NHCA 38TH ANNUAL HEARING CONSERVATION CONFERENCE

THE ART OF HEARING CONSERVATION

February 21-23, 2013
St. Petersburg • FLORIDA
Hilton St. Petersburg Bayfront • 333 1st Street South
www.hearingconservation.org

Spectrum Supplement

3030 W. 81st Avenue, Westminster, CO 80031
Phone: 303-224-9022 • Fax: 303-458-0002
nhcaoffice@hearingconservation.org
We live in a LOUD World

Get More Noise Reduction

Introducing the new 3M™ Peltor™ Earmuffs X Series

Your hearing needs protection against a broad range of noise exposure. Whether you work in an environment with higher or lower noise levels, the 3M™ Peltor™ Earmuffs X Series have you covered. With advanced products ranging in attenuation from NRR 21 dB to NRR 31 dB, the X Series earmuffs protect against harmful noise exposure in almost every industrial setting.

Protection. The X5 has a NRR of 31 dB – the highest attenuation earmuff on the market.

Comfort. Electrically insulated (dielectric) twin headband reduces heat buildup while maintaining good fit and balance.

Design. Color-coded earcups allow for easy identification and selection tailored to your noise environment.

The Power to Protect Your World™

*Prolonged exposure to sounds at 85 dBA and higher increases risk of permanent hearing loss. OSHA regulation 1910.95 requires that hearing protection be available to workers with Time-Weighted Average (TWA) noise exposures at or above this level. Risk increases with sound level and longer exposure time.

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3M is a trademark of and The Power to Protect Your World is a service mark of 3M, and Peltor is a trademark of 3M Svenska AB, used under license in Canada.
### Map & Schedule At A Glance

**TUESDAY, FEBRUARY 19, 2013**

<table>
<thead>
<tr>
<th>MEETING</th>
<th>TIME</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSI Meeting</td>
<td>8:00 - 5:00 PM</td>
<td>Demens</td>
</tr>
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**WEDNESDAY, FEBRUARY 20, 2013**

<table>
<thead>
<tr>
<th>MEETING</th>
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<tbody>
<tr>
<td>CAOHC Training</td>
<td>8:00 - 4:00 PM</td>
<td>Bayboro</td>
</tr>
<tr>
<td>Scholarship Foundation Golf Outing</td>
<td>12:45 PM</td>
<td>Mangrove Bay Golf Club</td>
</tr>
<tr>
<td>Executive Council Meeting</td>
<td>4:00 - 6:30 PM</td>
<td>Williams</td>
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</table>

**THURSDAY, FEBRUARY 21, 2013**

<table>
<thead>
<tr>
<th>MEETING</th>
<th>TIME</th>
<th>ROOM</th>
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<tbody>
<tr>
<td>Registration</td>
<td>7:30 - 5:30 PM</td>
<td>Lobby II Foyer</td>
</tr>
<tr>
<td>Continental Breakfast</td>
<td>7:30 - 8:30 AM</td>
<td>Lobby II Foyer</td>
</tr>
<tr>
<td>Exhibit/Poster Setup</td>
<td>7:30 - 5:00 PM</td>
<td>Grand Bay South</td>
</tr>
<tr>
<td>BREAK</td>
<td>9:45 - 10:15 AM</td>
<td>Lobby II Foyer</td>
</tr>
<tr>
<td>Workshop #1: FULL DAY - The Basics</td>
<td>8:30 - 4:00 PM</td>
<td>St. Petersburg I</td>
</tr>
<tr>
<td>Workshop #2: FULL DAY - Music Education</td>
<td>8:30 - 4:00 PM</td>
<td>St. Petersburg II</td>
</tr>
<tr>
<td>Workshop #3: FULL DAY - Forensics</td>
<td>8:30 - 4:00 PM</td>
<td>St. Petersburg III</td>
</tr>
<tr>
<td>Workshop #4A &amp; 4B: Social Media</td>
<td>8:30 - 4:00 PM</td>
<td>Demens</td>
</tr>
<tr>
<td>Workshop #5A &amp; 5B: PSP Workshop</td>
<td>8:30 - 4:00 PM</td>
<td>Williams</td>
</tr>
<tr>
<td>Workshop #6A &amp; 6B: Vendor Workshop</td>
<td>1:00 - 4:00 PM</td>
<td>Demens</td>
</tr>
<tr>
<td>Workshop #7A: Hearing Aids</td>
<td>8:30 - 11:30 AM</td>
<td>Harborview</td>
</tr>
<tr>
<td>Workshop #7B: NIHL &amp; Emerging Therapeutics</td>
<td>1:00 - 4:00 PM</td>
<td>Harborview</td>
</tr>
<tr>
<td>Scholarship Foundation Awards Luncheon</td>
<td>11:30 - 1:00 PM</td>
<td>Tangerine South</td>
</tr>
<tr>
<td>BREAK</td>
<td>2:15 - 2:45 PM</td>
<td>Lobby II Foyer</td>
</tr>
<tr>
<td>Meet &amp; Greet (*By invitation only)</td>
<td>4:00 - 5:30 PM</td>
<td>Pool Area*</td>
</tr>
<tr>
<td>Exhibitor Reception</td>
<td>5:30 - 8:30 PM</td>
<td>Grand Bay South</td>
</tr>
<tr>
<td>Scholarship Foundation Board Meeting</td>
<td>8:30 - 9:30 PM</td>
<td>Hilton Training Ctr 3</td>
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*Subject to change

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**FRIDAY, FEBRUARY 22, 2013**

<table>
<thead>
<tr>
<th>MEETING</th>
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<tr>
<td>Registration</td>
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<td>Lobby II Foyer</td>
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<tr>
<td>Continental Breakfast</td>
<td>7:00 - 8:00 AM</td>
<td>St. Petersburg I, II, III</td>
</tr>
<tr>
<td>General Session</td>
<td>8:00 - 9:50 AM</td>
<td>Grand Bay South</td>
</tr>
<tr>
<td>BREAK</td>
<td>9:50 - 10:20 AM</td>
<td>St. Petersburg I, II, III</td>
</tr>
<tr>
<td>Keynote Speaker</td>
<td>10:20 - 10:55 AM</td>
<td>Grand Bay South</td>
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<tr>
<td>General Session</td>
<td>10:55 - 12:05 AM</td>
<td>St. Petersburg I, II, III</td>
</tr>
<tr>
<td>Networking Luncheon</td>
<td>12:05 - 1:20 PM</td>
<td>Grand Bay North</td>
</tr>
<tr>
<td>General Session</td>
<td>1:30 - 3:10 PM</td>
<td>St. Petersburg I, II, III</td>
</tr>
<tr>
<td>BREAK</td>
<td>3:10 - 3:40 PM</td>
<td>Grand Bay South</td>
</tr>
<tr>
<td>Student Meet &amp; Greet</td>
<td>5:25 - 6:30 PM</td>
<td>Pool Area*</td>
</tr>
<tr>
<td>Friday Night Event</td>
<td>6:30 - 9:30 PM</td>
<td>Dali Museum</td>
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**SATURDAY, FEBRUARY 23, 2013**

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<tr>
<td>Registration</td>
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<td>Lobby II Foyer</td>
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<tr>
<td>Breakfast Round Table Chats</td>
<td>7:45 - 8:45 AM</td>
<td>Grand Bay North</td>
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<tr>
<td>BREAK</td>
<td>9:00 - 11:30 AM</td>
<td>St. Petersburg I</td>
</tr>
<tr>
<td>BREAKOUT #1: Music</td>
<td>9:00 - 11:30 AM</td>
<td>St. Petersburg II</td>
</tr>
<tr>
<td>BREAKOUT #2: Prevention/Edu.</td>
<td>9:00 - 11:30 AM</td>
<td>St. Petersburg III</td>
</tr>
<tr>
<td>BREAKOUT #3: Military</td>
<td>9:00 - 11:30 AM</td>
<td>Williams/Demens</td>
</tr>
<tr>
<td>BREAKOUT #4: Current Issues</td>
<td>10:00 - 10:30 AM</td>
<td>Grand Bay South</td>
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<tr>
<td>Hosted Luncheon &amp; Awards</td>
<td>11:30 - 12:45 PM</td>
<td>Grand Bay North</td>
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<tr>
<td>Gasaway Lecture</td>
<td>12:55 - 1:40 PM</td>
<td>St. Petersburg I, II, III</td>
</tr>
<tr>
<td>General Session</td>
<td>1:40 - 2:20 PM</td>
<td>St. Petersburg I, II, III</td>
</tr>
<tr>
<td>BREAK</td>
<td>2:20 - 2:50 PM</td>
<td>St. Petersburg I, II, III</td>
</tr>
<tr>
<td>General Session</td>
<td>2:50 - 5:00 PM</td>
<td>St. Petersburg I, II, III</td>
</tr>
<tr>
<td>Executive Council Meeting</td>
<td>6:00 - 9:00 PM</td>
<td>Williams</td>
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**SUNDAY, FEBRUARY 24, 2013**

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<th>MEETING</th>
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<tr>
<td>Dangerous Decibels Workshop</td>
<td>7:00 - 5:00 PM</td>
<td>Harborview</td>
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**MONDAY, FEBRUARY 25, 2013**

<table>
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<tr>
<td>Dangerous Decibels Workshop</td>
<td>7:00 - 1:00 PM</td>
<td>Harborview</td>
</tr>
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</table>
Welcome to St. Petersburg, Florida!
On behalf of the NHCA Executive Council, our management firm Interactive Management, Inc, and the members of the 2013 Program Task Force, welcome to the 38th Annual Hearing Conservation Conference in St. Petersburg! St. Pete’s earns its nickname of “The Sunshine City” with a reputed 360 days of beautiful sunshine, which will certainly be a welcome reprieve for those of us from colder climates. It’s also known for its vibrant art scene, which ties in nicely with our conference theme, “The Art of Hearing Conservation”.

Nancy Gallighugh, our Conference Program Chair, and Jacquelyn Youde, Program Chair Elect, have been hard at work putting together a wide range of workshops, posters, and presentations. This year sees the return of the Basics and the PSP Workshop, a revisitation of the very popular Forensics, and the addition of new workshops on oto-therapeutics, hearing aids and the hearing-impaired worker, use of social media, and hearing loss prevention for musicians. Additionally, an afternoon workshop will highlight new products from our vendors, providing an in-depth look at developing technologies.

Our general session promises a very interesting two days, with a comprehensive look at fit-testing of hearing protection; examination of the effects of noise over a lifetime; environmental factors such as ototoxins and diet which may affect hearing; and what may be needed to bring OSHA regulations closer to best practices. On Saturday, the conference features four breakout tracks:

- Music and Hearing Conservation
- Prevention and Education
- Hearing Conservation in the Military
- Current Issues in Hearing Conservation

As always, the Program Task Force has brought in the experts in hearing conservation to share their expertise. The Keynote Speaker on Friday will be Dr. Sharon Kujawa, presenting “Noise Exposure: It’s More Dangerous Than We Thought!” Dr. Thais Morata will be presenting the Gasaway Lecture; her subject is “Hearing Health and the Grand Scheme of Things”.

In keeping with “The Art of Hearing Conservation”, the Friday Night Event will be held at the Dali Museum, just minutes from our hotel. This museum hosts the largest collection of Dali’s work outside of Europe. For those unfamiliar with Salvador Dali, he was a 20th century surrealist, with painting techniques influenced by the Renaissance masters, and mustache influenced by our own Mead Killion. During February, the museum will be featuring the “Much Ado About Shakespeare” exhibit, a display of artwork inspired by the works of William Shakespeare. Coincidence? (Note: the Program Task Force did consider the Van Gogh Museum; however, it was decided it was not an appropriate venue, as Van Gogh demonstrated he did not have a particularly good grasp of the need to protect and preserve one’s ears.)

The NHCA Scholarship Foundation will be holding their first ever Art Auction during the Friday Night Event. Works of art which have been created, commissioned, bought, or inherited by our members will be on display, and auctioned at the end of the night. Please take some time to browse the Silent Auction as well; donated items will be available for viewing and bidding throughout Saturday afternoon. The Scholarship Foundation will hold the NHCA Golf Tournament this year, at the Mangrove Bay Golf Club.

The funds raised through NHCA Scholarship Foundation events will directly support research and travel (to the conference) for graduate students focusing on applied and practical studies in hearing loss prevention. Attending the conference may help them establish valuable contacts and develop their interest in the field of hearing loss prevention. Participating in these fundraising efforts can help give a leg up to the next generation of hearing conservationists.

In addition to the Friday Night Event, we will offer networking opportunities and time to browse the exhibitor hall, meet our vendors, and check out new products. This is a great chance to reuniw with your colleagues and hearing conservation ‘family’, and to make some new friends. Our Program Task Force has made a particular effort to reach out to local non-members and give them an opportunity to find out what we’re all about; we’re looking forward to seeing some new faces.

For those of you who are first-time attendees, I encourage you to wear your “First-Timer” ribbon, and don’t be shy! We’re a boisterous group with a great deal of enthusiasm, and we like to hear from new people. If you have questions or are just feeling a bit overwhelmed, find a person with a lot of ribbons; chances are they can help you out. If you can’t find a person with a lot of ribbons, find me, but be warned: you will probably get volunteered for something!

Thanks to all our presenters, exhibitors, volunteers, and especially the Program Task Force for putting together our 38th Annual NHCA Conference. Welcome, thanks for joining us, and have a great time!

Laura Kauth, M.A., CCC-A
President

NHCA Scholarship Foundation
CALL FOR PROGRAM CHAIR ELECT!

The NHCA Program Task Force is seeking a Program Chair Elect for 2014-2015! This is a two-year position which allows for one year of training and one year to take on the role of Program Chair. This opportunity is very rewarding and we hope that you consider nominating yourself or someone who you think is eligible! There are several requirements in order to be considered for this position: 1.) you must be an NHCA member, 2.) you must have attended at least one annual conference and 3.) ideally we would like for you to have served at least one year on the Program Committee in some capacity. The responsibilities of this role are listed below. Please note that you will not be working alone!

ROLES & RESPONSIBILITIES:

Program Chair Elect Responsibilities - Year One
(March 13-15, 2014 | Las Vegas, NV)

- Develop the Thursday Workshop schedule.
- Establish breakfast chat sessions and hosts for each session.
- Recruit, coordinate and train conference volunteers.
- Take over planning efforts in the event the Program Chair is unable to perform duties.
- Work with NHCA staff to ensure that all speakers have provided the necessary forms for CEU approval.

Program Chair Responsibilities - Year Two
(February 19-21, 2015 | New Orleans, LA)

- Site visit to venue with NHCA staff.
- Determine conference theme & artwork selection.
- Solicit potential key speakers for Gasaway Lecture, Keynote, and Luncheon.
- Develop a review committee for all papers submitted.
- Establish conference schedule.
- Hold regular conference calls with committee.
- Coordinate with Scholarship Foundation Representative on fundraising activities.
- Assist in editing conference Program.
- Oversee all committee members and be sure everything is on track.

Program Task Force Members Include:

- Program Chair
- Program Chair Elect
- Exhibit/Sponsor Coordinator
- Director of Education
- Student/First Timer Reception Coordinator
- Scholarship Foundation Representative
- AV Coordinator
- NHCA Staff

Interested?
Please contact the NHCA office at 303-224-9022 or nhcaoffice@hearingconservation.org

“I had a very good experience being Program Chair Elect. The mentoring I received in the Program Chair Elect position laid the foundation for a smooth transition into the role of Program Chair without many of the potential glitches that can occur without adequate training or background knowledge. What most impressed me about being Program Chair Elect was the amount of support that was available from the Program Chair, Director of Education, President, Executive Director, etc. I had the idea in my head that I would be in this alone, but there was always someone to offer guidance. And I’ve been very pleasantly surprised to see that the support continues now that I’m Program Chair. This has been a very rewarding experience that has given me the opportunity to get involved in our organization as well as establish connections with our members.” - Nancy Galliugh, M.S., CCC-A, 2013 Program Chair (St. Petersburg, FL)

“The Program Chair Elect position has been a rewarding and fun experience. I’ve enjoyed being an active member in the NHCA, contributing to the annual conference and getting to know the (wonderful!) members. My initial fears were immediately alleviated when I found the Program Committee to be an effective and reliable support network. The behind-the-scenes action is full of laughter, making the actual planning an enjoyable experience! I am positive the incoming Program Chair Elect will have a valuable experience as well!” - Jacquelyn Youde, Au.D., CCC-A, 2013 Program Chair Elect

“In all the years that I have been a member, I never thought that I would volunteer to be Program Chair for a large conference. Yet, I did, and found it to be a most rewarding experience. They say a leader is only as good as the staff who surrounds that leader, and I can honestly say that both our Executive Director and newly created Program Chair Elect made my job easy. Since I have no research experience, I formed an ad hoc committee to review paper/poster submissions and rank them. In turn, my challenge was to plug in the chosen presenters into a scheduling matrix that was passed on to me by my predecessor Collen LePrell. As you can gather, there is plenty of help readily available. It’s a challenging position but one that does not take up all of your time. I found that conference activities started in earnest in August and slowly but progressively got busier right up to the conference. If you want to feel a real rush of accomplishment, I highly recommend this position to anyone.” - James Jerome, CCC-A, M.A., 2012 Program Chair (New Orleans, LA)

“Rule the world (of the NHCA conference that is)! Get to look at the submissions for presentation before anyone else. It is work, so surrender and enjoy it as the promptest, kindest and most competent help is at your hands. It is rewarding work and you will never experience the NHCA conferences the same way.” - Thais Morata, Ph.D., 2010 Program Chair (Orlando, FL)
Friday, February 22, 2013 | 6:30 p.m. - 9:30 p.m.

Dali Museum | 1 Dali Blvd | St. Petersburg, FL 33701

Transportation:
The Dali Museum is a five minute walk from the Hilton St. Petersburg Bayfront hotel. If you require transportation, the hotel shuttle service will be happy to drive you. Please make arrangements at the hotel front desk.

Schedule of Events:
6:20 p.m. - 6:30 p.m. | Meet in hotel lobby and walk to The Dali Museum
6:30 p.m. - 9:30 p.m. | Buffet dinner, cash bar, art auction, music & networking
*Guests are welcome to walk back to the hotel at any point in the evening.

About The Dali Museum:
The new Dali Museum is one of a kind. Dali’s art, at once classically-based and provocatively imaginative, resonates in the geometry of the concrete and the astonishing flow of glass from the fractured center of the building. The Dali Museum is iconic and a beacon of the arts scene in downtown St. Petersburg. Come sip coffee in our wi-fi ed Café Gala, stroll to the center of our garden labyrinth and take a deep breath. Entertain the possibility of the fantastical as the place and the art invite you to look beyond. This place is for your use; to question, to participate, to take joy in a new experience. To learn more: http://thedali.org/

American Academy of Audiology (AAA)
1.75 CEUs
The National Hearing Conservation Association is approved by the American Academy of Audiology to offer Academy CEUs for this activity. The program is worth a maximum of 1.75 CEUs. Acadmey approval of this continuing eductaion activity does not imply endorsement of the course content, specific products, or clinical procedures.

Continuing Education Board of the American Speech-Language-Hearing Association (ASHA)
1.65 CEU (full conference and workshops)
1.05 CEUs (conference only)
.6 CEUs (workshops only)

American Association of Occupational Health Nurses (AAOHN)
17.25 CNE Contact Hours
This activity has been submitted to the American Association of Occupational Health Nurses (AAOHN) for approval to award contact hours. The American Association of Occupational Health Nurses (AAOHN) is an accredited approver by the American Nurses Credentialing Center’s Commission on Accreditation.

Board of Certified Safety Professionals (BCSP)
This conference could qualify for BCSP COC points. See the BCSP COC Guide for details, available for download on the COC page: www.bcsp.org/coc.

