*

❖ **2014 Peng Wang, University of Kentucky**

*Impedance-to-Scattering Matrix Method for Silencer Analysis*

❖ **2014 Yangfan Liu, Purdue University**

*High Frequency Sound Field Simulation by the Method of Local Basis Representation*

❖ **2015 Nicholas Kim, Purdue University**

*Microperforated films as duct liners*

❖ **2015 Rob Opdam, RWTH Aachen University**

*Angle-Dependent Reflection Factor Measurements of Finite Samples with an Edge Diffraction Correction*

❖ **2015 Zhongzheng Liu, Texas A&M University**

*Acoustic Streaming around a Spherical Microparticle/Cell under Ultrasonic Wave Excitation*

❖ **2015 Rui He, University of Kentucky**

*Simulation of Airborne Paths using Frequency Based Substructuring*

❖ **2015 Seongil Hwang, Texas A&M University**

*Ground Monitoring of Bottom Hole Assembly Vibration in Drill String System using Acoustic Transfer Functions and Hybrid Analytical/Two-Dimensional Finite Element Method*

❖ **2016 Tongyang Shi, Purdue University**

*The Use of Wideband Acoustical Holography for Noise Source Visualization*

❖ **2016 Jiawei Liu, Purdue University**

*Noise Source Identification Based on an Inverse Radiation Mode Procedure*

❖ **2016 Shu Jiang, Texas A&M University**

*High-Resolution Ultrasonic NDE Imaging Method with Virtually Expanded Circumferential Aperture in Small-Diameter Cylindrical Oil/Gas Pipes*

❖ **2016 Gil Jun Lee, University of Cincinnati**

*Design of a Squeak Test Apparatus Based on a Modified Sprag-Slip Mechanism*

❖ **2016 Kamil Kocak, Georgia Institute of Technology**

*Analytical Modeling of a Single Hybrid Particle Impact Damper under Periodic Impulse Excitation*

❖ **2017 Trinoy Dutta, Michigan State University**

*Performance of Hard Disk Drives in High Noise Environments* (also winner of prize for publication in Noise Control Engineering Journal - \$500)

❖ **2017 Weonchan Sung, Purdue University**

*Descriptors of Sound from HVAC&R Environments*

❖ **2017 Micaela M. Thiery, Michigan Tech University**

*Use of CNT Thin-film Assemblies as Microphones through Hot-film Anemometry*

❖ **2017 Maxwell Toothman, Georgia Institute of Technology**

*Performance Evaluation of a Syntactic-foam Water Hammer Arrestor*

❖ **2017 Nan Zhang, University of Kentucky**

*Notes on Scale Modelling of Acoustic Scattering Problems*

## Classic Papers in Noise Control Engineering

This is a presentation award given at North American InterNoise or Noise-Con conferences. Students can select from a list of seminal noise control papers and present these to discuss the original work, its significance in modern noise control theory and practice and their own work in the area addressed by the original paper

❖ **2012 Michael Hayward, Purdue University**

*Overview of Hunt, Beranek and Maa's 1939 paper on "Analysis of Sound Decay in Rectangular Rooms"*

❖ **2012 Ryan Schultz, Purdue University**

*Overview of Beranek & Work's 1949 Paper on "Sound Transmission through Multiple Structures Containing Flexible Blankets"*

❖ **2013 Guohua Sun, University of Cincinnati**

*Overview of Olson H. and May E.'s 1953 paper on "Electronic Sound Absorber"*

❖ **2014 Daniel Woods, Purdue University**

*Overview of Dr. L. L. Beranek's 2006 paper on Analysis of Sabine and Eyring equations and their application to concert hall audience and chair absorption*

❖ **2015 Yangfan Liu, Purdue University**

*Overview of Paul E. Sabine's 1931 Paper: A Critical Study of the Precision of Measurement of Absorption Coefficients by Reverberation Method*

❖ **2016 Daniel Carr, Purdue University**

*Revisiting Applegate and Croker's 1976 NCEJ paper: Reducing the Noise of a Rotary Lawn Mower Blade*

❖ **2017 Yutong Xue, Purdue University**

*Overview of J.B. Moreland's 1976 paper on Controlling Industrial Noise by means of Room Boundary Absorption*

## **Leo Beranek Student Medal for Excellence in Noise Control Studies**



Established by INCE/USA and the INCE Foundation in 2010 to recognize excellence in the study of noise-control by undergraduate and graduate students at academic institutions in North America with courses in, or related to, noise-control engineering including practical applications.