American Board of Industrial Hygiene (ABIH)
0.5 Industrial Hygiene CM points per half day
4.0 total Industrial Hygiene CM Points

The National Hearing Conservation Association is approved by the Continuing Education Board of the American Speech-Language-Hearing Association (ASHA) to provide continuing education activities in speech-language pathology and audiology. See course information for number of ASHA CEUs, instructional level and content area. ASHA CE Provider approval does not imply endorsement of course content, specific products or clinical procedures.
### Conference Schedule

**Thursda**y, **February 21, 2013**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>7:30 AM - 5:30 PM</td>
<td>Registration and information desk open</td>
</tr>
<tr>
<td>7:30 AM - 8:30 AM</td>
<td>Continental breakfast</td>
</tr>
<tr>
<td>8:30 AM - 11:30 AM</td>
<td>Morning workshops</td>
</tr>
<tr>
<td>9:45 AM - 10:15 AM</td>
<td>BREAK</td>
</tr>
<tr>
<td>11:30 AM - 1:00 PM</td>
<td>Lunch (on your own)</td>
</tr>
<tr>
<td>11:30 AM - 1:00 PM</td>
<td>Scholarship Foundation Awards Luncheon *By invitation only</td>
</tr>
<tr>
<td>1:00 PM - 4:00 PM</td>
<td>Afternoon workshops</td>
</tr>
</tbody>
</table>

**AM and PM workshop offerings, registration required. See conference help desk regarding workshops if you did not pre-register for a workshop you wish to attend.**

### Full Day

1. **“Hearing Loss Prevention: The Basics”** | St. Petersburg I
   - Noise Measurement and Instrumentation
   - Tom Lloyd, B.S. - Associates in Acoustics, Inc. | USA
   - The Audiogram - How to Use it
   - James Jerome, M.A., CCC-A - Workplace Integra | USA
   - Hearing Loss Recordability Issues
   - Cindy Bloyer, M.S., CCC-A - Examinetics, Inc. | USA
   - Effective Hearing Protection
   - Theresa Schulz, Ph.D., CCC-A - Honeywell Safety Products | USA
   - Education and Motivation
   - Nancy Gallighugh, M.S., CCC-A - Kalamazoo RESA | USA
   - Hearing Conservation Regulations and HIPAA
   - Mary McDaniel, Au.D., CCC-A - Pacific Hearing Conservation, Inc. | USA

2. **“Hearing Conservation in Music Education”** | St. Petersburg II
   - Presenter: Kris Chesky, Ph.D. - University of North Texas | USA
   - Amyn Amlani, Ph.D. - University of North Texas | USA

3. **Forensics and Expert Witnessing- Emphasis for the Acoustician/Audiologist** | St. Petersburg III
   - Presenters: John Casali, Ph.D., C.P.E. - Virginia Tech, Auditory Systems Laboratory | USA
   - Dennis Driscoll, P.E., M.S., I.N.C.E. Bd. Cert. - Associates in Acoustics, Inc. | USA
   - Robert Dobie, M.D. - University of Texas Health Science Center at San Antonio | USA
   - Michael Seidemann, Ph.D. - Audiological Associates, Inc. | USA

### AM & PM

4(A). **“Attracting Business and Brand Awareness Through Social Media”** | Demens
   - Presenter: Daniel Golden, President & Chief Search Artist - Be Found Online | USA

5(A). **“Presenting Noise Survey and Noise Controls as They Pertain to PSP Members”** | Williams
   - Presenter: Tim Bailey - 3M Corporation | USA

5(B). **Follow Up Presentation of the 2012 PSP Survey**
   - Presenters: Sue Zurales, M.A., F-AAA - Mobilear, Inc. | USA
   - Bob Millier - Med Compass | USA

### PM Only

6(B). **Vendor New Product Workshop** | Bayboro
   - Presenters: See insert for details

### AM Only

7(A). **Hearing Aids & Worker Considerations** | Harborview
   - Presenter: Jill Gruenwald, Au.D. - Vanderbilt Bill Wilkerson Center | USA

### PM Only

7(B). **“Can’t I Just Take a Pill for That?” What Every Hearing Health Provider Needs to Know About NIHL and Emerging Therapeutics”** | Harborview
   - Presenters: Colleen Le Prell, Ph.D. - University of Florida | USA
   - Jianxin Bao, Ph.D. - Washington University School of Medicine | USA
   - Kathleen Campbell, Ph.D. - SIU School of Medicine | USA
   - Edward Lobarinas, Ph.D. - University of Florida | USA
   - Kevin Ohlemiller, Ph.D. - Washington University School of Medicine Otolaryngology | USA
   - Christopher Spankovich, Ph.D. - University of Florida | USA

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<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>2:15 PM - 2:45 PM</td>
<td>BREAK</td>
</tr>
<tr>
<td>4:00 PM - 5:00 PM</td>
<td>Committee Meetings and Networking</td>
</tr>
<tr>
<td>4:00 PM - 5:30 PM</td>
<td>NHCA Meet and Greet (Students, New Members and First Timers) *By invitation only</td>
</tr>
<tr>
<td>5:30 PM - 8:30 PM</td>
<td>Exhibits Open/Exhibitor’s Reception</td>
</tr>
</tbody>
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FRIDAY, FEBRUARY 22, 2013

7:00 AM - 5:30 PM
Registration and information desk open | Lobby II Foyer

7:00 AM - 8:00 AM
Continental Breakfast | Grand Bay Ballroom South

8:00 AM - 8:15 AM
Welcome and opening remarks | St. Petersburg Ballroom I, II, III
Laura Kauth, M.A., CCC-A, & Nancy Galliugh, M.S., CCC-A

8:15 AM - 9:30 AM
PANEL PRESENTATION: “Hearing Protector Fit Testing: Practical Considerations” | St. Petersburg Ballroom I, II, III
Laurie Wells, Au.D. - 3M Corporation | USA
James Jerome, M.S., CCC-A - Workplace INTEGRA | USA
Theresa Schulz, Ph.D. - Honeywell Safety Products | USA
Kathryn Crane Thielen, R.N., B.S.N., C.O.H.N. - Pepperidge Farm | USA

9:30 AM - 9:50 AM
“Implications if Your Life Depends on Your Hearing: The NRR vs the ASAF” | St. Petersburg Ballroom I, II, III
John Casali, Ph.D., C.P.E. - Virginia Tech, Auditory Systems Laboratory | USA

9:50 AM - 10:20 AM BREAK | Grand Bay Ballroom South

10:20 AM - 10:55 AM
Keynote Lecture: “Noise Exposure: It’s More Dangerous Than We Thought!” | St. Petersburg Ballroom I, II, III
Sharon Kujawa, Ph.D. - Harvard Medical School | USA

10:55 AM - 11:15 AM
“Interaction of Age and Noise-Exposure on Hearing Thresholds” | St. Petersburg Ballroom I, II, III
Susan Strauss, M.S. - University of Pretoria | South Africa

11:15 AM - 11:35 AM
“Method for Extending OSHA Age Correction Tables Beyond Age 60” | St. Petersburg Ballroom I, II, III
Nancy Wojcik, M.S. - ExxonMobil Biomedical Sciences, Inc. | USA

11:35 AM - 12:05 PM
NHCA Business Meeting | St. Petersburg Ballroom I, II, III

12:05 PM - 1:20 PM
Networking Luncheon | Grand Bay Ballroom North

1:30 PM - 1:50 PM
“Getting It Right (More Often)” | St. Petersburg Ballroom I, II, III
Doug Ohlin, Ph.D. - 3M Corporation | USA

1:50 PM - 2:10 PM
“The US Navy’s Noise Induced Hearing Loss Program” | St. Petersburg Ballroom I, II, III
Kurt Yankaskas - Office of Naval Research, Code 34 | USA

2:10 PM - 2:30 PM
“The Variability of Pure Tone Threshold Measurements” | St. Petersburg Ballroom I, II, III
Gregory Flamme, Ph.D. - Western Michigan University | USA

2:30 PM - 2:50 PM
“Evaluating the Operational Impact of Hearing Impairment” | St. Petersburg Ballroom I, II, III
Douglas Brungart, Ph.D. - Walter Reed National Military Medical Center | USA

2:50 PM - 3:10 PM
“Noise Induced Hearing Loss and the Working-Age Adult - A Personal Story” | St. Petersburg Ballroom I, II, III
Valerie Stafford-Mallis, M.B.A. - Alternative Communication Services (ACS), LLC | USA

3:10 PM - 3:40 PM BREAK | Grand Bay Ballroom South

3:40 PM - 4:00 PM
“Can You Hear Me Now? The Challenge of Determining Whether Workplace Noise Is Increasing or Decreasing Over Time” | St. Petersburg Ballroom I, II, III
Richard Neitzel, Ph.D., C.I.H. - University of Michigan | USA

4:00 PM - 4:20 PM
“Prevalence of Workers with Shifts in Hearing by Industry: A Comparison of Occupational Noise Exposure Regulation Criteria” | St. Petersburg Ballroom I, II, III
Elizabeth Masterson, Ph.D., C.P.H., C.O.H.C. - National Institute for Occupational Safety and Health | USA

4:20 PM - 4:40 PM
“Effectiveness of Interventions to Prevent Occupational Noise-Induced Hearing Loss, Update of a Cochrane Systematic Review” | St. Petersburg Ballroom I, II, III
Jos Verbeek - Finnish Institute of Occupational Health | Finland

4:40 PM - 5:25 PM
2013 Safe-in-Sound Excellence in Hearing Loss Prevention Awards | St. Petersburg Ballroom I, II, III
Thais Morata, Ph.D. - National Institute for Occupational Safety and Health | USA
Deanna Meinke, Ph.D. - University of Northern Colorado | USA
John Howard, Ph.D. - National Institute for Occupational Safety and Health | USA

5:25 PM - 6:30 PM
Break/Committee Meetings/Networking Time

5:25 PM - 6:30 PM
Student Meet & Greet (Students ONLY) | Pool Area (Subject to change)

6:30 PM - 9:30 PM
Friday Night Off-Site Event | Dali Museum

Exhibits Open & Posters Setup 8:30 AM to 6:30 PM | Grand Bay Ballroom South
### Conference Schedule

**Saturday, February 23, 2013**

**7:30 AM - 5:30 PM**  
Registration and Information Desk Open | Lobby II Foyer  
Breakfast / Round Table Chat Sessions | Grand Ballroom North

#### Breakout #1 - Music  
St. Petersburg I

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Moderator</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 AM - 9:20 AM</td>
<td>&quot;Accountability in Schools of Music Requires a Noise Exposure Assessment Standard&quot;</td>
<td>Kris Chesky, Ph.D. - University of North Texas</td>
</tr>
<tr>
<td>9:20 AM - 9:40 AM</td>
<td>&quot;Clinical Verification of Custom-Fitted Musician Earplugs: How Much Deviation from ‘Flat’ is Acceptable?&quot;</td>
<td>Brian Fligor, Sc.D. - Boston Children’s Hospital</td>
</tr>
<tr>
<td>9:40 AM - 10:00 AM</td>
<td>&quot;Effects of Recreational Noise on Otoacoustic Emissions and High Frequency Thresholds&quot;</td>
<td>Colleen Le Prell, Ph.D. - University of Florida</td>
</tr>
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</table>

#### Breakout #2 - Prevention/Education  
St. Petersburg II

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Moderator</th>
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</thead>
<tbody>
<tr>
<td>9:00 AM - 9:20 AM</td>
<td>&quot;Sound Check Australia: A Citizen Science Approach to Noise and Hearing Conservation Research&quot;</td>
<td>Elizabeth Beach, Ph.D. - National Acoustic Laboratories</td>
</tr>
<tr>
<td>9:20 AM - 9:40 AM</td>
<td>&quot;Effectiveness of a Brazilian Version of the ‘Dangerous Decibels’ Educational Program&quot;</td>
<td>Keila Knobel, Ph.D. - University of Campinas</td>
</tr>
<tr>
<td>9:40 AM - 10:00 AM</td>
<td>&quot;DiscovEARty Zone: Hearing Conservation Outreach from the American Academy of Audiology&quot;</td>
<td>Sharon Sandridge, Ph.D. - Cleveland Clinic</td>
</tr>
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#### Breakout #3 - Military  
St. Petersburg III

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Moderator</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 AM - 9:20 AM</td>
<td>&quot;A Tale of Two Fit-Test Case Studies&quot;</td>
<td>CAPT William Murphy, Ph.D. - CDC/National Institute for Occupational Safety and Health</td>
</tr>
<tr>
<td>9:20 AM - 9:40 AM</td>
<td>&quot;Pharmacologic Protection from Noise Induced Hearing Loss (NIHL) in the US Military&quot;</td>
<td>Kathleen Campbell, Ph.D. - University of Southern Illinois Medical Center</td>
</tr>
<tr>
<td>9:40 AM - 10:00 AM</td>
<td>&quot;Hearing Protection Device Field Attenuation Estimation System Round Robin Results&quot;</td>
<td>JR Stefanson, B.S., C.O.H.C. - United States Army Aeromedical Research Laboratory</td>
</tr>
</tbody>
</table>

#### Breakout #4 - Current Issues  
Williams/Demens

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Moderator</th>
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</thead>
<tbody>
<tr>
<td>9:00 AM - 9:20 AM</td>
<td>&quot;Specifying an ‘Appropriate’ Exchange Rate for Occupational Standards: Ear vs. Dosimeter&quot;</td>
<td>William Clark, Ph.D. - Washington University School of Medicine</td>
</tr>
<tr>
<td>9:20 AM - 9:40 AM</td>
<td>&quot;Specifying an Appropriate Exchange Rate for Occupational Standards: What Do the NIPTS Data Tell Us?&quot;</td>
<td>Robert Dobie, M.D. - University of Texas HSC at San Antonio</td>
</tr>
<tr>
<td>9:40 AM - 10:00 AM</td>
<td>&quot;The Exchange Rate and Noise-Induced Hearing Loss&quot;</td>
<td>Alice Suter, Ph.D. - Alice Suter and Associates</td>
</tr>
</tbody>
</table>

#### Breakout #5 - Other Issues  
Grand Bay Ballroom South

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Moderator</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00 AM - 10:30 AM</td>
<td>&quot;Effect of Hearing Loss and Other Factors Influencing Use of Hearing Protection by Trumpet Players&quot;</td>
<td>Mead Killion, Ph.D. - Etymotric Research, Northwestern University</td>
</tr>
<tr>
<td>10:30 AM - 10:50 AM</td>
<td>&quot;Bystander Impulse Noise Exposure From Small-Caliber Weapons: How Close Is Too Close?&quot;</td>
<td>CAPT William Murphy, Ph.D. - CDC/National Institute for Occupational Safety and Health</td>
</tr>
<tr>
<td>10:50 AM - 11:10 AM</td>
<td>&quot;Battle of the OAS: Measuring Effects of Acoustic Overexposure in Band Members and Directors&quot;</td>
<td>Siddhar Krishnamurti, Ph.D. - Auburn University</td>
</tr>
<tr>
<td>11:10 AM - 11:30 AM</td>
<td>&quot;Sound Exposure of Professional Orchestral Musicians During Solitary Practice&quot;</td>
<td>Ian O’Brien - University of Sydney</td>
</tr>
</tbody>
</table>

#### Breakout #6 - Military  
Williams/Demens

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Moderator</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:30 AM - 10:50 AM</td>
<td>&quot;Shipboard Noise Control on US Navy Aircraft Carriers&quot;</td>
<td>Jeffrey Komrower - Noise Control Engineering, Inc.</td>
</tr>
<tr>
<td>11:10 AM - 11:30 AM</td>
<td>&quot;Human Aural NON-Detectability&quot;</td>
<td>Kichol Lee, Ph.D. - Virginia Tech</td>
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</tbody>
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#### Breakout #7 - Current Issues  
Grand Bay Ballroom North

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Moderator</th>
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<tbody>
<tr>
<td>11:10 AM - 11:30 AM</td>
<td>&quot;Replacing Cells in the Inner Ear: The Path to a Regenerative Cure for Hearing Loss&quot;</td>
<td>Andrea Boidman, Executive Director - Hearing Health Foundation</td>
</tr>
<tr>
<td>Time</td>
<td>Event</td>
<td>Location</td>
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<tr>
<td>11:30 AM - 12:45 PM</td>
<td>Hosted Luncheon and Awards</td>
<td>Grand Bay Ballroom North</td>
</tr>
<tr>
<td>12:45 PM - 12:55 PM</td>
<td>Award Photos</td>
<td>Grand Bay Ballroom North</td>
</tr>
<tr>
<td>1:40 PM - 2:00 PM</td>
<td>“85/3 and Other Items for OSHA’s To-Do List”</td>
<td>St. Petersburg Ballroom I, II, III</td>
</tr>
<tr>
<td>2:00 PM - 2:20 PM</td>
<td>“Management Issues Related to Hearing Conservation in Music &amp; Entertainment”</td>
<td>St. Petersburg Ballroom I, II, III</td>
</tr>
<tr>
<td>2:20 PM - 2:50 PM</td>
<td>BREAK</td>
<td>Lobby II Foyer</td>
</tr>
<tr>
<td>2:50 PM - 3:10 PM</td>
<td>“Recommended Auditory Processing Test Battery for Workers with Occupational Exposures to Ototoxins”</td>
<td>St. Petersburg Ballroom I, II, III</td>
</tr>
<tr>
<td>3:10 PM - 3:30 PM</td>
<td>“Auditory Dysfunction Associated with Solvent Exposure”</td>
<td>St. Petersburg Ballroom I, II, III</td>
</tr>
<tr>
<td>3:30 PM - 3:50 PM</td>
<td>“Tinnitus”</td>
<td>St. Petersburg Ballroom I, II, III</td>
</tr>
<tr>
<td>3:50 PM - 4:10 PM</td>
<td>“Healthy Diet = Healthy Ears?”</td>
<td>St. Petersburg Ballroom I, II, III</td>
</tr>
<tr>
<td>4:10 PM - 4:30 PM</td>
<td>“Development of a Task-Based Noise Constraints Flight Rule for the International Space Station”</td>
<td>St. Petersburg Ballroom I, II, III</td>
</tr>
<tr>
<td>4:30 PM - 4:50 PM</td>
<td>“A Comparative Study of Changes in Firefighters Occupational Exposure to Noise”</td>
<td>St. Petersburg Ballroom I, II, III</td>
</tr>
<tr>
<td>4:50 PM - 5:00 PM</td>
<td>Closing Remarks</td>
<td>St. Petersburg Ballroom I, II, III</td>
</tr>
</tbody>
</table>

Exhibits Open & Poster Setup 7:45 AM to 12:00 PM | Grand Bay Ballroom South

2014 Workshop Submissions
Deadline: July 1, 2013

2014 Panel/Poster Submissions
Deadline: July 31, 2013

Submit at: www.hearingconservation.org
Available beginning April 2013
## 2013 Exhibitor Booth Listings & Map

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<th>Exhibitor</th>
</tr>
</thead>
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<td>1, 2, 3, 4</td>
<td>3M Corporation</td>
</tr>
<tr>
<td>5</td>
<td>G.R.A.S. Sound &amp; Vibration</td>
</tr>
<tr>
<td>6</td>
<td>American Industrial Hygiene Association (AIHA)</td>
</tr>
<tr>
<td>20</td>
<td>American Speech Language Hearing Association (ASHA)</td>
</tr>
<tr>
<td>21, 22</td>
<td>Benson Medical Instruments</td>
</tr>
<tr>
<td>14</td>
<td>Phonak</td>
</tr>
<tr>
<td>18, 19</td>
<td>CAOHC</td>
</tr>
<tr>
<td>23, 24</td>
<td>Westone Laboratories</td>
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<tr>
<td>29</td>
<td>CavCom</td>
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</tbody>
</table>

The map indicates the layout of the Grand Bay Ballroom North and South, with booth locations marked for each exhibitor. The layout includes sections for the main entrance to the exhibit hall, lobby, posters, conference registration, and food areas.
THANK YOU TO OUR 2013 SPONSORS

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3M

CONFERENCE SPONSOR | GOLD

HOWARD LEIGHT by Honeywell

EVENT SPONSOR | SILVER

Westone

VENDOR RECEPTION | BRONZE

Benson Medical Instruments

Eckel

Noise Control Technologies

Noise Barriers, LLC.

CAOHC

WORKSHOP SPONSORS

Treemetrics

G.R.A.S.

PHONAK life is on

CavCom

Sensidyne

Casella USA

AIHA

American Speech-Language Hearing Association

Caption Call Life is Calling
3M — The Power to Protect Your World. 3M provides cutting edge health and safety products for many industries, helping to protect workers’ health with reliable, comfortable safety solutions. Our industry leading personal protection equipment (PPE) has long offered safety products designed to meet the highest industry standards of excellence. 3M has brought together the leading names in hearing conservation: 3M™, E-A-R™, Peltor™ and Quest – to lead the world in Detection, Protection and Validation solutions. Visit 3M at www.3m.com/hearing where you can read articles, download hearing conservation materials, watch videos and learn about 3M™ hearing conservation solutions.

Howard Leight by Honeywell is a leading global provider of hearing conservation solutions and passive and intelligent hearing protection devices. As the founder of the HearForever® initiative, for over 30 years the company and its predecessors have pursued the prevention of occupational noise-induced hearing loss through innovation in hearing protection design, technology, performance and comfort, and the promotion of progressive Hearing Conservation Programs. Leading solutions include the highest attenuating Max® single-use earplug; patented Air Flow Control™ technology for optimal earmuff attenuation; QuietDose™ personal in-ear dosimetry; and the industry-changing VeriPRO® earplug fit testing system; and QUIETPRO intelligent protection for extreme noise environments. Visit us online at howardleight.com and hearforever.org.

Westone Laboratories has specialized in custom earplugs and earpieces as well as other products to protect and enhance hearing, facilitate communication, and support hearing care professionals since 1959. Our dedication to absolute quality, uncompromising service, and The Golden Rule have made us a world leader in our industry.

Benson Medical Instruments designs and manufactures occupational audiometers and hearing conservation software, focusing on seamless integration. The results are faster test speed, greater repeatability, unsurpassed ease of use, and powerful data transfer. We offer affordable solutions for a single clinic, as well as multi-site companies and mobile group testing.

CAOHC’s mission is to promote hearing loss prevention by enhancing the quality of occupational hearing loss prevention practices, with focus on providing oversight and support to those who train occupational hearing conservationists; the course directors, and those who supervise hearing conservationists and interpret problem audiograms; the professional supervisors.

Eckel Industries of Canada Limited product line includes audiometric booths, rooms for hearing evaluation and multiple room suites, featuring cam-locking panel construction.

Noise Barriers, LLC designs, fabricates and installs noise control products and systems. We specialize in noise control enclosures, barriers and sound absorption systems for architectural, educational, environmental and industrial applications. Our specialty is reducing noise levels to meet noise conservation guidelines. We also manufacture a full line of Audiometric Rooms.

The American Industrial Hygiene Association (AIHA) is the premier association of occupational and environmental health and safety professionals. AIHA’s members play a crucial role on the front line of worker health and safety. Members represent a cross-section of industry, private business, labor, government and academia. For more information: www.aiha.org

American Speech-Language-Hearing Association: Over 14,000 ASHA certified audiologists provide research, hearing conservation, diagnostic and rehabilitative services for individuals hearing loss and/or balance disorders.
WORKSHOP SPONSORS CONTINUED ($1,500)

Casella USA is one of the leading suppliers of Industrial Hygiene, Occupational Health and Environmental products. Casella provides clients with measuring instruments and other products related to the main business areas of environmental monitoring, health and safety applications and industrial hygiene topics.

CavCom is an audio technology company committed to designing products that prevent hearing loss and improve 2-way radio communications in high noise and/or respirator environments. Immediate 2-way communication is critical to enhance worker safety and improve product quality. CavCom recognizes that employees demand comfort, durability and personal protection.

G.R.A.S. Sound and Vibration: A broad range of standard measurement microphones, preamplifiers, transducers and accessories. Sound intensity microphones, outdoor monitoring microphones, artificial ears, ear and mouth simulators, CCP preamplifiers, calibrators, etc. The microphone-preamplifier combinations feature built in TEDS, microphone arrays. Microphone systems for measurement of low noise levels below the threshold of hearing.

Phonak Communication a leader in passive and active custom hearing protection with communication and ambient awareness, all verifiable with Safety Meter. www.phonak-communications.com

Tremetrics designs and manufactures a complete line of innovative hearing/health testing equipment including multimedia and microprocessor audiometers, space-saving mobile testing systems, hearing test booths and health database management software.

EDUCATION SPONSOR ($1,500)

American Academy of Audiology Foundation: Promoting philanthropy in support of research, education and public awareness in audiology and hearing science.

Hearing protection fit testing has never been easier.
VeriPRO makes it easy to get an accurate, real-world picture of your employees’ hearing protection effectiveness, capturing the individual Personal Attenuation Rating (PAR) of any earplug.
Through its one-on-one training, VeriPRO demonstrates the importance of proper use of hearing protection and provides the opportunity to select the appropriate earplug for each person — and becomes an integral part of a Hearing Conservation Program that stops noise-induced hearing loss.

Learn more about how VeriPRO can be a part of your Hearing Conservation Program at www.howardleight.com/veripro

Honeywell
The NHCA Lifetime Achievement Award was established in 1999 to recognize a lifetime of extraordinary accomplishments in hearing loss prevention as well as service to NHCA. These contributions, whether they have been in research, leadership, or mentorship, must have had a lasting impact on the hearing conservation field and the public, and must have demonstrated a lifetime commitment to hearing loss prevention. This tribute is rarely bestowed, with the initial award presented in 2000 to Dr. Donald C. Gasaway, Ph.D. and the second to Dr. Alice H. Suter, Ph.D., in 2008. It is with extreme gratitude and reverence that NHCA now recognizes Mr. Elliott H. Berger, M.S., INCE, Board Certified, with the NHCA Lifetime Achievement Award.

Elliott is a numbers guy, so keep in mind the number 30 with the units to be defined shortly.

First, the boring stuff. In 1974 Elliott received his Bachelor of Science in Physics from Rensselaer Polytechnic Institute, Troy, NY. Next, in 1976 he completed his Master of Science, majoring in Acoustics at North Carolina State University, Raleigh, NC, where he studied under Dr. Larry H. Royster, Ph.D.

Second, the fun stuff begins after his graduation from NCSU when he started as an Acoustical Engineer at E·A·R, supervising acoustical support for the Noise Control Products Group with hearing protection as a secondary responsibility. Next, he became Manager of Acoustical Engineering, with his principal focus redirected to hearing protection, up until E·A·R became Aearo Corporation in the 1990s, after which Elliott’s title was changed to Senior Scientist, Auditory Research. In 2010, after 3M acquired Aearo, he was promoted to Division Scientist, which is one of the most distinguished titles bestowed by 3M.

As a scientist, Elliott has consistently and steadfastly worked to assure and improve the protection of individuals from noise-induced hearing loss. His body of work is truly extraordinary, widely recognized as such, and of positive and lasting quality. By the numbers, Elliott has:

- 3 edited textbooks
- 14 book chapters
- 58 journal and professional publications, including conference proceedings
- 21 EARLog monographs
- 43 3M/ E·A·R contract research reports
- 480 3M/ E·A·R internal technical reports
- 37 magazine and lay articles and pamphlets
- 119 research and professional presentations
- 208 seminars taught
- 28 organized and/or chaired meetings and/or sessions
- 8 consulting projects and special demonstrations
- 6 adjunct faculty and committee positions
- 7 adult education, 3M Tech Forums, and community lectures
- 19 radio, television, and internet interviews
- 3 patents
- 7 Editorships or Co-Editorships of professional journals and noise-related publications
- 12 Technical Reviewer positions with professional journals and noise-related periodicals, which does not include the countless manuscripts he peer reviews
- 8 professional society memberships
- 2 Fellowships, one in AIHA and the other in ASA.

Elliott’s efficient and precise writing style continues to instruct us in the specifics of hearing loss prevention. Besides his brilliantly and skillfully crafted writings, Elliott is a prolific educator. His pedagogical achievements include 122 North American and 21 international hearing protection clinics or workshops with over 12,000 total attendees, plus an award-winning Professional Development Course, entitled Ramping Up Your Hearing Conservation Program, which is regularly taught at the annual American Industrial Hygiene Conference and Exposition. So, again by the numbers, over 36 years Elliott averages 30 significant contributions to the cause per year. What’s your number?

30 contributions/year is only an objective measure of Elliott’s lasting impact on our profession. This average pales in comparison to the seemingly unlimited number of times anyone in our field has simply picked up the phone and/or sent him an email. Usually our quest for answers ends after talking or e-talking to Elliott, who graciously and humbly takes time out of his day to help. Metaphorically speaking, Elliott has always been our profession’s search engine. He has arguably the most complete and organized filing system with more than 4,000 references that enables him to locate and provide any pertinent article upon demand.

As a dedicated professional, Elliott has untringly given back to the profession with his time. Since 1989 he has served on the NHCA Executive Council, including the offices of Vice-President in 1990-91, President in 1993, and Historian since 1996. He also chaired the 1990 and 1991 annual NHCA conference, and co-chaired the 1992 conference with Dr. John Franks and others at NIOSH. Elliott has been a member of the American Industrial Hygiene Association’s Noise Committee since 1984, serving as Chair in 1995-97. Elliott served 10 years (1997-2007) as a Board Member of the Council for Accreditation in Occupational Hearing Conservation, also serving as Chair of the Publications Committee (1999-2007). As noted in the list above, Elliott safeguards the scientific merit, accuracy, and integrity of much of the scientific literature, serving as Editor/Co-editor and Technical Reviewer on 19 noise-related publications.

Elliott has a strong passion and involvement in standards and regulatory activities. He has chaired ANSI WG11 on hearing protectors since 1985 (a.k.a., Elliott’s
Working Group), served as the United States representative on ISO TC43/WG17, also pertaining to hearing protectors, and has had substantial involvement with OSHA, MSHA, and EPA.

These professional activities and contributions have not gone unnoticed. In 1993, Elliott was the first recipient of NHCA’s Outstanding Hearing Conservationist Award, and subsequently the Michael B. Threadgill Award for Outstanding Leadership and Service. Now, with this Lifetime Achievement Award, Elliott completes the trifecta or Triple Crown of major NHCA awards, and he stands alone as the only person to do so. His accomplished, knowledgeable, and often clever presentation skills have also been duly recognized, as on three separate occasions he has received the Outstanding Lecture Award from both NHCA and AIHA.

There are even more contributions and accomplishments that could be included here. His work continues apace, and his legacy continues to grow. But there is no need to wait to publicly acknowledge his value to the entire hearing loss prevention community. Elliott H. Berger is as deserving of NHCA’s Lifetime Achievement Award as anyone could be. His annual significant-contribution number may be 30, but to all of us in hearing loss prevention, Elliott is #1.

Dennis P. Driscoll, P.E.
The Media Award was established to recognize the efforts of writers and/or producers of news features that serve to heighten public awareness of the hazards of noise. The NHCA Nominations Task Force is pleased to announce this year’s winner of the NHCA Media Award, Cara Buckley, Reporter, New York Times, for her article “What? Dangerous Decibels: Working or Playing Indoors, New Yorkers Face an Unabated Roar” published July 19, 2012.

Cara Buckley, Reporter - New York Times

In a series in the New York Times titled “What: Dangerous Decibels”, reporter Cara Buckley focused attention on the problem of excessively high sound levels in public venues. Her central article, “Working or Playing Indoors, New Yorkers Face an Unabated Roar”, takes an in-depth look at the problem of noise in recreational environments in New York City, examining actual noise levels, owner motivations behind the deliberate creation of loud environments for their patrons, and the effects on both customers and employees. Research and statements from experts in the field of hearing loss prevention were augmented and personalized by anecdotes from individuals employed in these loud environments.

Other features of the series included a look at regulation of noise exposure in the USA compared to other nations, and an interactive tour of the New York City soundscape.

The Times article drew nearly 300 comments from readers, most of them supportive. It was reprinted in various other publications in the United States and Canada, and spawned radio programs devoted to the problem of unsafe noise levels. While it is unclear whether the article has prompted employees, employers or legislators to demand that the volume be turned down, it has brought public attention to the threat of potentially hazardous noise in recreational environments and non-industrial workplaces.

About the author:
Cara Buckley was born in Ireland, moved to Canada as a child and attended graduate school at Columbia’s School of International and Public Affairs. She joined the New York Times staff in 2006 to work on the Metro Desk, where she has covered the NYPD, housing, youth culture and community issues. She has also reported from Iraq. Prior to joining the Times she worked at the Miami Herald, covering hurricanes and stories out of the Caribbean, including Haiti and the Florida Keys. Her article on unsafe noise levels was prompted by a managing editor’s long-simmering irritation over what seemed like increasing loudness in shops, gyms and restaurants.

The article can be accessed by going to:
For the third consecutive year, the International Journal of Audiology (IJA) and the National Hearing Conservation Association (NHCA) have partnered to publish a supplemental issue of IJA based on presentations at the NHCA annual conference. Publication of peer-reviewed scholarly papers has been one of NHCA’s strategic goals for the last decade. The partnership has created an on-going process that allows NHCA to achieve this important goal.

Selected presenters were invited to submit papers from the 37th Annual NHCA Conference which, as you remember was themed “The Cultures of Hearing Loss Prevention”. The consensus is clear: hearing conservation is not just for the workplace anymore, it should be integral to our culture.

The co-editors, Thais Morata and Theresa Schulz, would like to publicly express their appreciation to the authors and the peer reviewers for their dedication to making this supplement a success. The editors of IJA, Ross Roeser and Jackie Clark, have been personally instrumental in guiding the publication and making the supplement a reality.

Please join us in thanking the underwriters of this IJA Supplement, Anderson Consulting Associates; ASI Health Services; Council for Accreditation in Occupational Hearing Conservation (CAOHC); Industrial Hearing Testing; Hearing Health Science; HTI, Inc.; National Mobile Health Programs; MedCompass; Mobilear, Inc.; NHCA; NIOSH; the Safe-in-Sound™ Awards and especially Oticon for its generous grant.
The NHCA Scholarship Foundation is pleased to announce the recipients of our 2013 Student Conference Award. The award is available to graduate students who are actively pursuing a degree in a discipline related to hearing conservation and who are enrolled at least half-time in an accredited educational institution. Interested students complete a one-page application and send one letter of recommendation. Applications are then evaluated by the Student Conference Awards (SCA) subcommittee of the NHCA Scholarship Foundation Board. The SCA committee members for this year were Vishakha Rawool (Chair), Nancy Green, Susan Griest, Lidia Lee, Deanna Meinke, and Theresa Schulz. Recipients received a complimentary conference registration and a $800 stipend to cover travel and lodging expenses. The amount of awards in future years may be variable depending on the actual expenses incurred by the award winners.

Susan Strauss, Ph.D.
University of Pretoria
Dept. of Communication Pathology
4th Year

Jason Powell, Ph.D.
University of North Texas
Computer Science and Engineering
4th Year

Jessica Stamey, Au.D.
University of Kansas
Audiology
4th Year

Jonathan Andrew Piakis | University of Arizona | Mel and Enid Zuckerman College of Public Health
Research Project Entitled: “Evaluation of Smart-Phone Noise Monitoring Applications to Standard Noise Dosimeters in Mining Environments”

Jonathan Piakis is a Master’s candidate at the University of Arizona’s Mel and Enid Zuckerman College of Public Health in Tucson, Arizona. Throughout his studies, Jonathan has worked as the Health and Safety Specialist at the Steward Observatory Mirror Lab where he currently maintains their Hearing Conservation Program. Recently, Jonathan has turned his attention to the underrepresented community of Arizona miners, aiding in research concerning heat stress and advances in noise monitoring. His current research is entitled, “Evaluation of Smart-Phone Noise Monitoring Applications to Standard Noise Dosimeters in Mining Environments.”

The Student Research Award is designed to assist with student research studies such as special projects, theses or dissertations relating to hearing loss prevention/hearing conservation. This scholarship is awarded to undergraduate or graduate students focusing on applied/practical studies in hearing loss prevention/hearing conservation at regionally accredited U.S. institutions. The Student Research Award Committee has awarded one $5,000 scholarship for the 2012-2013 school year to Jonathan Andrew Piakis, University of Arizona. Congratulations!
THANK YOU STUDENT RESEARCH AWARD SPONSORS!

PLATINUM SPONSOR | DONATION OF $1,500

THANK YOU STUDENT CONFERENCE AWARD SPONSORS!

SILVER SPONSORS | DONATION OF $500

BRONZE SPONSORS | DONATION OF $250

SCHOLARSHIP FOUNDATION | GENERAL ENDOWMENT SPONSORS

Nancy Green, Au.D. Roger Angelelli, Ph.D. David Nelson, Ph.D.
Anonymous Donor Colleen Le Prell, Ph.D. Daniel Gauger, M.S.
Paul Ehrhand Michael Stewart, Ph.D. Marilyn Morgan, RN/C.O.H.C.
Pamela duPont, M.S., CCC-A Iris Langman, M.S.P.A., CCC-A
SAFE-IN-SOUND AWARD™ WINNERS

Dangerous Decibels Program
Oregon Health & Science University
Portland State University
University of Northern Colorado

SAFE-IN-SOUND AWARD™ Committee:
Thais C. Morata, Ph.D. - Safe-in-Sound Award™ Director
National Institute for Occupational Safety and Health - Cincinnati, OH
Deanna Meinke, Ph.D. - Safe-in-Sound Award™ Committee Chair
University of Northern Colorado - Greeley, CO

John Franks, Ph.D. - Lytlesound - Cincinnati, OH
Lee Hager - 3M - Portland, MI
James Lankford, Ph.D. - Northern Illinois University - DeKalb, IL
Rick Neitzel, Ph.D., C.I.H. - University of Michigan - Ann Arbor, MI
Scott Schneider, C.I.H. - Laborers’ Health and Safety Fund of North America - Washington, DC

Johns Manville
Johns Manville

Vulcan Materials Company
Vulcan Materials Company

Left to Right: Chad McDougal, C.I.H., CSP, Manager Occupational Health; Kelly Bailey, C.I.H., Corporate Director, Safety, Health and Environmental Services; Andrew Perkins, M.S., C.I.H., CSP, Corporate Industrial Hygienist.

Left to Right: William Hal Martin, Ph.D. Professor Otalaryngology, Public Health and Preventive Medicine OHSU, Program Director and Principal Investigator; Genna Martin, Research Assistant and Classroom Educator OHSU; Judy Sobel, Ph.D. Associate Professor Community Health PSU; Deanna Meinke, Ph.D. Associate Professor Audiology UNC; Susan Griest, MPH, Research Investigator OHSU; Linda Howarth, Program Manager, OHSU; Ga-Lo Vann, Research Assistant and Classroom Educator, OHSU.

Left to Right: Charles M. Carter, C.I.H., Manager Industrial Hygiene; Jeanne Virtue, C.I.H., Environmental, Health & Safety Manager - JMTC, WHO, WTC and NA Field Employees; Barb Menard, MSc, C.I.H., Sr Manager, Product Stewardship & Industrial Hygiene; James F. Smith, MA, RN, COHN-S, CPEA, CSP Manager of Occupational Health.

Left to Right: Chad McDougal, C.I.H., CSP, Manager Occupational Health; Kelly Bailey, C.I.H., Corporate Director, Safety, Health and Environmental Services; Andrew Perkins, M.S., C.I.H., CSP, Corporate Industrial Hygienist.
SAFE-IN-SOUND AWARD™ - AWARD PRESENTER

John Howard, Ph.D., Director - National Institute for Occupational Safety and Health | USA

John Howard is the Director of the National Institute for Occupational Safety and Health in the U.S. Department of Health and Human Services. Dr. Howard also serves as the Administrator of the World Trade Center Health Program. Dr. Howard was first appointed NIOSH Director in 2002 and served until 2008. In 2008 and 2009, Dr. Howard worked as a consultant with the U.S. Government’s Afghanistan Health Initiative in the U.S. Department of Health and Human Services. Prior to his appointment as Director of NIOSH in 2002, Dr. Howard served as Chief of the Division of Occupational Safety and Health in the California Labor and Workforce Development Agency from 1991 through 2002. Dr. Howard received a Doctor of Medicine degree from Loyola University of Chicago, a Master of Public Health degree from the Harvard School of Public Health, a Doctor of Law degree from the University of California at Los Angeles, and a Master of Law degree in Administrative Law and Economic Regulation from the George Washington University in Washington, D.C. Dr. Howard is board-certified in internal medicine and occupational medicine. He is admitted to the practice of medicine and law in the State of California and in the District of Columbia, and he is a member of the U.S. Supreme Court bar. He has written numerous articles on occupational health law and policy.

SAFE-IN-SOUND AWARD™ - RECIPIENT BIOGRAPHIES

William Hal Martin, Ph.D. - Dangerous Decibels Program, Oregon Health & Science University | USA

Billy Martin has a wide range of clinical and research interests spanning the fields of physics, hearing, neuroscience and population health. His training in the University of California system included audiology, speech science, linguistics, electrical engineering, medicine, neuroscience and computational physics. This was followed by a post doctoral fellowship at the Technion-Technical Institute of Israel in auditory neurophysiology. He is currently professor of Otolaryngology/Head & Neck Surgery and professor of Public Health & Preventive Medicine at the Oregon Health & Science University where he directs the OHSU Tinnitus Clinic, tinnitus research, intraoperative neurophysiological monitoring and the Dangerous Decibels international noise induced hearing loss and tinnitus prevention program with materials now in 35 countries. Billy has authored or co-authored over 550 scientific publications and/or presentations across his fields of interest. Presently, his research projects examine the neurobiology and treatment of tinnitus and community based hearing health promotion in Native American/Alaska Native children. In his free time he is an avid surfer and water polo player collecting medals in the U.S. Masters national water polo championships in 2010, 2011 and 2012.