### **Inaugural Leo Beranek Student Medal Recipients:**

- ❖ **2011 Clinton R. Fleming, University of Hartford**

*Acoustic detection of breakthrough during laser and EDM drilling of gas turbine blades*

- ❖ **2011 Daniel R. Hendricks, Brigham Young University**

*Insertion loss modeling for enclosures*

- ❖ **2011 Jeffery M. Fisher, Brigham Young University**

*Development of a pseudo-uniform structural quantity for use in active structural acoustic control*

- ❖ **2011 Greg Chatlos, University of Cincinnati**

*Acoustic testing to identify noise sources and transmission path for cooling fans and pumps of CT (Computed Tomography) scanners*

- ❖ **2011 Brent W. Rudd, University of Cincinnati**

*Active tonal and broadband noise control for magnetic resonance imaging systems*

- ❖ **2011 Patrick McPherson, Georgia Institute of Technology**

*Passive and active impulse response techniques*

❖ **2011 Timothy Hsu, Georgia Institute of Technology**

*Hospital acoustics: Occupant outcomes and potential interventions*

❖ **2011 Dakota Moses Kelley, University of Nebraska - Lincoln**

*Correlation of subjective qualities of noise (like rumble, roar, hiss) with objective metrics from assorted indoor noise criteria ratings (such as NCB and RC)*

❖ **2011 Caleb Frederick Sieck, University of Nebraska – Lincoln**

*Control of sound transmission through an open window into a room*

❖ **2011 Ron Taulbee, The Ohio State University**

*Multi-Axial stiffness properties of automotive bushings*

❖ **2011 Aydin Gunduz, The Ohio State University**

*Structure-borne noise transmission through double row angular contact ball bearings*

❖ **2011 Matthew G. Blevins, Purdue University**

*Classroom acoustics in the developing world*

❖ **2011 Sarah M. McGuire, Purdue University**

*History of the development of transportation noise annoyance metrics, how knowledge of sound sources affects judgments of annoyance, and the logistics of developing an aircraft noise survey database*

❖ **2011 Jinghao Liu, University of Kentucky**

*Advanced studies on series acoustic impedance*

**2012 Recipients:**

❖ **2012 Aaron M Lesky, University of Hartford**

*Muffler design for NASA Orion space crew module under significant material constraints and performance requirements*

❖ **2012 Brett J. Seward, Purdue University**

*Theater sound and ultrasonic detection of voids in concrete*

❖ **2012 Adam Hehr, University of Cincinnati**

*Gas turbine engine pressure sensor controller improvement*

- ❖ **2012 James R. Cottrell, University of Nebraska - Lincoln**

*The effects of absorptive material placement on classroom acoustics*

- ❖ **2012 Chandana Ramitha Edirisinghe, Georgia Institute of Technology**

*Water hammer suppression using voided urethane and silicone*

- ❖ **2012 Joseph Plattenburg, Ohio State University**

*Development of new health monitoring procedures for rolling element bearings based on stiffness and damping matrix calculations and vibration experiments*

- ❖ **2012 Jie Duan, University of Cincinnati**

*Active control of vehicle powertrain and road noise*

- ❖ **2012 Limin Zhou, University of Kentucky**

*Airborne path attenuation of partial enclosures, validation of a low order model to predict combustion oscillations, and sensitivity of using incompatible BEM meshes in muffler analysis*

- ❖ **2012 Jonathan Botts, Rensselaer Polytechnic Institute**

*Bayesian filter design for time-domain impedance representation in acoustic finite difference methods*

- ❖ **2012 Carl R. Hart, University of Nebraska – Lincoln**

*Numerical simulations of applying active noise control on top of noise barriers to improve their performance and improved sound propagation prediction model which includes diffraction*

- ❖ **2012 Nicholas E. Earnhart, Georgia Institute of Technology**

*Modeling and validation of a syntactic foam lining for noise control devices for fluid power systems*