Barb Menard, MSc, C.I.H. - Johns Manville | USA

Barb Menard is the Senior Manager of Product Stewardship and Industrial Hygiene at Johns Manville, a Berkshire Hathaway building products company headquartered in Denver, CO. Ms. Menard has been with JM since 1999, serving as EHS Manager for R&D and Division Health & Safety Manager prior to accepting her current position in 2008. Following a Bachelor of Science in Biochemistry from McMaster University, she completed a Master of Science in Industrial Hygiene from the University of Toronto in 1993 and became a Certified Industrial Hygienist in 2003. Barb is passionate about employee health and safety, and hearing conservation in particular, influenced in part by her fathers’ progressive hearing loss related to military service and then manufacturing settings. She has two beautiful children who worship their grandfather, even though he’s rarely been able to converse with them the way he’d like. Barb is committed to making sure today’s manufacturing operators have many fruitful conversations with their grandchildren.

Kelly Bailey, C.I.H. - Vulcan Materials Company | USA

Mr. Kelly F. Bailey is the Corporate Director of Safety, Health and Environment for Vulcan Materials Company. Vulcan Materials Company is a major producer of ready-mix concrete, hot mix asphalt and is the largest aggregate mining company in the United States. Mr. Bailey holds Bachelor of Science degrees in chemistry and biology from Lamar University in Texas and has worked in the field of occupational health for forty years, primarily in the chemical, construction, mining, and secondary metal recovery industries. He is an industrial hygienist certified by the American Board of Industrial Hygiene.

Andrew Perkins, M.S., C.I.H., C.S.P. - Vulcan Materials Company | USA

Andrew Perkins is Vulcan Materials Company’s Corporate Industrial Hygienist. He holds a BS in Computer Information Systems and a MS in Occupational Safety and Health from Murray State University in Murray Kentucky. He has been employed with Vulcan Materials Company located in Birmingham, AL since 2004, in the Corporate SHE Department. At Vulcan one of his primary duties is to manage company-wide information management systems that support the company’s SHE functions. Vulcan is the largest aggregates producer in the US and has a very strong culture of commitment to safety, health and the environment.
The Golden Lobe Award was established in 1995 to recognize task force members because of the importance of their work to the health and welfare of the association. Today it may be awarded to any member or task force making exceptional contributions to NHCA. Candidates are nominated by the Executive Council and Task Force Chairs. The award consists of a certificate and is presented at the annual conference. Where a task force is recognized, a single Golden Lobe Award will be issued to the Task Force Chair at the annual conference.

Kara Cave, Ph.D., Au.D. - US Army | USA
Nominations Committee Member
“In her first role on an NHCA task force, Kara stepped up right away and has been extremely responsive, reliable, and helpful.”

Nancy Gallighugh, M.S., CCC-A - Kalamazoo RESA | USA
Program Task Force Chair
“Nancy is an absolute delight to work with. She has a wonderful energy about her and stepped into the Program Task Force Chair position with enthusiasm and willingness. She has done an exceptional job at staying organized throughout the year to make the 2013 conference a huge success.”

Deanna Meinke, Ph.D - University of Northern Colorado at Greeley | USA
Safe-In-Sound™, IJA and Children’s Conference Task Forces
“Deanna has been a dedicated supporter with her work on the Safe-In-Sound™, IJA, and the Children’s Conference. The time she has put into these Task Forces has been invaluable to NHCA.”

Timothy Rink, Ph.D. - HTI, Inc. | USA
Immediate Past-President and Nominations Committee Member
“Tim has been a fantastic and very responsive resource in all matters pertaining to NHCA leadership this year.”

Jacquelyn Youde, Au.D., CCC-A - Vanderbilt Bill Wilkerson Center | USA
Program Task Force Chair Elect
“Jackie was fearless in her role as Program Chair Elect. She was excited to be a part of the planning process for NHCA’s largest event and continues her willingness to encourage new ideas to implement during the 2014 conference. We couldn’t have done it without her!”

A SPECIAL THANK YOU... JACK FOREMAN, TREMETRICS
Jack Foreman - Tremetrics | USA
NHCA would like to thank Jack Foreman, Tremetrics for all of his hard work and dedication taking conference photos each year! Jack is the man behind the camera and has been kind enough to volunteer his time and equipment to making photo memories come to life from year to year! We appreciate his volunteer efforts! If you see Jack, be sure to say thank you!
# Program Task Force & Volunteer Schedule

Organizing and running the conference is a big job and we couldn’t do it without our volunteers! Thank you to the individuals who are volunteering their time during the conference to help with registration, moderating and other event logistics. We truly appreciate your support!

## Thursday, February 21, 2013

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Volunteer</th>
<th>Timer</th>
<th>Microphone</th>
<th>Microphone</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 - 8:30 a.m.</td>
<td>Registration</td>
<td>Michelle Alexander</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>7:30 - 8:30 a.m.</td>
<td>Registration</td>
<td>Beth Cooper</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>7:30 - 9:00 a.m.</td>
<td>Registration</td>
<td>Paul Ehrhard</td>
<td>N/A</td>
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<td>N/A</td>
</tr>
<tr>
<td>7:30 - 9:00 a.m.</td>
<td>Registration</td>
<td>Alberto Behar</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td><strong>Time</strong></td>
<td><strong>Activity</strong></td>
<td><strong>Moderators</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALL DAY</td>
<td>The Basics</td>
<td>Nancy Gallighugh</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALL DAY</td>
<td>Music Education</td>
<td>Kris Chesky</td>
<td>Jeffrey Goldberg</td>
<td>John Allen</td>
<td>Cindy Bloyer</td>
</tr>
<tr>
<td>ALL DAY</td>
<td>Forensics &amp; Expert Witnessing</td>
<td>Dennis Driscoll</td>
<td>John Byram</td>
<td>Mary McDaniel</td>
<td>Cassie Ford</td>
</tr>
<tr>
<td>AM &amp; PM</td>
<td>Social Media</td>
<td>Dan Golden</td>
<td>Tim Rink</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AM &amp; PM</td>
<td>PSP Workshop</td>
<td>Tim Bailey/Carolyn Tolley</td>
<td>Cathy Porter</td>
<td>Tim Bailey</td>
<td></td>
</tr>
<tr>
<td>PM Only</td>
<td>Vendor Workshop</td>
<td>TBA</td>
<td>Paul Ehrhard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AM Only</td>
<td>Hearing Aids</td>
<td>Jill Gruenwald</td>
<td>Golf Tournament</td>
<td>Theresa Schulz</td>
<td>Mary McDaniel</td>
</tr>
<tr>
<td>PM Only</td>
<td>Can’t I Just Take A Pill</td>
<td>Colleen Le Prell</td>
<td>Tim Bailey</td>
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## Friday, February 22, 2013

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Volunteers</th>
<th>Timer</th>
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<th>Microphone</th>
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<tbody>
<tr>
<td>7:00 - 8:00 a.m.</td>
<td>Registration</td>
<td>Amanda Azman</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>7:00 - 8:00 a.m.</td>
<td>Registration</td>
<td>Alberto Behar</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>7:00 - 8:00 a.m.</td>
<td>Registration</td>
<td>Mary McDaniel</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>7:00 - 9:00 a.m.</td>
<td>Registration</td>
<td>Michelle Alexander</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Time</strong></td>
<td><strong>Activity</strong></td>
<td><strong>Moderators</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:00 - 10:00 a.m.</td>
<td>General Session</td>
<td>Jeffrey Goldberg</td>
<td>Beth Cooper</td>
<td>John Byram</td>
<td>Marjorie Grantham</td>
</tr>
<tr>
<td>10:30 - 12:00 p.m.</td>
<td>General Session</td>
<td>Laura Kauth</td>
<td>Dan Gauger</td>
<td>Alberto Behar</td>
<td>John Byram</td>
</tr>
<tr>
<td>1:10 - 3:00 p.m.</td>
<td>General Session</td>
<td>Laurie Wells</td>
<td>Ann-Christin Johnson</td>
<td>Sandy MacLean</td>
<td>Sarah Ervin</td>
</tr>
<tr>
<td>3:25 - 4:40 p.m.</td>
<td>General Session</td>
<td>Alice Suter</td>
<td>Amanda Azman</td>
<td>Mary McDaniel</td>
<td>Rachel Bou Serhal</td>
</tr>
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</table>

## Saturday, February 23, 2013

<table>
<thead>
<tr>
<th>Time</th>
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<th>Microphone</th>
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<tbody>
<tr>
<td>7:00 - 9:00 a.m.</td>
<td>Registration</td>
<td>John Byram</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Time</strong></td>
<td><strong>Activity</strong></td>
<td><strong>Moderators</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:00 - 11:30 a.m.</td>
<td>Breakout: Music</td>
<td>Bruce Kirchner</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>9:00 - 11:30 a.m.</td>
<td>Breakout: Prevention/Edu</td>
<td>Jeffrey Goldberg</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>9:00 - 11:30 a.m.</td>
<td>Breakout: Military</td>
<td>Marjorie Grantham</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>9:00 - 11:30 a.m.</td>
<td>Breakout: Current Issues</td>
<td>Laura Kauth</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>12:55 - 2:20 p.m.</td>
<td>General Session</td>
<td>Amanda Azman</td>
<td>Sarah Ervin</td>
<td>Cathy Porter</td>
<td>Ann-Christin Johnson</td>
</tr>
<tr>
<td>2:50 - 5:00 p.m.</td>
<td>General Session</td>
<td>Tim Rink</td>
<td>Rachel Bou Serhal</td>
<td>Sandy MacLean</td>
<td>Dan Gauger</td>
</tr>
</tbody>
</table>
Friday Night Event Scholarship Foundation Fundraisers:

**Live ART Auction**
The National Hearing Conservation Association Scholarship Foundation (NHCASF) announces our first ever “Art Auction” to be held February 22, 2013 at the Dali Museum in St. Petersburg, FL during our annual NHCA Conference Friday Night Event. You are invited and encouraged to donate art that you have created, commissioned, purchased, inherited or otherwise have legal possession of/rights to. All proceeds will go to the NHCASF and are tax deductible.

**Conference Fundraisers:**

**50/50 Split**
Donate to the 50/50 Split during the conference! 50% of the proceeds will benefit the NHCA Scholarship Foundation!

**SilentAUCTION**
Participate in the NHCA Scholarship Foundation’s SilentAUCTION, which will be held during the conference! The funds raised through this auction will directly support research and travel (to the conference) for graduate students focusing on applied and basic studies in hearing loss prevention (many of our current NHCA members were assisted by these stipends during their slim years as a grad student). Please bring your item(s) or certificate to the NHCA Conference Registration desk. The auction will be held in the exhibit hall throughout the conference and culminate on Saturday morning. The NHCA Scholarship Foundation is most appreciative of your contributions for this important event!

**Scavenger Hunt**
Discovering the Art of Hearing Conservation - Join your fellow NHCA colleagues in a scavenger hunt where each clue leads you to the Art of Hearing Conservation treasure at the end, and where your very small participation price will go directly to support the Scholarship Foundation. Along the way, you will uncover various treasures of hearing conservation and have fun in the process!

**Golf Tournament**
**Wednesday, February 20, 2013**
**Shot Gun Start: 12:45 PM**

**Location:**
Mangrove Bay Golf Club (5 mile drive from conference hotel)
875 62nd Avenue Northeast | St. Petersburg, FL 33702

**Cost:** $125/per person (includes golf cart & lunch) - *Clubs are limited and not guaranteed with onsite registration!

**Transportation:** Tim Bailey has coordinated volunteer drivers! Please plan to meet in the main lobby of the hotel at 12:00 PM!

The 18-hole “Mangrove Bay” course at the Mangrove Bay Golf Course facility in Saint Petersburg, Florida features 6,779 yards of golf from the longest tees for a par of 72 . The course rating is 71.2 and it has a slope rating of 119 on Bermuda grass.
### Thursday, February 21, 2013

**Workshop Presentations and Biographies**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 AM - 5:30 PM</td>
<td>Registration and information desk open</td>
<td>Lobby II Foyer</td>
</tr>
<tr>
<td>7:30 AM - 8:30 AM</td>
<td>Continental Breakfast</td>
<td>Lobby II Foyer</td>
</tr>
<tr>
<td>8:30 AM - 11:30 AM</td>
<td>MORNING WORKSHOPS</td>
<td>Rooms vary - see below</td>
</tr>
<tr>
<td>9:45 AM - 10:15 AM</td>
<td>BREAK</td>
<td>Lobby II Foyer</td>
</tr>
<tr>
<td>11:30 AM - 1:00 PM</td>
<td>Lunch (on your own)</td>
<td>Lobby II Foyer</td>
</tr>
<tr>
<td>11:30 AM - 1:00 PM</td>
<td>Scholarship Foundation Awards Luncheon *By invitation only</td>
<td>Tangerine South</td>
</tr>
<tr>
<td>1:00 PM - 4:00 PM</td>
<td>AFTERNOON WORKSHOPS</td>
<td>Rooms vary - see below</td>
</tr>
<tr>
<td>2:15 PM - 2:45 PM</td>
<td>BREAK</td>
<td>Lobby II Foyer</td>
</tr>
</tbody>
</table>

**FULL DAY WORKSHOP #1 - (8:30 a.m. - 4:00 p.m.)**

#### “Hearing Loss Prevention: The Basics (Noise Measurement)”
**Presenter: Tom Lloyd, B.S. - Associates in Acoustics, Inc. | USA**
This section provides an overview of using sound measurement instrumentation and methods to conduct a noise survey for evaluating employee exposure and identifying noise sources for control. Topics discussed include setup and use of a sound level meter and noise dosimeter, how to take measurements for a noise exposure survey, who is included in a hearing conservation program, and how to conduct a sound survey for noise control evaluation.

#### “Hearing Loss Prevention: The Basics (The Audiogram - How to Use It)”
**Presenter: James Jerome, M.A., CCC-A - Workplace Integra | USA**
The audiometric test is essentially the report card for the hearing loss prevention program. No worker’s hearing has ever been preserved or protected because he or she took a hearing test. How we use that hearing test, how we convey the information, how we track the data becomes critical to the program. This session will go beyond just looking for standard threshold shift. It will provide the technician with information about obtaining a valid result, and will offer the professional supervisor insight into follow-up strategies.

#### “Hearing Loss Prevention: The Basics (Hearing Loss Recordability Issues)”
**Presenter: Cindy Bloyer, CCC-A, M.S. - Examinetics, Inc. | USA**
Identification of work-related hearing loss has long been one of the most complicated and controversial areas of government-mandated injury/illness recordkeeping. Effective in 2000, MSHA provided a new definition of “reportable” hearing loss in its revised noise standard, Part 62. OSHA also defined new criteria for recording occupational hearing loss with its recent revision to 29 CFR 1904 (effective in 2003, with a separate Form 300 column in effect January 1, 2004). This workshop presentation will focus on the basic requirements of MSHA and OSHA recordkeeping regulations, as well as implications for professional review of audiograms and determination of work-relatedness. Although compliance with recordkeeping rules is important to the ultimate goal of tracking incidence of work-related hearing loss, emphasis will also be placed on best practices for an effective hearing loss prevention program.

#### “Hearing Loss Prevention: The Basics (Effective Hearing Protection)”
**Presenter: Theresa Schulz, Ph.D., CCC-A - Honeywell Safety Products | USA**
As hearing conservationists we can measure, assess, document, and counsel. However, when it comes to effective intervention, our primary tool, sometimes our only tool, is a hearing protector. Therefore it behooves us to become knowledgeable about the specification of hearing protection devices and their use in hearing conservation programs. This presentation will focus on identifying types of hearing protectors, regulatory requirements, appropriate fitting procedures and techniques, and the NRR rating system.

#### “Hearing Loss Prevention: The Basics (Education and Motivation)”
**Presenter: Nancy Gallighugh, M.S., CCC-A - Kalamazoo RESA | USA**
While the ideal solution to a noisy environment is to remove the noise, in many situations, it simply isn’t possible. When this is the case, it's not enough to rely solely on compliance with regulations to reduce risk. We need to educate employees thoroughly on the benefits of hearing conservation and the crucial steps they should take to safeguard their hearing. Employees must participate actively for hearing conservation to be successful; we need to engage and interest them in their own protection. Effective hearing conservation cannot be achieved without the combined efforts of employers, supervisors, and the employees themselves. By focusing on the reasons behind hearing conservation, and providing some different approaches, we can better reach these individuals to make them a part of the solution to preventable hearing loss.

#### “Hearing Loss Prevention: The Basics (Regulations and HIPAA)”
**Presenter: Mary McDaniel, Au.D., CCC-A - Pacific Hearing Conservation, Inc. | USA**
This portion of the workshop will provide attendees with an overview of the Health Insurance Portability and Accountability Act (HIPAA) as it relates to the hearing conservation provider, including recordkeeping, maintaining compliance, and available resources. Also discussed will be a summary of Hearing Conservation Regulations including recordability differences between MSHA and OSHA.
Hearing Conservation in Music Education | St. Petersburg II
Presenter: Kris Chesky, Ph.D. - University of North Texas | USA
Amyn Amiani, Ph.D. - University of North Texas | USA
The National Association of Schools of Music ratified a new health and safety accreditation standard in the fall of 2012 that mandates school music programs to fully inform students of hearing health hazards inherent in learning and performing music in an educational setting. This workshop is an outreach program designed to assist music educators, school administrators, and local health and safety professionals working in or with music programs understand and become accountable to these requirements. Emphasis is placed on increasing awareness among students and faculty through educational efforts, effective use local resources, and ways to understand, report, and respond to hazardous situations.

Forensics & Expert Witnessing- Emphasis for the Acoustician/Audiologist | St. Petersburg III
Presenter: John Casali, Ph.D., C.P.E. - Virginia Tech, Auditory Systems Laboratory | USA
Dennis Driscoll, P.E., M.S., I.N.C.E. Bd. Cert. - Associates in Acoustics, Inc. | USA
Robert Dobie, Ph.D., M.D. - University of Texas Health Science Center at San Antonio | USA
Michael Seidemann, Ph.D. - Audiological Associates, Inc. | USA
This full-day workshop was designed to introduce NHCA attendees to the practice of serving as an expert witness and/or resource consultant for court litigation, workers compensation cases, and governmental hearings. With a comprehensive set of 125 PowerPoint slides, as well as handouts on retainer agreements, regulations governing expert disclosure and reports, and other reference material, the presenters conveyed a broad spectrum of information ranging from business aspects of forensic consulting to case analysis and testimony. Examples from premises liability, products liability, hearing loss, workers compensation, and patent litigation were provided to illustrate salient aspects of the expert's role. So, if you want to...Learn how acoustics and audiology can provide: important input to juries and judges within the U.S. legal system? Learn the basics of serving as an expert witness in court? Experience the challenge of being cross-examined? Understand how to navigate (and survive) the discovery and litigation process in your capacity as an expert witness? Understand the basics of writing compelling, scientific reports for submission to court? Learn the basic "business" aspects of serving as an expert for court proceedings? Be introduced to the fundamentals of tort law? Be exposed to examples of the application of acoustics and/or audiology to cases involving: noise-induced hearing loss, warning signals as implicated in accidents, community noise annoyance, and intellectual property?

Attracting Business and Brand Awareness Through Social Media | Demens
Presenter: Daniel Golden, President, Chief Search Artist - Be Found Online | USA
Dan Golden, President of Be Found Online, will share the ways that you can join conversations on social media, build your reputation, and form relationships that will help your professional practice thrive. His presentation will teach you how to create an effective social media strategy, how to implement that strategy, and how to measure its results. Conversations are happening with or without you. Does your community recognize you as the "subject matter expert?" Being social is more than spreading content. Being social is improving lead generation through content that's valuable to your audience.

Presenting Noise Survey and Noise Controls as They Pertain to PSP Members | Williams
Presenter: Tim Bailey - 3M Corporation | USA
Clients of NHCA PSP members regularly ask the PSP to provide information about noise exposure. What do clients expect of the PSP in noise measurement? What quality/sufficiency standards should be met to provide useful noise exposure data? What is the role of the PSP in noise control? What training and qualification requirements should be applied to PSP staff providing this kind of information?

Follow Up Presentation of the 2012 PSP Survey
Presenter: Sue Zurales, M.A., F-AAA - Mobilear, Inc. | USA
Bob Millier - Med Compass | USA
This follow up session will involve Q&A on the following topics: 1.) Early warning STS; 2.) Best practices on mobile unit; 3.) DOT Issues; 4.) Keeping customers “for life”; 5.) More evaluation of hygiene/infectious controls; 6.) More OSHA interest and changes in interest/emphasis as we heard in open forum (2012); 7.) Educational Training on Mobile Unit; 8.) STS Determination for Log 300; 9.) Marketing Services; 10.) Improving HLP through fitting; 11.) Fit check systems; 12.) Counseling clients; 13.) Testing itinerate work force-UNROW issues; 14.) Concerns of “buying” the hearing loss; 15.) Motivation/Marketing to Clients – topic came up today re: Fit Testing; 16.) Record Retention: of HCP data — Do we have responsibilities to keep data for companies we no longer serve?; 17.) Making “Work Relatedness” judgments: Who? How?; 18.) Presbycusis Values after age 60 years. OPEN FORUM – Other Topics For Discussion: 1.) The use of genetic information as it is regulated with the GINA act. 2.) How to handle a Non-HCP group of workers exposed to impulse noise?
HALF DAY WORKSHOP #6(B) - P.M. ONLY (1:00 p.m. - 4:00 p.m.)
“Vendor New Product Workshop” | Bayboro
Presenters: See insert for details
Conference exhibitors will be hosting an educational workshop featuring their hottest new products!

HALF DAY WORKSHOP #7(A) - A.M. ONLY (8:30 a.m. - 11:30 a.m.)
“Hearing Aids and Worker Considerations” | Harborview
Presenter: Jill Gruenwald, Au.D. - Vanderbilt Bill Wilkerson Center | USA
Despite our best preventative measures, noise-induced hearing loss is a way of life for many of today's workers. When a worker could benefit from a hearing aid, but his or her job demands hearing protection, how can we best serve the worker? This talk will cover hearing aid basics, selecting amplification for the hearing impaired worker, considerations for using hearing aids in noise, and counseling the hearing impaired worker.

HALF DAY WORKSHOP #7(B) - P. M. ONLY (1:00 p.m. - 4:00 p.m.)
“Can’t I Just Take a Pill for That?” What Every Hearing Health Provider Needs to Know About NIHL and Emerging Therapeutics” | Harborview
Presenter: Colleen Le Prell, Ph.D. - University of Florida | USA
Jianxin Bao, Ph.D. - Washington University School of Medicine | USA
Kathleen Campbell, Ph.D. - SIU School of Medicine | USA
Edward Lobardina, Ph.D. - University of Florida | USA
Kevin Ohlemiller, Ph.D. - Washington University School of Medicine Otolaryngology | USA
Christopher Spankovich, Ph.D. - University of Florida | USA
There are no FDA-approved agents for the prevention of hearing loss or tinnitus. None. And yet, there are a variety of pills on the market today, sold for this purpose. Patients, clients, and the public at large all want to know, should we be taking these agents? This workshop brings together scientists and clinicians to discuss current understanding, critical next steps in the translation of benefit from animal ears to human ears, and the implications for what we can- and should- be telling at-risk populations who work in noisy environments and need solutions now. Whether you work with musicians, workers exposed to occupational noise, or kids that engage in risky listening behaviors, this workshop will offer insight regarding drugs and other agents that may one day become new tools in your hearing conservation tool belt.

4:00 PM - 5:00 PM | Committee Meetings & Networking
4:00 PM - 5:30 PM | NHCA Meet & Greet (Students, new members and first timers) *By invitation only | Pool Area (Meeting location is subject to change)
5:30 PM - 8:30 PM | Exhibits Open/Exhibitor Reception | Grand Bay Ballroom South

Innovations in Noise-Induced Hearing Loss and Tinnitus Prevention in Kids

OCTOBER 15 & 16, 2013
3M INNOVATION CENTER, ST. PAUL, MN

Announcing an “Innovative Event” hosted by the 3M Foundation, the 3M Personal Safety Division and Dangerous Decibels® with support from the National Hearing Conservation Association:

Watch for details and announcements calling for posters and demonstrations at www.dangerousdecibels.org/INNOVATIONS
Amyn Amlani, Ph.D. - University of North Texas | USA
Disclosure: Amyn Amlani, Ph.D. has no relevant financial or nonfinancial relationships to disclose.
Amyn M. Amlani, Ph.D., is an Associate Professor on the faculty of the Department of Speech and Hearing Sciences, University of North Texas. Dr. Amlani holds the B.A. degree in Communication Disorders from the University of the Pacific, the M.S. degree in Audiology from Purdue University, and the Ph.D. degree in Audiology from Michigan State University. His research interests include the influence of hearing aid technology on speech and music, and economic and marketing trends within the hearing aid industry.

Tim Bailey - 3M Corporation | USA
Disclosure: Tim Bailey has no financial or nonfinancial relationships to disclose.
Tim Bailey is a Regional Sales Manager for 3M Detection Solutions. Tim has over thirty-two years of sales and consultation experience within the industrial hygiene, safety, hearing conservation and environmental markets. In addition, Mr. Bailey is a national member of the American Industrial Hygiene Association (AIHA), American Society of Safety Engineers (ASSE) and the National Hearing Conservation Association (NHCA). He is also a member of the Wisconsin AIHA Local Section. Tim’s involvement within these organizations include, serving on the Executive Council of NHCA and he is a Past President of NHCA. Tim is also a current member and Past Chair of the AIHA’s Confined Spaces Committee. Tim is based out of the 3M Detection Solutions location, in Oconomowoc, Wisconsin.

Jianxin Bao, Ph.D. - Washington University School of Medicine | USA
Disclosure: Jianxin Bao, Ph.D. has no relevant financial or nonfinancial relationships to disclose.
Jianxin Bao, Ph.D., is a Research Associate Professor in the Department of Otolaryngology at the Washington University School of Medicine. His research focuses on hearing disorders due to the contribution of pathological synaptic changes. The basic cellular and molecular mechanisms underlying these abnormal changes are studied using a variety of behavioral, electrophysiological, and imaging methods. At the same time, his research explores translational opportunities to treat hearing loss and tinnitus with molecular and pharmacogenomic approaches. He has funding from both the National Institutes of Health (NIH) and private foundations to explore basic mechanisms underlying these disorders and simultaneously develop both drug and stem cell therapies to treat these common diseases. Dr. Bao has served on the editorial board for Molecular Neurodegeneration, and as a steering committee member for Washington University’s Center for Aging. He currently acts as co-director for an auditory science course at Washington University.

Cindy Bloyer, M.S., CCC-A - Examinetics, Inc. | USA
Disclosure: Cindy Bloyer, M.S., CCC-A has no relevant financial or nonfinancial relationships to disclose.
An audiologist since 1980, Cindy has worked solely in the area of hearing conservation since 1991. She leads the Audiology department of Examinetics where she and her staff work with over 5000 facilities nationwide ensuring regulatory compliance and program excellence. A member of NHCA since 1991, a CAOHC CD since 1992 and a certified member of ASHA since 1981, Cindy holds an M.S. in Audiology from the University of Wisconsin-Stevens Point.

Kathleen Campbell, Ph.D. - SIU School of Medicine | USA
Disclosure: Financial - Ownership by employer, SIU School of Medicine, Intellectual property rights, hold patent on drugs. Nonfinancial - No relevant nonfinancial relationships exist.
Kathleen Campbell, Ph.D., Professor and Director of Audiology Research at SIU School of Medicine served on the AAA Board of Directors, received an AAA Presidential Citation, a Medical Innovators Award and is an ASHA fellow. She received the 2012 “Inventor of the Year Award” for the Southern Illinois University System. She authored “Essential Audiology for Physicians” and edited/authored “Pharmacology and Ototoxicity for Audiologists”. She was a clinician and clinical supervisor for over 25 years while also conducting research. For the last 10 years she has focused exclusively on her bench-to bedside research program in ototoxicity, noise-induced hearing loss and otoprotective agents. She also serves as an expert witness and a consultant for FDA clinical trials. She has received numerous grants from NIH, DOD and other agencies for her research in otoprotective agents and is the sole inventor on five US Patents issued for D-methionine as a protective agent. Her work is currently in clinical trials with the Department of Defense.
John Casali, Ph.D., C.P.E. - Virginia Tech, Auditory Systems Laboratory | USA
Disclosure: John Casali, Ph.D., C.P.E. has no relevant financial or nonfinancial relationships to disclose.
Dr. Casali is the Grado Chaired Professor of Industrial and Systems Engineering at Virginia Tech, and a Board-Certified Professional Ergonomist (C.P.E.). After receiving his Ph.D. in Human Factors Engineering, he developed the Auditory System Laboratory, a versatile acoustics research facility at Virginia Tech. He is a Fellow of the Human Factors and Ergonomics Society and the Institute of Industrial Engineers, and was the 2007 President of the National Hearing Conservation Association. He was the recipient of the NHCA's Outstanding Hearing Conservationist Award in 2009, and has twice received NHCA's Outstanding Lecture Award as well as the Media Award. His research at Virginia Tech has been sponsored by various government agencies and corporations to a total of over $7.5 million. Dr. Casali holds six patents and has authored over 170 publications. He is on several Scientific Advisory Boards and Editorial Boards. He enjoys working with companies and community groups on warning signal issues, hearing protection and earphone design, community noise, ergonomics, and patent/product liability litigation.

Kris Chesky, Ph.D. - University of Northern Texas | USA
Disclosure: Kris Chesky, Ph.D. has no relevant financial or nonfinancial relationships to disclose.
Dr. Kris Chesky is a musician, educator, and researcher. He is currently the Associate Professor within the College of Music at the University of North Texas. As Director of the Texas Center of Music and Medicine, Dr. Chesky has received research grants from the National Endowment for the Arts, the Grammy Foundation, NAMM, IFMR, the Scott Foundation, and others to study health issues related to learning and performing music. He won the 2010 Safe-in-Sound Award for his efforts to prevent NIHL in musician populations.

Robert Dobie, M.D. - University of Texas Health Science Center at San Antonio | USA
Disclosure: Financial - Consulting for more than 30 corporate clients and receives a consulting fee.
Nonfinancial - No relevant nonfinancial relationships exist.
Bob Dobie is a clinical professor of otolaryngology at both UC-Davis and UT-San Antonio, and a partner with Dobie Associates, offering consultation in hearing, balance, and ear disorders (www.dobieassociates.net). He has a clinical practice in otolaryngology and research interests that include age-related and noise-induced hearing loss, tinnitus, and hearing conservation. A member of several editorial boards, he is the author of Medical-Legal Evaluation of Hearing Loss (2nd edition, 2001), and over 175 other publications.

Dennis P. Driscoll, P.E., Brd. Cert., I.N.C.E. - Associates in Acoustics, Inc. | USA
Disclosure: Dennis Driscoll, P.E., Brd. Cert., I.N.C.E., has no relevant financial or nonfinancial relationships to disclose.
Dennis has both a Bachelor of Science and Master of Science degrees from North Carolina State University. Since 1980, his specialties in acoustics include measurement of equipment noise levels and employee noise exposures, the design of engineering controls, and environmental surveys. From 1980-1988 he managed Amoco Corporation’s hearing conservation program, and has been an acoustical consultant to industry since 1988. Toward professional certification, he is a registered Professional Engineer and a Board Certified Noise Control Engineer. He is a Past President of the National Hearing Conservation Association (NHCA), a Fellow Member of the American Industrial Hygiene Association (AIHA), and past Chair of the AIHA Noise Committee. Finally, Dennis is one of the Editors and participating author of The Noise Manual, 5th Edition, by AIHA.

Nancy Gallihugh, M.S., CCC-A - Kalamazoo RESA | USA
Disclosure: Nancy Gallihugh, M.S., CCC-A has no relevant financial or nonfinancial relationships to disclose.
Nancy Gallihugh received her Bachelor of Arts degree from Indiana University and her Master of Science degree from Western Illinois University. As a member of the staff of Constance Brown Hearing Centers for thirteen years, she supervised the industrial audiology program, provided clinical audiology services, and managed the educational audiology program. She currently administers educational audiology services to hearing impaired students through Kalamazoo Regional Educational Service Agency.

Daniel Golden, President, Chief Search Artist - Be Found Online | USA
Disclosure: Daniel Golden has no relevant financial or nonfinancial relationships to disclose.
Dan Golden has been in the search business since 2001 and brings a wealth of digital marketing experience to Be Found Online. A graduate of Northwestern University with a B.A. in Economics, he has a diverse digital marketing background having spent time on the client side, freelance consulting, at large agencies and in startup environments. After learning the “how to’s” at ConsumerGuide, DoubleClick Performics and Google, he took the best part of each and founded Be Found Local as a paid search company in 2006. In 2009, he joined forces with long time business partner, SEO mastermind and fellow Northwestern University graduate Steve Krull to form Be Found Online. Executing a successful formula of doing right by their clients and by their employees, the company has since grown over 500% and was recently named the #4 Fastest Growing Chicago Ad Agency on the 2012 Inc 500|5,000 list.
Dr. Edward Lobarinas is an Assistant Professor at the University of Florida’s Department of Speech, Language and Hearing Sciences. He received his Ph.D. from the State University of New York at Buffalo in Hearing Science/Audiology in 2006. Originally trained in Behavioral Pharmacology at Rutgers University where he did his undergraduate education, he has focused his research on finding treatments for tinnitus using animal models continued to explore novel treatments for tinnitus as well as using objective measures such as brain imaging to find neural correlates of tinnitus. Dr. Lobarinas developed an animal model of tinnitus and has on perceptual consequences of noise, blast and drug induced hearing loss. Dr. Lobarinas is a member of the American Speech and Hearing Association, the American Academy of Audiology, and has served as a grant reviewer since 1992. Mary is also a member of the American Academy of Audiology and the Acoustical Society of America. She received her Au.D. from A.T. Still University, Arizona School of Health Sciences, and at her graduation, Dr. McDaniel was presented a Professional Leadership Award from the Audiology Foundation of America.
Kevin Ohlemiller, Ph.D. - Washington University School of Medicine | USA
Disclosure: Kevin Ohlemiller, Ph.D. has no relevant financial or nonfinancial relationships to disclose.
Kevin K. Ohlemiller received his Ph.D. in Neuroscience from Northwestern University, then performed postdoctoral work under Dr. Nobuo Suga at Washington University. He next joined the faculty at the Central Institute for the Deaf (Saint Louis, MO), which later merged with Washington University School of Medicine Otolaryngology, where he serves as an Associate Research Professor. Dr. Ohlemiller holds a joint appointment in the Program in Audiology and Communication Sciences, where he teaches hearing neuroscience and genetics. He has authored or co-authored over 80 original papers, reviews, and a textbook. His research explores the interaction of genes and environment in acquired hearing loss.

Theresa Schulz, Ph.D., CCC-A - Honeywell Safety Products | USA
Theresa Schulz received her B.S. (1981) and M.A. (1983) degrees from the University of Texas at Austin and her Ph.D. (1994) from Ohio State University. She was recognized as the US Air Force Outstanding Audiologist of the Year in 1989 and 1998, and received the Elizabeth Guild Award for Contributions to Military Hearing Conservation in 1996. She was nominated by the Air Force for the 2003 National Public Service Award and received the military’s Outstanding Volunteer Medal in 2004 and NHCA’s Michael Beall Threadgill award in 2009 for her extensive work to prevent noise-induced hearing loss both in the military and in the public sector. Theresa is a die-hard NHCAer having served the association in many roles, she is currently President of the NHCA Foundation. Dr. Schulz provides consultation in hearing loss prevention issues and hearing conservation programs and is a frequently requested, enthusiastic speaker on hearing conservation.

Michael Seidemann, Ph.D. - Audiological Associates, Inc. | USA
Disclosure: Michael Seidemann, Ph.D. has no relevant financial or nonfinancial relationships to disclose.
Dr. Seidemann has 44 years of experience in audiology. For his first 20 years, he was on the faculty at Tulane and LSU Medical Schools. For the past 24 years, he has been in a private practice that is limited to forensic and industrial audiology. Most of his practice activities are related to litigation concerning noise-induced hearing loss.

Christopher Spankovich, Au.D., Ph.D., M.P.H. - University of Florida | USA
Disclosure: Christopher Spankovich, Au.D., Ph.D., M.P.H. has no relevant financial or nonfinancial relationships to disclose.
Christopher Spankovich is a Research Assistant Professor in the Department of Speech, Language, and Hearing Sciences at the University of Florida. His academic training includes a Master of Public Health (M.P.H.) from Emory University, a clinical doctorate in audiology (Au.D.) from Rush University, and a research doctorate in hearing sciences (Ph.D.) from Vanderbilt University. Dr. Spankovich’s balance of training spans clinical and basic science domains and is directed at early identification of auditory pathology, prevention of acquired forms of hearing loss, and public health applications in hearing conservation.

Sue Zurales, M.A., F-AAA - Mobilear, Inc. | USA
Disclosure: Sue Zurales, M.A., F-AAA has no relevant financial or nonfinancial relationships to disclose.
Sue Zurales is President of Mobilear Incorporated. Mobilear provides mobile hearing conservation services to the Chicagoland area. She received her Masters in Audiology from Northern Illinois University in 1983. For the past 28 years she has been involved in various aspects of hearing conservation. Sue has been a member of NHCA since 1983 and a long-time member of the P50. She is a Fellow of the American Academy of Audiology and involved in the Illinois Academy of Audiology.
### GENERAL SESSION - MORNING

**8:15 AM - 9:30 AM**

**“PANEL PRESENTATION: Hearing Protector Fit Testing: Practical Considerations”**

**Presenters:**
- Laurie Wells, Au.D. - 3M Corporation | USA
- James Jerome, M.S., CCC-A - Workplace INTEGRA | USA
- Theresa Schulz, Ph.D. - Honeywell Safety Products | USA
- Kathryn Crane Thielen, R.N., B.S.N., C.O.H.N. - Pepperidge Farm | USA

Hearing protection fit testing technologies are here to stay. While the technologies are interesting, and are increasingly proven technically, how is it going on the ground? What are the practical implications and considerations involved in using these systems? How is the resulting information being used by people in the industry? And probably most importantly, are these technologies and the information they provide helping to prevent hearing loss in noise-exposed workers? This panel discussion will address these issues in the contexts of regulation, logistics, and upper management support. In addition, reports from the field will enable us to hear from end-users about how fit testing is working (or not) for them in their hearing conservation practice.

**9:30 AM - 9:50 AM**

**“Implications if Your Life Depends on Your Hearing: The NRR vs the ASAF”**

**Presenter:**
- John Casali, Ph.D., C.P.E. - Virginia Tech, Auditory Systems Laboratory | USA
- MAJ Jay Clasing, OTR/L - Virginia Tech, Auditory Systems Laboratory | USA

The hearing sense is critical for maintaining situation awareness in dynamic work, military, and leisure settings. Compared to the vision sense, major advantages afforded by hearing include its omnidirectionality, “always on” status, high sensitivity, wide bandwidth, and startle response. When hearing is occluded by hearing protection devices (HPDs), including passive HPDs, hearing protection-enhancement devices (HPEDS) or military Tactical Communications and Protection Systems (TCAPS), it may indeed be protected from noise hazards but situation awareness may be degraded in the process. This perceptual effect requires extremely careful attention when protectors are selected for dynamic environments, especially where the user’s safety depends on their sensation, perception, and interpretation of auditory stimuli. This paper summarizes the results from several in-situ and high-fidelity simulation experiments at Virginia Tech concerning detection, identification, and localization tasks for various military and industrial signals, and contrasts the objective effects of a variety of HPDs, HPEDs, and TCAPS against open ear performance. These results are evidence that even certain enhanced electronic protectors, as well as passive pass-through devices, significantly compromise auditory situation awareness as compared to the open ear. Considering the huge emphasis on EPA-required NRR attenuation labeling, which is obviously one-dimensional in its measurement of HPD performance and currently plays a major role in hearing protection design and testing, this paper posits the need for another metric, the Auditory Situation Awareness Factor (ASAF)*. Given the injury and death potential in situations where auditory situation awareness is key for avoiding industrial hazards or military threats, it is apparent from the data presented that at least for certain military and industrial applications, the need for predeployment testing of a protector’s specific effects on situation awareness has come of age.