- ❖ **2012 Osman Taha Sen, Ohio State University**

*Dynamics of a speed-dependent friction-induced torque in non-linear brake system*

- ❖ **2012 Tyler P. Dare, Purdue University**

*Tire/pavement interaction noise including research on fundamental physical mechanisms involved*

## **2013 Recipients:**

### **UNDERGRADUATE**

❖ **2013 Zachary R. Jensen, Brigham Young University**

*Modeling insertion loss of engine enclosures*

❖ **2013 Andrew Hubbard, University of Cincinnati**

*Pneumatic nail gun noise reduction project*

❖ **2013 Adam T. Buck, University of Nebraska - Lincoln**

*Research project identifying just noticeable difference in reverberation time, updating commonly accepted values*

❖ **2013 Matthew Edwards, Georgia Institute of Technology**

*Interdisciplinary work on sound transmission of aircraft noise in composite building envelopes*

❖ **2013 Rachel C. Parlock, University of Hartford**

*Long term sound measurements in hospital patient units, treatment recommendations and follow-up measurements*

❖ **2013 Tiffany R. Stahura, University of Hartford**

*Long term sound measurements in hospital patient units, treatment recommendations and follow-up measurements*

❖ **2013 Trevor N. Brown, Purdue University**

*Develop method for ultrasonic detection of voids in setting concrete*

❖ **2013 Eric Ricciardi, Ohio State University**

*Design and construction of scaled-down anechoic and reverberation chambers*

❖ **2013 Brittany Kay Notor, Pennsylvania State University**

*Elementary school design project – HVAC noise mitigation strategies and in-classroom surface treatments to get T60 values to acceptable levels*

## GRADUATE

### ❖ 2013 Alan T. Wall, Brigham Young University

*Dissertation: The Characterization of Military Aircraft Jet Noise using Near-field Acoustical Holography. First implementation of near-field acoustical holography to a full scale jet plume. Lead author for NCEJ and JASA publications, presentations/publications at InterNoise 2012, Noise-con 2013, AIAA*

### ❖ 2013 Glenn Pietila, University of Cincinnati

*Adaptive jury analysis method to improve commonly used Bradley-Terry model for sound quality assessment, including development of a nested artificial neural network to improve interpretation of paired comparison results*

### ❖ 2013 Xin Hua, University of Kentucky

*TL modeling of diesel particulate filters, developing backings for microperforated panels to optimize absorption and practical considerations in the two-load measurement method for determining muffler/silencer transmission loss*

### ❖ 2013 Zhao Peng, University of Nebraska - Lincoln

*Study of noise effect on speech comprehension of native English speakers and ESL speakers*

### ❖ 2013 Hongdan Tao, Purdue University

*More versatile numeric method to calculate sound propagation in a complex outdoor environment; Thesis "A hybrid parabolic equation/finite element approach for predicting sound propagation over porous interfaces"*

### ❖ 2013 Jared Liette, Ohio State University

*Active engine mount project to provide 10 dB noise reduction; thesis study Interaction between Multiple Active Structural Paths in a Vibratory Source-Path-Receiver System*

### ❖ 2013 Andrew W. Christian, Pennsylvania State University

*Study on minimizing impact of military aircraft noise on communities near air bases, incorporating evolutionary algorithm approach to flight paths to determine minimal impact to surrounding population*

### ❖ 2013 Samuel Clapp, Rensselaer Polytechnic Institute

*Thesis: Applying Multi-Channel Microphone and Loudspeaker Systems to 3-D Sound Field Analysis and Perceptual Evaluation of Concert Halls; design/construction of 16 channel ambisonics microphone*

❖ **2013 Shima Shahab, Georgia Institute of Technology**

*Thesis “Transient Numerical Analysis of Sound Radiation from a Partially Submerged Cylindrical Pile” - first structural acoustics, time-domain numerical model to predict underwater noise radiated from a cylindrical construction pile under impact loading and surrounded by multiple layers of fluid and sediments*

❖ **2013 Alan Thomas Wall, Brigham Young University**

Characterization of Military Aircraft Jet Noise using Near-field Acoustical Holography

**2014 Recipients:**

**UNDERGRADUATE**

❖ **2014 Jazmin Myres, Brigham Young University**

*Creation of complex partial fields through overlapping, scan-based pressure measurements*