**9:50 AM - 10:20 AM**

**BREAK**

**10:20 AM - 10:55 AM**

**KEYNOTE LECTURE: “Noise Exposure: It’s More Dangerous Than We Thought!”**

**Presenter:** Sharon Kujawa, Ph.D. - Harvard Medical School | USA

Overexposure to loud sound can cause hearing loss, the severity of which is shaped by characteristics of the exposure and characteristics of the individual. After overexposure, thresholds are immediately elevated, but can recover for several weeks. If recovery remains incomplete, the noise-induced hearing loss (NIHL) is considered “permanent”; if thresholds return to normal, the NIHL is deemed “temporary”, with no persistent or delayed consequences for auditory function. Recent work in our laboratory (Kujawa and Liberman 2006; 2009; Lin et al 2011) has shown that significant degeneration of the cochlear nerve occurs after noise exposure, even when there is no hair cell loss, and even if thresholds have returned to normal. Such observations raise important concerns about long-term effects of apparently benign exposures and our inability to identify such noise injury with the threshold-based assessments that are our gold standard. The phenomenon of slow-onset, noise-induced, primary cochlear-nerve loss is potentially a very common problem and major contributor to the auditory perceptual handicaps of noise-exposed, aging individuals. (Work supported by NIH/NIDCD R01 DC8577)
The audiological data of 57,714 South African mine workers were investigated in this retrospective cohort study. The cohort included the hearing threshold data of a non-noise-exposed control group (N=10062). Participants were categorized in terms of noise exposure; level and working years, and age. Descriptive and inferential statistics were employed. The largest differences in prevalence of hearing loss, between die noise-exposed and control groups, were observed at 3 and 4 kHz in the age group 36 to 45 years. Thresholds at 8 kHz were worse than expected and declined slowly down with age. High-frequency thresholds showed a non-linear growth pattern with age with a greater decline at 2 kHz with age in the noise-exposed population compared to the control group. Hearing deteriorated more across age groups with more noise-exposed years, and this deterioration was most visible after 10 to 15 working years and particularly at 3 kHz. It was shown that age affects the hearing thresholds of the noise and control groups. Within the age groups thresholds were affected differently for different noise-exposure groups (the larger cohorts but also homogeneous exposure groups) and for different exposure times.
Although the ability to detect, localize and identify sounds is critically important in military operations, little is known about the relationship between an individual service member’s level of hearing impairment and his or her probability of mission success on the battlefield. Similarly, little is known about the impact that the reduced auditory acuity caused by the use of hearing protection has on performance in military-relevant tasks. We are now addressing this deficiency with a series of field studies that will use wearable hearing loss simulation systems to measure operational performance as a function of the level of simulated hearing impairment. One such study will measure the impact that a parametrically-increasing simulated hearing loss has on the probability of victory in a force-on-force “paintball” combat exercise. The results will have implications both in the development of auditory fitness-for-duty standards and in the development of specifications for future hearing protection systems.

Hearing loss is an invisible disability and affects approximately three million Floridians. Valerie is an oral, late-deafened adult who earned her Master’s in Business Administration from Webster University, after losing most of her hearing. In 2009, she underwent bi-lateral cochlear implantation, and utilizes many types of assistive technology in her activities of daily living. As a person who lost her hearing over thirty-five years ago, Valerie has experienced first-hand the struggles faced by all persons with disabilities to maintain employment, independence and full-participation in public-life. Her presentation will detail the impacts of the progression of her hearing loss on her career, her relationships, and her leisure pursuits. She will detail what assistive technology has been helpful and what she would have liked to have known as her hearing loss progressed. The information presented in this presentation will graphically illustrate ways hearing health professionals can empower their patients beyond hearing aids and cochlear implants, as wonderful as those devices are.

Hearing loss prevention programs have been mandatory in many US industries for nearly 30 years. During that period, certain components of these programs—especially audiometric testing, training, and hearing protector use— have been the focus of much research and innovation. By comparison, little research has been done on evaluation of noise exposures and controls. There is in particular no consensus regarding a method for assessing temporal trends in noise exposure, and development of standardized approaches could draw more attention to the issue of noise control. A critical factor in developing metrics for noise exposure over time is the amount of noise exposure data available over the time period of interest, and how these data are interpreted. Utilizing a large dataset (>8000 measurements over a six-year period) from an aluminum manufacturing company, we evaluated several approaches to assessing temporal trends in noise exposure, including average noise levels within and across facilities; percentage of employees exposed over the allowable level; and percentage of similar exposure groups (SEGs) exposed over the allowable level. In this analysis, some facilities showed declines in noise exposure over the observation period. However, despite the company’s strong emphasis on hearing loss prevention programs, other facilities showed no change or increases in noise exposure over time using these metrics. Our results suggest that a multi-pronged approach may be needed to evaluate time trends in noise exposure, and development of standardized approaches could draw more attention to the issue of noise control.

The objective of this study was to compare the prevalence of workers with National Institute for Occupational Safety and Health significant threshold shifts (NSTS), Occupational Safety and Health Administration standard threshold shifts (OSTS), and OSTS with age correction (OSTS-A), by industry. Methods: Male and female worker audiograms were examined for the years 2001 through 2010. NSTS, OSTS, and OSTS-A prevalences were estimated and compared by industry. Results: A total of 20% of workers had at least one NSTS, 14% had at least one OSTS and 6% had at least one OSTS-A in the time period. For most industries, the OSTS and OSTS-A criteria identified 28-36% and 66-74% fewer workers with shifts in hearing than the NSTS criteria, respectively. Conclusions: Current regulations should be updated. The OSTS and OSTS-A criteria likely fail to identify large numbers of workers who need intervention to prevent additional hearing loss.
“Effectiveness of Interventions to Prevent Occupational Noise-Induced Hearing Loss, Update of a Cochrane Systematic Review” | St. Petersburg Ballroom I, II, III
Presenter: Jos Verbeek - Finnish Institute of Occupational Health | Finland

We updated a Cochrane Systematic Review to find out what the evidence for the effectiveness of hearing loss prevention programmes is. One study showed that noise levels decreased after stricter legislation in the mining industry but there were no further controlled studies that noise reduction can be effectively implemented. We found 15 studies with 79,986 participants that evaluated the long-term effects of hearing loss prevention programmes. The use of hearing protection in well-implemented HLPPs was associated with less hearing loss but not with worker training, audiometry nor personal noise monitoring. Compared to non-exposed workers, four average hearing loss prevention programmes did not reduce the risk of hearing loss to below an acceptable level. Two comparable additional studies showed a substantial risk of hearing loss in spite of a HLPP. Better prevention programmes and better quality studies especially of engineering controls are needed to better prevent noise-induced hearing loss.

“2013 Safe-In-Sound Excellence in Hearing Loss Prevention Awards” | St. Petersburg Ballroom I, II, III
Presenters: Thais Morata, Ph.D. - National Institute for Occupational Safety and Health | USA
Deanna Meinke, Ph.D. - University of Northern Colorado | USA
John Howard, Ph.D. - National Institute for Occupational Safety and Health | USA

In 2007, the National Institute for Occupational Safety and Health (NIOSH) partnered with the National Hearing Conservation Association (NHCA) to create the Safe-in-Sound Award™ for Excellence and Innovation in Hearing Loss Prevention (www.safeinsound.us). The objectives of this initiative are to recognize organizations that document measurable achievements and to share leading edge information to a broader community. Hearing health practices were evaluated against key performance indicators in a rigorous systematic review process designed to capture and evaluate the successes. The fifth annual round of Safe-in-Sound Excellence and Innovation in Hearing Loss Prevention Awards™ will be presented. Each of the award recipients will accept their awards and briefly present their success stories. Please attend to celebrate their accomplishments and learn from those in the forefront of our efforts to prevent work-related noise-induced hearing loss. See pages 22-23 for more information on award recipients.

FRIDAY NIGHT EVENT - DALI MUSEUM
Dali Museum | 1 Dali Blvd | St. Petersburg, FL 33701

Transportation:
The Dali Museum is a five minute walk from the Hilton St. Petersburg Bayfront hotel. If you require transportation, the hotel shuttle service will be happy to drive you. Please make arrangements at the hotel front desk.

Schedule of Events:
6:20 p.m. - 6:30 p.m. | Meet in hotel lobby and walk to The Dali Museum
6:30 p.m. - 9:30 p.m. | Buffet dinner, cash bar, art auction, music & networking
*Guests are welcome to walk back to the hotel at any point in the evening.
### Platform Presentation Descriptions

**Saturday, February 23, 2013**

#### 7:30 AM - 5:30 PM
- **Registration and Information Desk Open** | Lobby II Foyer

#### 7:45 AM - 8:45 AM
- **Round Table Chat Sessions with Buffet Breakfast** | Grand Bay Ballroom North

#### Saturday Conference Presentation Descriptions

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**Breakout Session #1 - Music**

**9:00 AM - 9:20 AM**
- **“Accountability in Schools of Music Requires a Noise Exposure Assessment Standard”** | St. Petersburg I
- **Presenter:** Kris Chesky, Ph.D. | University of North Texas | USA
- **Amyn Amlani, Ph.D.** | University of North Texas | USA
- **As illustrated in recent reports by NIOSH and by the National Association of Schools of Music (NASM), noise exposure assessment protocols being used for characterizing music-related noise levels in educational settings has the potential for fostering confusion, dissemination of misinformation, and misguided recommendations. Using recent case examples of both public school and tertiary music programs being flagged for excessive sound generation and/or non-compliance to new accreditation standards, this session will illustrate emerging problems while advocating for the development of a new noise exposure assessment standard that is specifically designed to address music-related hearing concerns in the educational sector.**

**9:20 AM - 9:40 AM**
- **“Clinical Verification of Custom-Fitted Musicians Earplugs: How Much Deviation from ‘Flat’ is Acceptable?”** | St. Petersburg I
- **Presenter:** Brian Fligor, Sc.D. | Boston Children’s Hospital | USA
- **As illustrated in recent reports by NIOSH and by the National Association of Schools of Music (NASM), noise exposure assessment protocols being used for characterizing music-related noise levels in educational settings has the potential for fostering confusion, dissemination of misinformation, and misguided recommendations. Using recent case examples of both public school and tertiary music programs being flagged for excessive sound generation and/or non-compliance to new accreditation standards, this session will illustrate emerging problems while advocating for the development of a new noise exposure assessment standard that is specifically designed to address music-related hearing concerns in the educational sector.**

**9:40 AM - 10:00 AM**
- **“Effects of Recreational Noise on Otoacoustic Emissions and High Frequency Thresholds”** | St. Petersburg I
- **Presenter:** Colleen Le Prell, Ph.D. | University of Florida | USA
- **Edward Lobaranas, Ph.D.** | University of Florida | USA
- **Scott Griffiths - University of Florida** | USA
- **Christopher Spankovich, Au.D., Ph.D., M.P.H - University of Florida** | USA
- **Distortion product otoacoustic emission (DPOAE) amplitude and extended high frequency (EHF) thresholds have been suggested as tests that may provide a warning for “pre-clinical” hearing loss. Deficits detected using these tests might provide a warning that damage is likely to accrue at lower frequencies, critical for speech perception, if noise exposure continues. Regardless, observation of EHF/DPOAE deficits suggests cochlear pathology. Here, we describe deficits in DPOAE and EHF in college students exposed to recreational noise.**

**10:00 AM - 10:30 AM**
- **BREAK** | Grand Bay Ballroom South
10:30 AM - 10:50 AM  
**“Effect of Hearing Loss and Other Factors Influencing Use of Hearing Protection by Trumpet Players”**  
*Presenter: Mead Killion, Ph.D. - E tymotic Research - Northwestern University | USA*  

Although a great many brass players, and trumpet players in particular, successfully use high-fidelity earplugs, others report failure with the same earplugs. The following factors may operate to discourage a brass player from using hearing protection: 1. Lack of acclimatization time 2. Loss of “Fortissimo Blare” from the aural distortion generated by the 110–120 dB SPL produced at the open ear with fortissimo playing 3. Shallow earmold seal, leading to a large occlusion effect 4. Inadequate seal of the earmold in the ear canal and/or the wrong acoustic mass in the sound channel 5. Hearing loss: Many harmonic overtones of even moderately loud playing may become inaudible with earplugs to a lifetime trumpet player with high-frequency hearing loss. The limitations imposed by each of these can usually be overcome with modifications of the HPD or with acclimatization time, allowing a lifetime of playing without the all-too-common “musicians hearing loss” and its frequent companion, tinnitus.

10:50 AM - 11:10 AM  
**“Battle of OAEs: Measuring Effects of Acoustic Overexposure in Band Members and Directors”**  
*Presenter: Sridhar Krishnamurti, Ph.D. - Auburn University | USA*  

Outer hair dysfunction associated with noise exposure can be evaluated by two non-invasive tools: transient evoked otoacoustic emissions (TEOAEs) and distortion product otoacoustic emissions (DPOAEs). Click stimuli are used to generate TEOAE responses while DPOAE recording requires the application of two pure tone stimuli. If audiometric thresholds exceed 20–30dB HL, TEOAE and DPOAE responses are expected to be absent (Kemp et. al., 2002). We studied the value of using TEOAEs and DPOAEs in measuring acoustic overexposure effects in band members (students) and band directors. Using a priori criteria established for DPOAEs and TEOAEs, we found that TEOAE band reproducibility criteria identified about one-third of ears to be at risk while DPOAE SNR criteria identified about one-sixth of ears to be at risk. Band directors consistently showed poorer OAEs than band members. Implications of these results will be discussed in terms of hearing conservation measures needed for this noise-exposed population.

11:10 AM - 11:30 AM  
**“Sound Exposure of Professional Orchestral Musicians During Solitary Practice”**  
*Presenter: Ian O’Brien - University of Sydney | Australia*  

Professional orchestral musicians are often exposed to potentially hazardous sound levels while playing in ensemble, with the most significant portion of an orchestral musicians’ workplace sound exposure known to be received from the individual’s own instrument. Despite this, there is little data on levels these musicians face during the private practice which is undertaken daily by these musicians, making accurate risk assessments extremely difficult. This study aimed to determine possible sound exposure to these musicians during personal practice. Subjects initially completed a questionnaire before undertaking multi-point sound monitoring in a controlled environment. Levels observed were similar to those reported in ensemble for the most at-risk from this activity. Improved solutions and instrument-specific training is required amongst this population to ensure they develop effective noise management strategies both in the orchestra and while practicing alone.

**BREAKOUT SESSION #2 - PREVENTION/EDUCATION**

9:00 AM - 9:20 AM  
**“Sound Check Australia: A Citizen Science Approach to Noise and Hearing Conservation Research”**  
*Presenter: Elizabeth Beach, Ph.D. - National Acoustic Laboratories | Australia  
Megan Gilliver, Ph.D. - National Acoustics Laboratories | Australia  
Warwick Williams, Ph.D. - National Acoustic Laboratories | Australia*

In August 2012, researchers from the National Acoustic Laboratories and the HEARing Cooperative Research Centre teamed up with Australia’s national broadcaster, the ABC, to develop a ‘citizen science’ project on noise and hearing conservation. The project, Sound Check Australia, coincided with National Science Week and Hearing Awareness Week and was promoted nationwide to thousands of potential participants. Participants were invited to complete an online survey and a simple online speech-in-noise hearing check. Topics covered by the survey included: general and hearing-related health; exposure to occupational and leisure noise; exposure to ototoxic substances; attitudes towards noise, hearing loss, and loud music venues; use of personal audio devices; and the social impacts of hearing loss. In this presentation, the development of the project and the advantages and disadvantages of a ‘citizen science’ approach will be discussed. Preliminary findings will also be presented.

9:20 AM - 9:40 AM  
**“Effectiveness of a Brazilian Version of the ‘Dangerous Decibels’ Educational Program”**  
*Presenter: Keila Knobel, Ph.D. - University of Campinas | Brazil  
Maria Cecilia P.M. Lima, Ph.D. - University of Campinas, Campinas | Brazil*

We adapted the ‘Dangerous Decibels’ educational program for Brazilian children. Our aims were to evaluate the effectiveness of this version of the ‘Dangerous Decibels’ in increasing students’ knowledge and positively changing their attitudes and intended behaviors related to NIHL prevention. Baseline questionnaires were completed by 220 third to fifth grade students from two schools. 155 children from one school received a 60 minute interactive classroom presentation on hearing and hearing loss prevention and filled out questionnaires immediately after the presentation. The remaining students from the other school served as a comparison group. All students filled out follow-up questionnaires three months after baseline. The comparisons of the baseline and immediate questionnaire showed that the students exhibited significant improvements in knowledge and intended behavior related to NIHL prevention. The data of the 3 months follow-up the comparison with the control group is still being analyzed. Final results will be discussed.

9:40 AM - 10:00 AM  
**“DiscovEARy Zone: Hearing Conservation Outreach from the American Academy of Audiology”**  
*Presenter: Sharon Sandridge, Ph.D. - Cleveland Clinic | USA  
Robert Ghent, Au.D. - Honeywell Safety Products | USA*

The DiscovEARy Zone (DZ) is an interactive exhibit designed to promote hearing loss prevention (HLP) to the public regardless of age. DZ comprises an educational experience that can be used in the workplace, in an audiology practice, at health fairs, and in schools to demonstrate the principles of hearing conservation as well as educate participants about the dangers of exposure to high-intensity sound. Interactive activities range from low-tech to high-tech iPad games. DZ was operated as an outreach program for the clinical audiologist at AudiologyNOW! this past March. Survey data regarding DZ were collected during that conference and will be presented and discussed.
Nhca spectrum volume 30, supplement iv, 2013

10:00 AM - 10:30 AM BREAK | Grand Bay Ballroom South

10:30 AM - 10:50 AM
“Bystander Impulse Noise Exposure From Small-Caliber Weapons: How Close Is Too Close?” | St. Petersburg II
Presenter: CAPT William Murphy, Ph.D. - National Institute for Occupational Safety and Health | USA
Gregory Flamme, Ph.D. - Western Michigan University | USA
Deanna Meinke, Ph.D. - University of Northern Colorado | USA
Donald Finan, Ph.D. - University of Northern Colorado | USA
James Lankford, Ph.D. - Northern Illinois University | USA
Michael Stewart, Ph.D. - Central Michigan University | USA
Edward Zechmann - National Institute for Occupational Safety and Health | USA
Caroline Dektas - National Institute for Occupational Safety and Health | USA

Exposure to impulse noise produced by gunshots is well known to be hazardous to hearing. Most commonly the hearing conservation professional will be concerned about protecting the hearing of the person(s) firing a gun. At recreational events or exhibitions, the bystanders can also be at risk of hearing loss. Thus, guidelines must be developed to define safe distances from the shooter(s). At an outdoor range, impulses were recorded for distances of 1.5, three, and six meters from the shooter with an array of eighteen microphones from fifty-four rifles, shotguns and pistols. Contour plots of exposure levels calculated with several damage risk criteria were developed. Multiple shooters were assumed to be equally spaced and linear superposition of the acoustic signals was applied to estimate the exposures for bystanders and other shooters.

10:50 AM - 11:10 AM
“Shooting Habits of Youth Recreational Firearm Users” | St. Petersburg II
Presenter: Michael Stewart, Ph.D. - Central Michigan University | USA
Deanna Meinke, Ph.D. - University of Northern Colorado | USA
Jessica Synders, Au.D. - Central Michigan University | USA
Kayla Howerton, B.A. - University of Northern Colorado | USA

Youth hunters 6 to 15 years of age are estimated to number 1.6 million. The peak sound pressure levels of recreational firearms frequently exceed the recommended exposure limits. This research study surveyed youth recreational firearm users regarding their shooting habits, reported use of hearing protection devices, self-assessed auditory status, and attitudes about firearm noise and hearing loss risk. The majority of the subjects reported using large caliber firearms capable of rapid fire (i.e. bolt action or semi-automatic) for both hunting and target practice activities. Hearing protective devices are reportedly used “all the time” by 56% of participants while target shooting and only 16% of the time while hunting. Approximately 10% of the youth reported constant tinnitus and 45% notice tinnitus occurs or worsens after shooting. This research highlights the need for early education and intervention efforts to minimize the risk of NIHL in youths. Hearing conservation needs for this population will be discussed.