❖ **2014 Alexandra Maddox, University of Cincinnati**

*Predicting pressure between the vocal folds using Bernoulli’s equation*

❖ **2014 Michael Ippolito, Georgia Institute of Technology**

*Development of removable, temporary tuned mass/shot mass damper treatment*

❖ **2014 Adam Lawrence Paul, University of Hartford**

*Contribution of Floor Treatment Characteristics to Background Noise Levels in Health Care Facilities*

❖ **2014 David A. Arena, University of Hartford**

*Contribution of Floor Treatment Characteristics to Background Noise Levels in Health Care Facilities*

❖ **2014 Yutong Xue, Purdue University**

*Design guidelines for new generation micro-perforated sound absorbers*

❖ **2014 John A. Scheick, Ohio State University**

*Radiated Gear Noise from Multi-Mesh Parallel Axis Gears*

❖ **2014 Matthew Todd Neal, Penn State University**

*Geothermal Redesign of the Gage Building*

## GRADUATE

- ❖ **2014 Daniel R. Marquez, Brigham Young University**

*Estimating the acoustic power of sources in nonideal enclosures*

- ❖ **2014 Guohua Sun, University of Cincinnati**

*Active Control of Impact Acoustic Noise*

- ❖ **2014 Joonhee Lee, University of Nebraska – Lincoln**

*Application of Assorted Tonality Metrics to Human Annoyance Thresholds of Tones in Noise*

- ❖ **2014 Bao N. Tong, Purdue University**

*Propagation of Noise from En-Route Aircraft*

- ❖ **2014 Michael D. Krak, Ohio State University**

*Transient Behavior of Torsional Systems with Multiple Clearance Nonlinearities*

- ❖ **2014 Micah R. Shepherd, Penn State University**

*Structural-acoustic optimization of structures excited by turbulent boundary layer flow*

- ❖ **2014 Cameron Jeff Fackler, Rensselaer Polytechnic Institute**

*Bayesian model selection for analysis and design of multilayered sound absorbing materials using transfer function impedance method*

- ❖ **2014 Ashwin Thomas, Georgia Institute of Technology**

*Simulated and Laboratory Models of Aircraft Sound Transmission in Residences*

## 2015 Recipients:

## UNDERGRADUATE

- ❖ **2015 Christopher J. Cutler & Xin Yan Kevin Zheng, University of Hartford**

*Statistical assessment of road traffic noise by using time-history patterns and long-term noise measurements*

- ❖ **2015 Christopher Kezon, Columbia College Chicago**

*Acoustical Analysis of St. Stephen's Church*

❖ **2015 Xianpai Zheng , Ohio State University**

*An independent study that attempts to improve vibration isolation effectiveness of electric vehicle powertrains*

**GRADUATE**

❖ **2015 Pegah Aslani, Brigham Young University**

*Active Control of Sound Radiated From Cylindrical Shells*

❖ **2015 Rajavel Balaguru, Stevens Institute of Tech.**

*Acoustical Studies on Corrugated Tubes*

❖ **2015 Matthew G. Blevins, University of Nebraska, Lincoln**

*Optimizing Transmission Loss of Membrane-Type Acoustic Metamaterials*

❖ **2015 Philip Andrew Feurtado, The Penn. State University**

*Quiet structure design using embedded acoustic black holes*

❖ **2015 Luke Fredette, Ohio State University**

*Dynamic Analysis of Hydraulic Bushings with Measured Nonlinear Compliance Parameters*

❖ **2015 Yitian Zhang, University of Kentucky**

*Assessing the Effects of Impedance Modifications using the Moebius Transformation*

**2016 Recipients:**

**UNDERGRADUATE**

❖ **2016 Joel Burns, The Ohio State University**

*Development of a Model-Based Exhaust Isolation System Design Procedure with a Focus on the Interfacial Dynamics*

❖ **2016 Anna Catton, Michigan Tech University**

*Design of a new drive speaker system for extension of low frequency diffuse field in a reverberant test chamber*

- ❖ **2016 Sean Hughes, University of Cincinnati**

*Acoustics*

## **GRADUATE**

- ❖ **2016 Troy M. Bouman, Michigan Tech University**

*True efficiency and harmonic distortion of carbon nanotube thin-film loudspeakers*