11:10 AM - 11:30 AM
“Auditory Risk Estimates for Youth Target Shooting” | St. Petersburg II
Presenter: Deanna Meinke, Ph.D. - University of Northern Colorado | USA
James Lankford, Ph.D. - Northern Illinois University | USA
Gregory Flamme, Ph.D. - Western Michigan University | USA
Michael Stewart, Ph.D. - Central Michigan University | USA
Donald Finan, Ph.D. - University of Northern Colorado | USA
Jacob Soendergaard, M.Sc., B.Eng. - G.R.A.S. Sound and Vibration | USA
William Murphy, Ph.D. - National Institute for Occupational Safety and Health | USA
Trevor Jerome - National Institute for Occupational Safety and Health | USA

Youth begin shooting firearms at young ages. Young shooters engage in outdoor target shooting events to learn and practice the skill. The youth shooting positions are typically standing or sitting at a table, which places the firearm closer to the ground or reflective surface when compared to adult shooters. Firearm noise exposure creates an auditory risk for the young shooter, instructors and nearby persons. Impulses were recorded at four positions relative to a youth shooter; the shooter’s left ear, an instructor’s right ear, one meter to the left of the shooter, and two meters behind the shooter. Impulses were generated by 23 firearms representing rifles, shotguns and pistols/revolvers used by youth. Acoustic characteristics were examined and the auditory risk estimates were evaluated using contemporary damage-risk criteria for unprotected adult listeners. Strategies to minimize the auditory risk are discussed relative to participants, instructors and spectators at youth shooting events.

11:30 AM - 12:00 PM BREAKOUT SESSION #3 - MILITARY

9:00 AM - 9:20 AM
“A Tale of Two Fit-Test Case Studies” | St. Petersburg Ballroom III
Presenters: CAPT William Murphy, Ph.D. - CDC/National Institute for Occupational Safety and Health | USA
Christa Themann, M.S., CCC-A - CDC/National Institute for Occupational Safety and Health | USA

In 2010, NIOSH debuted the HPD Well-Fit ft-testing system to estimate earplug attenuation. In 2012, NIOSH personnel evaluated workers in two separate field studies. Noise exposures for offshore drill rig operators and engineers can exceed 100 dBA during their workday. Seventy-four workers were fit-tested and approximately 50% of the workers achieved the target 85-dBA protected exposure level without training. After training, all workers were able to achieve at least 23-dB attenuation. The second study examined a cohort of workers conducting sandblasting operations at Grand Coulee Dam. Sandblasting exposures can be in excess of 115 dBA. The workers were fit-tested before and after the three-hour work shift and demonstrated single level protections between 33 and 45 dBA. The post-shift attenuations were not statistically significantly different from the pre-shift attenuations. In this case, the levels that workers achieved were significantly above the derated estimates based upon the NRR for the earplugs.
“Pharmacologic Protection from Noise Induced Hearing Loss (NIHL) in the US Military”
Presenter: Kathleen Campbell, Ph.D. - University of Southern Illinois Medical Center | USA
CPT Virginia Bailey, Au.D., M.B.A. - Fort Jackson Army Hearing Program | USA
CPT Rebecca Ludwig, Au.D., CCC-A - United States Army - Fort Jackson Army Hearing Program | USA
This presentation will review current research in ototoxic protective and rescue agents for noise-induced hearing loss including Dr. Campbell's own research with D-methionine as an ototoxic protective agent. However an overview of the various types of ototoxic agents currently being developed will be provided. Some of the protective agents are used only to elucidate mechanisms rather than to directly create patient therapies. Other agents have only animal data while others are in clinical trials. No agents are currently FDA approved to prevent noise-induced hearing loss but several look promising. In the future pharmacologic therapies may augment noise abatement and physical hearing protector programs. Dr. Campbell is the sole inventor of several patents for protective agents which are now in or approaching clinical trials. Her patents are owned by her employer. However she also collaborates and assists others developing various types of ototoxic agents.

“Hearing Protection Device Field Attenuation Estimation System Round Robin Results”
Presenter: JR Stefanson, B.S., C.O.H.C. - United States Army Aeromedical Center | USA
William Ahroon, Ph.D. - US Army Aeromedical Research Lab | USA
The purpose of this paper is to present the data collected during the round robin evaluation of Hearing Protection Device (HPD) Field Attenuation Estimation Systems (FAES) described at the New Orleans 2012 meeting of the National Hearing Conservation Association. The study involved evaluations of five HPD FAES by five Army audiologists at five different Army posts. The investigators provided subjective impressions of the various systems as well as the measurement of Personal Attenuation Rating (PAR) data for each individual user tested for a single fit of an insert hearing protection device (i.e., earplug). The five Army Audiologists' subjective comments were summarized for each of the five systems tested. This presentation will summarize the more objective information collected during the round-robin study, including the PARs and estimates of the relative times required for earplug fit testing.

10:00 AM - 10:30 AM
BREAK | Grand Bay Ballroom South

10:30 AM - 10:50 AM
“Shipboard Noise Control on US Navy Aircraft Carriers”
Presenter: Jeffrey Komrower - Noise Control Engineering, Inc. | USA
Kurt Vankkasas, B.S. - Office of Naval Research | USA
The Veterans Administration currently pays in excess of $1.2 billion dollars annually to hearing impaired and disabled veterans and this cost is likely to continue to rise in the future. The development of an effective damping treatment, which can be applied to high noise areas and reduce the overall noise exposure of the ship's force will reduce noise induced hearing loss (NIHL) occurrences and decrease the number and severity of hearing impairment issues. This paper describes a testing and analysis approach to being implemented to reduce noise levels on the gallery deck on CVN68 class aircraft carriers which includes the use of noise modeling as well as acoustic and vibration measurements. Focalization techniques using an acoustic array are also used to determine transmission paths of energy into the compartments measured in order to optimize the specialized damping spray-on damping treatment being used to reduce noise levels.

10:50 AM - 11:10 AM
“Auditory Localization: Standardized Tests for Headgear Evaluation”
Presenter: Kevin Michael, Ph.D. - Michael & Associates | USA
Tomasz Letowski, Ph.D., Dr.Sc. - U.S. Army Research Laboratory | USA
There is a requirement for a practical and economical means of quantifying the ability to localize sound sources for a person wearing various hearing protective devices, including earmuffs, earplugs and helmets. New protective products are being developed with a design emphasis on maintaining the natural ability to localize sounds. Military tactical communication and protective systems (TCAPS) in particular are designed to maintain situational awareness. There is no standardized method to evaluate these products. One approach for a laboratory test is to utilize a hemispherical array of speakers with a human test subject’s center-of-head position in the center of the array, equidistant from each of the speakers. Short bursts of stimuli are presented to the subject in a random order. Test scores include correct/incorrect identification while factoring in the degree of angular error. With this system, protective devices can be evaluated based on quantitative data obtained from human subjects.

11:10 AM - 11:30 AM
“Human Aural NON-Detectability”
Presenter: Kichol Lee, Ph.D. - Virginia Tech | USA
John Casali, Ph.D., C.P.E. - Virginia Tech, Auditory Systems Laboratory | USA
In response to requests from manufacturers of Warfighter-worn military ensemble devices, the Virginia Tech Auditory Systems Lab (VT-ASL) recently developed a facility for acoustical testing per the military standard for Human Aural Nondetectability, a portion of MIL-STD-1474D. Since the standard requires measuring sound pressure level (SPL) emissions of different types of military devices at below human detection thresholds for certain applications, it specifies very stringent ambient noise levels that a testing facility must meet. High sensitivity, low noise floor instrumentation is also required. The anechoic chamber located at VT-ASL was prepared to meet the standard’s noise floor and sound field requirements, and a Larson-Davis ANSI Type 1 Real-Time Analyzer with one-inch random-incidence microphone was used to capture SPLs in the unweighted 1/3-octave filter mode. A unique, sequential measurement protocol, employing both Leq and Lmax metrics, was developed by VT-ASL and approved by the military customer, to enable reliable capture of the ambient noise floor and the device's noise emission on each measurement trial. The primary purpose of the facility is to determine whether or not a military device's acoustical emission meets human aural non-detectability requirements per MIL-STD-1474D for military operations in which stealth must be maintained. A secondary, less-stringent application is measurement of noise emission of commercial products with implications for annoyance and sound quality issues.
“Specifying an ‘Appropriate’ Exchange Rate for Occupational Standards: Ear vs. Dosimeter?”
Presenter: William Clark, Ph.D. - Washington University School of Medicine | USA
Specifying a 3 dB exchange rate (ER) in noise standards has several advantages: 1) it is simple and easily calculated; 2) mathematically correct for describing total acoustic energy in an exposure; 3) for continuous noise the ER doesn’t matter; 4) for intermittent or fluctuating noise it is usually more conservative than the 5-dB exchange rate. But there are disadvantages if it’s wrong, including overstating hazard and expending resources to protect hearing for those who don’t need it. Whether it is the “correct” rate, or even valid depends upon how well it predicts risk of hearing loss caused by noise. Reviewed are the biological mechanisms that contribute to hearing loss, studies of temporary and permanent effects in animal and human subjects, and descriptions of nonlinear and active hearing mechanisms that contribute to our understanding of the ER from a hearing, rather than a noise perspective.

“The Exchange Rate and Noise-Induced Hearing Loss”
Presenter: Alice Suter, Ph.D. - Alice Suter and Associates | USA
The exchange rate (ER) is the relationship in dB between the allowable noise exposure level and duration prescribed by standards or regulations. Today nearly every industrialized nation has adopted the 3-dB ER with the exception of OSHA in the U.S. and certain federal agencies that follow its lead, which still use the 5-dB ER. This presentation will discuss the history of the development of the 3-dB and 5-dB ERs including consensus and regulatory activities, with attention to the many questionable assumptions inherent in the selection of the 5-dB ER. The benefits of intermittency found in the laboratory do not translate to the workplace, and even in the most favorable conditions, do not justify the use of the 5-dB ER. Recent research support the use of the 3-dB ER with impulse noise in combination with continuous noise, especially if a measure of impulsiveness such as kurtosis is taken into account.

“Simultaneous Measurement of At Ear and Shoulder Noise Exposures”
Presenter: Edward Hayes - Clarkson University | USA
Richard Neitzel, Ph.D., C.I.H. - University of Michigan | USA
Kevin Michael, Ph.D. - Michael & Associates, Inc. | USA
Michael McTague, M.P.H. - Yale University | USA
Christine Dixon-Ernst, M.S., Hyg., C.I.H., M.A., CCC-A - Alcoa | USA
Peter Rabinowitz, M.D., M.P.H. - Yale University | USA
The field effectiveness of hearing protective devices (HPDs) varies greatly between individuals and may not correspond to standardized measures such as the EPA Noise Reduction Rating (NRR). HPD attenuation provided to an individual varies with time due to many factors, including work environment, type of noise exposure and physical activity. There is growing interest in the concept of fit testing of hearing protection, but this only provides a snapshot assessment of hearing protector fit. We describe a series of full shift noise dosimetry measurements performed both in-ear and on-the-shoulder, allowing instantaneous attenuation to be derived for the entire work shift. Preliminary results indicate that noise reduction levels range from 4 to 23 dB. Although lower than the manufacturers' NRR, attenuation was sufficient to lower personal exposure to less than 85 dBA. Exposure level under the HPD is an important consideration when analyzing field attenuation.

Presenter: James Banach, M.B.A. - 3M Corporation | USA
In 1985 Royster and Royster published a survey on Hearing Protection Utilization in US industry. Information about the utilization of hearing protection devices was obtained through interviews at 218 facilities. The primary objectives of the study were to identify problems related to HPD use and to develop a reference manual to guide industrial personnel in achieving maximum benefit from HPDs. Since November of 2011 interviews with 20 companies identified as having either better than average hearing conservation programs or large programs often with international scope have been performed. The results of these interviews are presented with one eye on the Royster's study and the other looking for the current challenges and successes in hearing conservation programs. It is apparent that in some ways nothing has changed and in others unique approaches including problem solving, employee involvement and program assessment offer interesting opportunities that go beyond regulation compliance to effectiveness.
### 11:10 AM - 11:30 AM
**“Replacing Cells in the Inner Ear: The Path to a Regenerative Cure for Hearing Loss”**
**Presenter:** Andrea Boidman, Executive Director - Hearing Health Foundation | USA

Inner ear hair cells are located in most animals, and are required for normal hearing. These cells convert sound information into electrical signals that are sent to the brain. Once hair cells die in mammals — including humans — hearing loss is permanent. We know that chickens and many other species spontaneously regenerate their hair cells, but humans do not yet have this ability. In 2011, Hearing Health Foundation launched the Hearing Restoration Project (HRP). A new, multi-institutional consortium, the HRP is comprised of some of the country’s leading researchers in the field of regeneration. HRP’s goal is to offer a biologic cure for hearing loss in a period of ten years, so that humans — like chickens — will be able to regenerate their damaged hair cells and once again hear. This talk will present the work of the consortium members in the framework of the HRP model.

### 11:30 AM - 12:45 PM
**Hosted Luncheon & Awards** | Grand Bay Ballroom North

### 12:45 PM - 12:55 PM
**Award Photos** | Grand Bay Ballroom North

### 12:55 PM - 1:40 PM
**Gasaway Lecture: “Hearing Health and The Grand Scheme of Things”**
**St. Petersburg Ballroom I, II, III**
**Presenter:** Thais Morata, Ph.D. - National Institute for Occupational Safety and Health | USA

Every year, the NHCA designates one session at its annual conference as the Gasaway Lecture to recognize Donald C. Gasaway's long and exemplary years of service, his contributions to the association, and his impact on the field of hearing loss prevention. Don Gasaway devoted himself to promoting hearing conservation and effectively used any means he could to educate others about hearing and hearing loss, to improve training, and to motivate his audiences to take action. I am deeply honored to present this year's Gasaway Lecture. While the challenge to prevent hearing loss remains, the ways we view and address this challenge are changing. National boundaries are no longer obstacles to the transfer of knowledge, and hearing conservation is not limited to industry. Our efforts are broadening towards building a culture that promotes healthy hearing. Today we have fewer obstacles and more tools than were available to Don. This year's Gasaway lecture will focus on ways we can optimize the exchange of skills and experience, facilitate new partnerships and expedite the research process worldwide in the pursuit of hearing loss prevention in all walks of life.

### 1:40 PM - 2:00 PM
**“85/3 and Other Items for OSHA’s To-Do List”**
**St. Petersburg Ballroom I, II, III**
**Presenter:** Alice Suter, Ph.D. - Alice Suter and Associates | USA

This paper will present a to-do list for OSHA of much needed improvements in its noise regulation and enforcement. For decades, groups have urged OSHA to adopt the 85-dBA PEL and the 3-dBA exchange rate, so this recommendation would be considered #1 on our list. The goals and procedures of the 85/3 Coalition were presented in a platform presentation at the 2012 Hearing Conservation Conference. This paper will report on the progress of the Coalition to date, including an overview of the Coalition Members and Pioneers. Other items on the list include recommendations for practical actions or changes. Examples would be minor changes to the existing regulation for the following: updating the ANSI standards and age correction tables, reforming the noise measurement procedures to remove the 89.9 dBA dosimeter lower threshold for assessing compliance with the PEL, and updating the sections on audiometric instruments and rooms. OSHA should also create a “best practice” guide for small business, build on its data base of noise control solutions, and provide enhanced training for its inspectors. Many of these changes are sorely needed as the existing provisions are embarrassingly out of date, and they should be effected with relatively little effort or controversy.

### 2:00 PM - 2:20 PM
**“Management Issues Related to Hearing Conservation in Music and Entertainment”**
**St. Petersburg Ballroom I, II, III**
**Presenter:** Robert Ghent, Au.D. - Honeywell Safety Products | USA

The music and entertainment industries, particularly live music venues and events, present challenges to the implementation and management of hearing conservation programs and regulatory enforcement that are not typical of most noisy industries. Here we take look at some of these management issues from both inside and outside the music and entertainment industries. We will compare and contrast the regulatory environment for occupational hearing loss in music and entertainment versus other industries, and in the US versus the UK where an active regulatory effort has been in place for several years. Data from studies in a small slice of the music and entertainment sector will illustrate some of the hurdles faced, and will be followed by a discussion of how those hurdles may be cleared.

### 2:20 PM - 2:50 PM
**BREAK** | Lobby II Foyer

### 2:50 PM - 3:10 PM
**“Recommended Auditory Processing Test Battery for Workers with Occupational Exposures to Ototoxins”**
**St. Petersburg Ballroom I, II, III**
**Presenter:** Vishakha Rawool, Ph.D. CCC-A - West Virginia University | USA

According to the WorkSafe guidelines from Australia, workers who are exposed to ototoxins and complain of hearing difficulties should be referred for evaluation of the central parts of the auditory system even in the presence of normal auditory thresholds. This presentation will include recommendations for a test battery for such workers based in the following considerations: Ease of administration and interpretation in clinical settings, evaluation of brainstem and cortical auditory pathways, evaluation of binaural (dichotic) and temporal auditory processing skills, minimal effect of hearing loss, minimal effect of linguistic competency, use of subjective and objective measures, control of patient fatigue and learning effects, and minimal effect of cognitive variables in necessary since solvent-exposed workers may have some difficulty in modulating their attentional resources according to task demands, as apparent in similar P300 amplitudes for rare and oddball stimuli and vigilance-decrement during methylene chloride exposure.
3:10 PM - 3:30 PM

“Auditory Dysfunction Associated with Solvent Exposure” | St. Petersburg Ballroom I, II, III

Presenter: Adrian Fuente, Ph.D. - University of Chile | Chile
Ana Claudia Fiorini, Ph.D., Pontificia Universidade Catolica de Sao Paulo | Brazil

The aim of this research was to investigate whether solvent-exposed workers report poorer hearing performance in daily-life activities, as related to the function of the peripheral and central auditory systems, compared to non-exposed subjects. Forty-eight workers exposed to a mixture of solvents and 48 age-gender and educational level matched, non-exposed, control subjects were selected. The evaluation procedures included: pure-tone audiometry, the Random Gap Detection test, and the Amsterdam Inventory for Auditory Disability and Handicap, to investigate subjects’ self-reported hearing performance in daily-life activities. A Student test and analyses of covariance (ANCOVA) were computed to determine possible significant differences between solvent-exposed and non-exposed subjects. Pearson correlations among the three measures were also calculated. Solvent-exposed subjects exhibited significantly poorer hearing thresholds than non-exposed subjects. Also, solvent-exposed subjects exhibited poorer results for the Random Gap Detection test and self-reported poorer listening performance than non-exposed subjects. Results of the Amsterdam Inventory for Auditory Disability and Handicap were significantly correlated with the binaural average of subject pure-tone thresholds and Random Gap Detection test performance. We conclude that solvent exposure is associated with poorer hearing performance in daily-life activities that relate to the function of the peripheral and central auditory system.

3:30 PM - 3:50 PM

“Tinnitus” | St. Petersburg Ballroom I, II, III

Presenter: Edward Lobinars, Ph.D. - University of Florida | USA

Exposure to high levels of noise has been shown to lead to both temporary and in some cases permanent hearing loss. However, the relationship between noise exposure and tinnitus is not as well understood. Noise exposure sometimes results in tinnitus even when the signs of hearing loss are not obvious. Conversely, studies have shown that approximately 85% of individuals with tinnitus have some degree of hearing loss. To better understand the relationship between noise exposure and tinnitus, current basic research has turned to the use of animal models. Interestingly, the animal models show that susceptibility to both hearing loss and tinnitus varies among animals; results consistent with what is reported in humans. Here we will present past and more recent data from animal models looking at noise induced tinnitus, some potential biomarkers of tinnitus, potential tinnitus pharmacotherapy, and relate these findings to current thinking about noise and tinnitus.

3:50 PM - 4:10 PM

“Healthy Diet = Healthy Ears?” | St. Petersburg Ballroom I, II, III

Presenter: Christopher Spankovich, Au.D., M.P.H. - University of Florida | USA
Colleen Le Prell, Ph.D. - University of Florida | USA

A few human epidemiological studies to date have shown higher intake of specific nutrients to be associated with hearing thresholds in some, but not all, studies. Variability across studies is likely related to differences in specific metrics used to quantify nutrient intake and hearing status. Most studies have used single nutrient analysis. Although this analysis is valuable, interactions between nutrients are increasingly recognized and could confound statistical modeling of single nutrient effects. Therefore, we examined the potential relationship between diet and hearing using overall dietary quality. Design. This cross-sectional analysis was based on Healthy Eating Index data and audiological thresholds. Study sample: Participants were drawn from the National Health and Nutrition Examination Survey, 2001-2002. Results: There was a positive relationship between dietary quality and threshold sensitivity at higher frequencies; benefits were largely limited to older and male participants. There was no relationship between dietary quality and threshold sensitivity at lower frequencies.