- ❖ **2016 Tao Feng, University of Cincinnati**

*Advanced Active Control of Vehicle Powertrain and Road Noise*

- ❖ **2016 Joseph A. Plattenburg, The Ohio State University**

*Analytical Vibration Models For Plates and Shells with Combined Active and Passive Damping*

- ❖ **2016 Peng Wang, University of Kentucky**

*Impedance-to-Scattering Matrix Method for Large Silencer Analysis*

## **2017 Recipients**

### **UNDERGRADUATE**

- ❖ **2017 Brenna Boyd, University of Nebraska**

*Measurements and player surveys of crowd noise levels during college hockey games*

- ❖ **2017 Anna Elefante, University of Hartford**

*Towards Using Acoustic Waves as a Therapeutic Tool for Osteogenic Differentiation*

- ❖ **2017 Caleb B. Goates, Brigham Young University**

*Bandwidth extension of acoustic beamforming using phase unwrapping and array interpolation*

- ❖ **2017 Lauren Seibert, University of Cincinnati**

*Sound power ranking of circular saw blades*

- ❖ **2017 Luca Shearer, University of Hartford**

*Towards Using Acoustic Waves as a Therapeutic Tool for Osteogenic Differentiation*

❖ **2017 Weimen Thor, Purdue University**

*A desktop procedure for measuring the transmission loss of automotive door seals*

❖ **2017 Stephania Vaglica, Michigan Tech**

*Evaluating surrogate materials for carbon nanotube thermophone speakers*

**GRADUATE**

❖ **2017 Mahsa Asgarisbet, Michigan Tech University**

*Measurement of carbon nanotube loudspeaker source plane characteristics using nearfield acoustic holography*

❖ **2017 Rui Cao, Purdue University**

*Wave propagation in tires with an emphasis on in-plane shearing modes*

❖ **2017 Blaine M. Harker, Brigham Young University**

*Analytical source models of the noise radiated by military jet aircraft*

❖ **2017 Gil Jun Lee, University of Cincinnati**

*Design and Analysis of a Novel Squeak Test Apparatus Developed for Objective Rating of Squeak Propensity and Its Application*

❖ **2017 Kangping Ruan, University of Kentucky**

*Advanced Studies on Computing Sound Attenuation through HVAC Ductwork using Simulation and Scale Modeling*

## Laymon N. Miller Award for Excellence in Acoustical Consulting



### ❖ 2015 William J. Cavanaugh

As a member of the acoustical consulting community who embodies the qualities of the late Laymon N. Miller — teacher, scientist, innovator—and who has practiced acoustical consulting in an exemplary manner over a sustained period of time. Such that the quality of life is significantly enhanced.



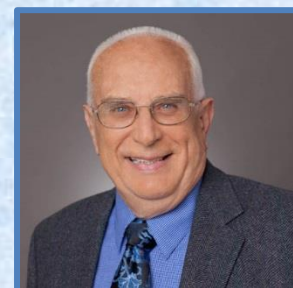
### ❖ 2016 James D. Barnes

Decades of exemplary acoustical consulting and professional engineering services making quieter environments on domestic and international projects for industry, governments, and communities.



### ❖ 2017 George P. Wilson

Decades of exemplary leadership, mentoring, and innovation in acoustical consulting, particularly in the areas of rail and building vibration isolation resulting in thousands of people who can now live and work near rail lines without suffering from excessive levels of noise, ground-borne noise, or perceptible vibration and can enjoy the quietest passages of symphonic music without the distraction of a passing train.



## Michiko So Finegold Award



In memory of our friend, colleague, and contributor to our profession. For graduate students and young professionals in the USA, who are studying in the fields of noise control engineering, noise effects research and development of noise policies, to facilitate their studies or travel to conferences.

- ❖ **2013 Neil Figurella, Ohio State University**
- ❖ **2013 Xin Hua, University of Kentucky**
- ❖ **2013 Vignesh Jayakumar, University of Cincinnati**
- ❖ **2013 Beom Soo Kim, Penn State University**
- ❖ **2013 Andrew McMullen, Purdue University**
- ❖ **2013 Selen Okcu, National Institute of Aerospace**
- ❖ **2013 Rachel Romond, Penn State University**
- ❖ **2013 Yitian Zhang, University of Kentucky**
- ❖ **2014 Rui Cao, Purdue University**
- ❖ **2014 Raef Cherif, Université de Sherbrooke**
- ❖ **2014 Seungkyu Lee, Purdue University**
- ❖ **2014 Guohua Sun, University of Cincinnati**
- ❖ **2014 Yawen Wang, University of Cincinnati**
- ❖ **2014 Junyi Yang, University of Cincinnati**
- ❖ **2015 Pasquale Bottalico, *Michigan State University***
- ❖ **2015 Seongil Hwang, *Texas A&M University***
- ❖ **2015 Nicholas Kim, *Purdue University***

- ❖ **2015 Yangfan Liu, *Purdue University***
- ❖ **2015 Ivano Ipsaro Passione, *Michigan State University***
- ❖ **2015 Hongdan Tao, *Purdue University***
- ❖ **2015 Bao Ngoc Tong, *Purdue University***
- ❖ **2016 Mahsa Asgarisabet, *Michigan Technological University***
- ❖ **2016 Tao Feng, *University of Cincinnati***
- ❖ **2016 Philip A. Feurtado, *The Pennsylvania State University***
- ❖ **2016 Tongyang Shi, *Purdue University***
- ❖ **2016 Peng Wang, *University of Kentucky***
- ❖ **2017 Keyu Chen, *University of Kentucky***
- ❖ **2017 Seongil Hwang, *Texas A & M University***
- ❖ **2017 Jungdong Li, *University of Kentucky***
- ❖ **2017 Kangping Ruan, *University of Kentucky***
- ❖ **2017 Weonchan Sung, *Purdue University***

## **Hallberg Foundation Award**

To support travel of undergraduate and graduate students to present their work in noise control engineering at conferences. Funded by a donation from The Elizabeth L. and Russell F. Hallberg Foundation facilitated by INCE-USA member Douglas F. Winker, Ph.D.

- ❖ **2014 Cameron Fackler, Rensselaer Polytechnic University**
- ❖ **2014 Tao Feng, University of Cincinnati**
- ❖ **2014 Philip Feurtado, The Pennsylvania State University**
- ❖ **2014 Sean Kilgallin, Georgia Institute of Technology**
- ❖ **2014 Nicholas Kim, Purdue University**
- ❖ **2014 Hoang Le, Tennessee Technological University**
- ❖ **2014 Wanlu Li, University of Kentucky**
- ❖ **2014 Yangfan Liu, Purdue University**
- ❖ **2014 Olivier Robin, Université de Sherbrooke**
- ❖ **2014 Peng Wang, University of Kentucky**
- ❖ **2014 Daniel Woods, Purdue University**
- ❖ **2014 Liuxian Zhao, University of Notre Dame**
- ❖ **2015 Ethan Bourdeau and Xin Yan Kevin Zheng, University of Hartford**
- ❖ **2015 Rui Cao, Purdue University**
- ❖ **2015 Daniel Carr, Purdue University**
- ❖ **2015 Phillip Andrew Feurtado, The Penn State University**
- ❖ **2015 Seungkyu Lee, Purdue University**
- ❖ **2015 Zhongzheng Liu, Texas A&M University**
- ❖ **2015 Yawen Wang, University of Cincinnati**
- ❖ **2015 Yitian Zhang, University of Kentucky**
- ❖ **2016 Shu Jiang, Texas A&M University**

- ❖ **2016 Hyunjun Shin, Purdue University**
- ❖ **2016 Gil Jun Lee, University of Cincinnati**
- ❖ **2016 Seongil Hwang, Texas A&M University**
- ❖ **2017 Mahsa Asgarisabet, Michigan Technical University**
- ❖ **2017 Mohammed S. Gholami, Université de Sherbrooke**
- ❖ **2017 Siddharth Parmar, Michigan Technical University**
- ❖ **2017 Miles Penhale, Michigan Technical University**
- ❖ **2017 Suraj Prabhu, Michigan Technical University**
- ❖ **2017 Micaela M. Thiery, Michigan Technical University**
- ❖ **2017 Nan Zhan, University of Kentucky**