4:10 PM - 4:30 PM

“Development of a Task-Based Noise Constraints Flight Rule for the International Space Station” | St. Petersburg Ballroom I, II, III

Presenter: Richard Danielson, Ph.D. - Baylor College of Medicine | USA
Jose Limardo - NASA-Johnson Space Center | USA

During long-duration space missions on the International Space Station (ISS), crewmembers are exposed to a variety of incessant noise conditions that are produced by onboard payloads, ventilation fans, thermal control systems, and exercise equipment within the limited confines of the spacecraft. To minimize risk of hearing loss, flight rules have been developed with a task-based approach to noise constraints and recommendations for hearing protective devices on the ISS. A working group from Johnson Space Center has implemented a Noise Exposure Estimation Tool (NEET) that allows personnel in Houston’s Mission Control to predict noise exposures for upcoming activities and make recommendations to flight surgeons and crewmembers. The NEET uses noise level data from a Noise Hazard Inventory (NHI) of 60+ specific locations and environmental conditions onboard ISS. This presentation will describe how personnel from NASA and its international partners employ the NHI and NEET in this unique hearing loss prevention setting.

4:30 PM - 4:50 PM

“A Comparative Study of Changes in Firefighters Occupational Exposure to Noise” | St. Petersburg Ballroom I, II, III

Presenter: Elizabeth Maples, Ph.D. - University of Alabama at Birmingham | USA
Catherine Fitzgerald - University of Alabama at Birmingham | USA

The purpose of this study was to examine the changes that have occurred in firefighters’ personal exposure to noise in the past fifteen years. A busy metropolitan fire service where personal noise exposure monitoring was conducted in 1997 agreed to a re-evaluation of firefighters’ exposures to noise. Full-shift personal noise samples were obtained from 69 active duty firefighters in spring 2012. These results were compared with 67 noise samples from 1997. A significant reduction in the mean 8-hour Time-weighted average (TWA) for noise within the group of firefighters sampled in 2012 was observed compared with the 1997 group. This reduction may be due to changes within the service and changes in fire-engine design. However, monitoring of specific noise sources indicate that firefighters continue to be exposed to high levels of impact noise which may put them at increased risk of noise induced hearing loss (NIHL).

4:50 PM - 5:00 PM

Closing Remarks | St. Petersburg Ballroom I, II, III
James Banach, M.B.A. - 3M Corporation | USA
Disclosure: Financial - Ownership by employer, 3M Corporation, paid a salary for employment in a management position.
Nonfinancial - has a relationship with American Industrial Hygiene Association, professional volunteer - noise committee member.
Over 30 years involvement and leadership in noise measurement and hearing conservation. Current member American Industrial Hygiene Association (AIHA) Noise Committee. Current Member National Hearing Conservation Association (NHCA). Past chair of the AIHA Noise Committee, past AIHA representative to Council for the Accreditation of Occupational Hearing Conservationists (CAOHC), including presenter for CAOHC certification and director courses, development of noise measurement curriculum, and past chair. Past president of the NHCA. Instructor for Professional Development Courses through AIHA. Instructor for NHCA’s “Excellence in Hearing Conservation” program. Publications include articles on noise measurement, hearing conservation, and noise exposure outside the workplace, input documents to OSHA and MSHA. Certified Instructor – Noise Measurement and Hearing Conservation for US Department of Labor - MSHA. NHCA Threadgill Leadership and Outstanding Lecture Awards. Degrees from University of Wisconsin - Milwaukee and Keller Graduate School of Management.

Elizabeth Beach, Ph.D. - National Acoustic Laboratories | Australia
Disclosure: Elizabeth Beach, Ph.D. has no relevant financial or nonfinancial relationships to disclose.
Elizabeth is a researcher at the National Acoustic Laboratories. She began working in the area of Hearing Loss Prevention in 2009 after completing undergraduate studies in Linguistics and Psychology at the University of Sydney, and a Ph.D. in Psychology at UWS. Her main area of research is leisure noise and its impact on the overall noise exposure of young adults. She has a particular interest in noise exposure in the music and entertainment industry.

Andrea Boidman - Hearing Health Foundation | USA
Disclosure: Andrea Boidman has no relevant financial or nonfinancial relationships to disclose.
Andrea Boidman has been with Hearing Health Foundation since June 2007, and has been the Executive Director since 2010. Andrea is a strong advocate of hearing research, and has written articles for publication on the importance of hearing research and prevention of hearing loss. She has also appeared on television and radio advocating for healthy hearing and a regenerative cure for hearing loss, most recently on The Balancing Act on Lifetime. Andrea manages and oversees all aspects of Hearing Health Foundation’s operations, including the Hearing Restoration Project, and is the publisher of Hearing Health Foundation’s award-winning consumer publication, Hearing Health Magazine. Andrea holds an M.A. in Education from New York University (2004) and a B.A. from Temple University (2000), magna cum laude, Phi Beta Kappa.

Douglas Brungart, Ph.D. - Walter Reed National Military Medical Center | USA
Disclosure: Douglas Brungart, Ph.D. has no relevant financial or nonfinancial relationships to disclose.
Dr. Brungart received his B.S. in Computer Engineering from Wright-State University in 1993 and his Ph.D. in Electrical Engineering from the Massachusetts Institute of Technology in 1998. His next 11 years were spent as a research scientist at the Air Force Research Laboratory in Dayton, Ohio, where he studied human speech perception and auditory localization and was issued eight US patents for his work on auditory display technology. For the past two and a half years, he has served as Chief Scientist at the Audiology and Speech Center at the Walter Reed National Military Medical Center, where his interests include spatial and binaural hearing, informational masking, speech intelligibility and the development of new auditory fitness-for-study standards for the military.

Kathleen Campbell, Ph.D. - SIU School of Medicine | USA
Disclosure: Financial - Ownership by employer, SIU School of Medicine, Intellectual property rights, hold patent on drugs.
Nonfinancial - No relevant nonfinancial relationship exist.
Kathleen Campbell, Ph.D., Professor and Director of Audiology Research at SIU School of Medicine served on the AAA Board of Directors, received an AAA Presidential Citation, a Medical Innovators Award and is an ASHA fellow. She received the 2012 “Inventor of the Year Award” for the Southern Illinois University System. She authored “Essential Audiology for Physicians” and edited/author “Pharmacology and Otoxicity for Audiologists”. She was a clinician and clinical supervisor for over 25 years while also conducting research. For the last 10 years she has focused exclusively on her bench-to bedside research program in ototoxicity, noise-induced hearing loss and otoprotective agents. She also serves as an expert witness and a consultant for FDA clinical trials. She has received numerous grants from NIH, DOD and other agencies for her research in otoprotective agents and is the sole inventor on five US Patents issued for D-methionine as a protective agent. Her work is currently in clinical trials with the Department of Defense.
John Casali, Ph.D., C.S.P. - Virginia Tech, Auditory Systems Laboratory | USA
Disclosure: John Casali, Ph.D., C.S.P. has no relevant financial or nonfinancial relationships to disclose.

Dr. Casali is the Grado Chaired Professor of Industrial and Systems Engineering at Virginia Tech, and a Board-Certified Professional Ergonomist (C.P.E.). After receiving his Ph.D. in Human Factors Engineering, he developed the Auditory Systems Laboratory, a versatile acoustics research facility at Virginia Tech. He is a Fellow of the Human Factors and Ergonomics Society and the Institute of Industrial Engineers, and was the 2007 President of the National Hearing Conservation Association. He was the recipient of the NHCA’s Outstanding Hearing Conservationist Award in 2009, and has twice received NHCA’s Outstanding Lecture Award as well as the Media Award. His research at Virginia Tech has been sponsored by various government agencies and corporations to a total of over $7.5 million. Dr. Casali holds several patents and has authored over 180 publications. He is on several Scientific Advisory Boards and Editorial Boards. He enjoys working with companies and community groups on warning signal issues, hearing protection and earphone design, community noise, ergonomics, and patent/product liability litigation.

Kris Chesky, Ph.D. - University of Northern Texas | USA
Disclosure: Kris Chesky, Ph.D. has no relevant financial or nonfinancial relationships to disclose.

Dr. Kris Chesky is Associate Professor within the University of North Texas College of Music and Director of the Texas Center of Music and Medicine. He oversees and teaches undergraduate and graduate courses in music medicine and has received research grants from the National Endowment for the Arts, the Grammy Foundation, and others to study health issues related to learning and performing music. Dr. Chesky was granted the 2010 Safe-in-Sound Award by NHCA and NIOSH for his work related to hearing loss prevention.

William Clark, Ph.D. - Washington University School of Medicine | USA
Disclosure: William Clark, Ph.D. has no relevant financial or nonfinancial relationships to disclose.

Dr. William Clark is the Director of the Program in Audiology and Communications Sciences (PACS) at Washington University School of Medicine in St. Louis, Missouri, where he also holds the rank of Professor in the Department of Otolaryngology and the Department of Education. The PACS program trains teachers of the deaf, audiologists, and research scientists. Prior to his appointment in the School of Medicine, Dr. Clark was a Senior Research Scientist and Director of Professional Services at the Central Institute for the Deaf and served concurrently as the Chairman of the Department of Speech and Hearing at Washington University. His work on noise-induced hearing loss encompasses laboratory studies of exposure in animal subjects, and field surveys of exposure and hearing loss both within and outside the workplace. Dr. Clark has published over 80 papers on the effects of noise on hearing and has co-authored several book chapters and a textbook titled “Anatomy and Physiology of Hearing for Audiologists” published in 2007. He has just received the 2011 School of Medicine’s Distinguished Educator Award for Graduate Student Teaching.

Kathryn Crane Thielen, R.N., B.S.N., C.O.H.N. - Pepperidge Farm | USA
Disclosure: Kathryn Crane Thielen, R.N., B.S.N., C.O.H.N. has no relevant financial or nonfinancial relationships to disclose.

Kathryn Crane Thielen, R.N., B.S.N., C.O.H.N., received her nursing diploma in June 1971 from Izaak Walton Killam Hospital for Children in Halifax, Nova Scotia. She later received her Occupational Health Nurse Certification from ABOHN in December 2009 and Bachelor of Science in Nursing from Florida Southern College in December 2000. Kathryn has been an Occupational Health Nurse for the Mosaic Phosphate Industry, Alcoa, Inc. and currently Pepperidge Farm in Lakeland, Florida. She is a member of the American Association of Occupational Health Nurses, Heart of Florida Occupational Nurses Association (Treasurer 2004–2010), American Nurses Association and the Florida Board of Nursing.

Richard Danielson, Ph.D. - Baylor College of Medicine | USA

Dick Danielson, Ph.D., is an Associate Professor at Baylor College of Medicine, Houston. He served as a military audiologist for 28 years, during which he enjoyed learning the principles of hearing conservation program management from our field’s pioneers. Since 2003, he has been the Manager for Audiology and Hearing Conservation at NASA’s Johnson Space Center, where his work focuses on the effects of noise and spaceflight on hearing. Dr. Danielson has served as the president or chair of numerous professional organizations, including the Council for Accreditation in Occupational Hearing Conservation (CAOHC) and the Texas Academy of Audiology.

Robert Dobie, M.D. - University of Texas Health Science Center | USA
Disclosure: Financial - Consulting for more than 30 corporate clients and receives a consulting fee. Nonfinancial - No relevant nonfinancial relationships exist.

Bob Dobie is a clinical professor of otolaryngology at both UC-Davis and UT-San Antonio, and a partner with Dobie Associates, offering consultation in hearing, balance, and ear disorders (www.dobieassociates.net). He has a clinical practice in otology and research interests that include age-related and noise-induced hearing loss, tinnitus, and hearing conservation. A member of several editorial boards, he is the author of Medical-Legal Evaluation of Hearing Loss (2nd edition, 2001), and over 175 other publications.
Adrian Fuente is an Assistant Professor at the University of Chile. Adrian obtained his Bachelor degree in Speech Pathology and Audiology from the University of Chile in 2000 and then a Master of Education from Universidad Mayor (Santiago, Chile). In 2003, he moved to Hong Kong to study his Ph.D. in Audiology which was completed in 2008. In 2012, he completed his Postdoctoral Research Fellowship at the University of Queensland, Brisbane, Australia. His research interests include the deleterious effect of chemical exposure on the auditory system, specifically on the central auditory nervous system, noise-induced hearing loss, and how age-related changes in the central auditory nervous system relate to hearing aid benefit in older adults. He has a number of publications in these fields of research.

Brian Fligor, Sc.D., is Director of Diagnostic Audiology at Boston Children's Hospital and Assistant Professor in Otology and Laryngology at Harvard Medical School. His primary research interests are investigating causes of acquired hearing loss from ototoxicity and noise. Publications describing factors associated with hearing loss from medical interventions have helped shape recommendations by the Joint Committee on Infant Hearing (2007) and proposed new ototoxicity grading scales for patients treated with chemotherapy. Dr. Fligor is a member of the Children's Oncology Group and past-chair of the Music-induced Hearing Disorders task force for the National Hearing Conservation Association. Dr. Fligor's work on potential for noise-induced hearing loss from using portable media players with headphones has received considerable popular media attention, including being spoofed on David Letterman's show in 2005. He is principle audiologist for the Boston Children's Hospital Musicians' Hearing Program, a clinical service geared toward mitigating risk for music-induced hearing disorders (MIHD) and treating musicians with MIHD to help them continue to effectively perform in their chosen career.

Robert M. Ghent, Jr., Au.D. is Research Audiologist and Manager of the Howard Leight Acoustical Testing Laboratory at Honeywell Safety Products in San Diego, CA. He is also a member of the DiscoverEar Zone Committee for AudiologyNOW! Dr. Ghent received his doctorate in Audiology from A.T. Still University—Arizona School of Health Sciences, and his B.S. in Communication Sciences and Disorders and M.S. in Audiology from Brigham Young University. Dr. Ghent has spent two decades on the prevention and remediation of hearing loss through consulting services in auditory research, clinical audiology, teaching audiology coursework at the University of Utah and Brigham Young University, as a Senior Research Audiologist at the Center for Amplification and Hearing Research at Sonic Innovations, and operating the Musician's Hearing Institute in Southern California. Prior to becoming an audiologist, Dr. Ghent was employed as an audio and electrical engineer. He is a life-long musician.

Gregory Flamme is an Associate Professor in the Department of Speech Pathology and Audiology at Western Michigan University. His research interests include the study of hearing and other health outcomes in a rural Midwestern cohort, hearing loss prevention strategies for rural adolescents, everyday exposures to risk factors for hearing impairment, and hearing aid benefit and satisfaction.

Robert Ghent, Au.D. - Honeywell Safety Products | USA
Disclosure: Financial - Employed by Honeywell Safety Products and receives a salary.
Nonfinancial - No relevant nonfinancial relationships exist.

Greg Flamme is an Associate Professor in the Department of Speech Pathology and Audiology at Western Michigan University. His research interests include the study of hearing and other health outcomes in a rural Midwestern cohort, hearing loss prevention strategies for rural adolescents, everyday exposures to risk factors for hearing impairment, and hearing aid benefit and satisfaction.

Brian Fligor, Sc.D. - Boston Children's Hospital | USA
Disclosure: Brian Fligor, Sc.D. has no relevant financial or nonfinancial relationships to disclose.

James Jerome, M.A., CCC-A - Workplace INTEGRA | USA
Disclosure: James Jerome, M.A., CCC-A has no relevant financial or nonfinancial relationships to disclose.

Edward Hayes is working towards his B.S. in Environmental Health Sciences at Clarkson University. He is currently a research intern at the Yale Occupational and Environmental Medicine Program for the Daily Exposure Monitoring of Noise study funded by NIOSH. He is also the current president of the AIHA Student Chapter at Clarkson University.

Edward Hayes - Clarkson University | USA
Disclosure: Edward Hayes has no relevant financial or nonfinancial relationships to disclose.

Robert Ghent, Jr., Au.D. is Research Audiologist and Manager of the Howard Leight Acoustical Testing Laboratory at Honeywell Safety Products in San Diego, CA. He is also a member of the DiscoverEar Zone Committee for AudiologyNOW! Dr. Ghent received his doctorate in Audiology from A.T. Still University—Arizona School of Health Sciences, and his B.S. in Communication Sciences and Disorders and M.S. in Audiology from Brigham Young University. Dr. Ghent has spent two decades on the prevention and remediation of hearing loss through consulting services in auditory research, clinical audiology, teaching audiology coursework at the University of Utah and Brigham Young University, as a Senior Research Audiologist at the Center for Amplification and Hearing Research at Sonic Innovations, and operating the Musician's Hearing Institute in Southern California. Prior to becoming an audiologist, Dr. Ghent was employed as an audio and electrical engineer. He is a life-long musician.

Edward Hayes - Clarkson University | USA
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Gregory Flamme, Ph.D. - Western Michigan University | USA
Disclosure: Financial - Conducts research for NIOSH and receives research contract.
Nonfinancial - No relevant nonfinancial relationships exist.

James Jerome, M.A., CCC-A - Workplace INTEGRA | USA
Disclosure: James Jerome, M.A., CCC-A has no relevant financial or nonfinancial relationships to disclose.

Edward Hayes is working towards his B.S. in Environmental Health Sciences at Clarkson University. He is currently a research intern at the Yale Occupational and Environmental Medicine Program for the Daily Exposure Monitoring of Noise study funded by NIOSH. He is also the current president of the AIHA Student Chapter at Clarkson University.

Edward Hayes - Clarkson University | USA
Disclosure: Edward Hayes has no relevant financial or nonfinancial relationships to disclose.

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Brian Fligor, Sc.D. - Boston Children's Hospital | USA
Disclosure: Brian Fligor, Sc.D. has no relevant financial or nonfinancial relationships to disclose.

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Gregory Flamme, Ph.D. - Western Michigan University | USA
Disclosure: Financial - Conducts research for NIOSH and receives research contract.
Nonfinancial - No relevant nonfinancial relationships exist.

James Jerome, M.A., CCC-A - Workplace INTEGRA | USA
Disclosure: James Jerome, M.A., CCC-A has no relevant financial or nonfinancial relationships to disclose.

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Edward Hayes - Clarkson University | USA
Disclosure: Edward Hayes has no relevant financial or nonfinancial relationships to disclose.

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Brian Fligor, Sc.D. - Boston Children's Hospital | USA
Disclosure: Brian Fligor, Sc.D. has no relevant financial or nonfinancial relationships to disclose.

Robert M. Ghent, Jr., Au.D. is Research Audiologist and Manager of the Howard Leight Acoustical Testing Laboratory at Honeywell Safety Products in San Diego, CA. He is also a member of the DiscoverEar Zone Committee for AudiologyNOW! Dr. Ghent received his doctorate in Audiology from A.T. Still University—Arizona School of Health Sciences, and his B.S. in Communication Sciences and Disorders and M.S. in Audiology from Brigham Young University. Dr. Ghent has spent two decades on the prevention and remediation of hearing loss through consulting services in auditory research, clinical audiology, teaching audiology coursework at the University of Utah and Brigham Young University, as a Senior Research Audiologist at the Center for Amplification and Hearing Research at Sonic Innovations, and operating the Musician's Hearing Institute in Southern California. Prior to becoming an audiologist, Dr. Ghent was employed as an audio and electrical engineer. He is a life-long musician.
Mead Killion, Ph.D. - Etymotic Research, Northwestern University | USA
Disclosure: Financial - Salary, Royalty, hold patent on equipment, Grants, and Ownership Interests with Etymotic Research, Inc. Nonfinancial - No relevant nonfinancial relationships exist.
Mead Killion is the founder and Chief Technology Officer of Etymotic Research, an R&D organization whose mission includes: 1) Helping people hear, 2) Helping people preserve their hearing, 3) Helping people enjoy hearing, and 4) Improving hearing tests. Killion is an Adjunct Professor of Audiology at Northwestern University. He holds two degrees in mathematics and a third degree in audiology plus an honorary doctor of science from Wabash College. He has published 80 papers and 19 book chapters in the fields of acoustics, psychoacoustics, transducers, and hearing aids, and has lectured in 19 foreign countries. Killion helped design several generations of hearing aid microphones, earphones and integrated circuit amplifiers. His research has resulted in dramatic increases in the sound quality of hearing aids, earplugs, and earphones. As a consultant to the Chicago Symphony Orchestra, he has been active in introducing high fidelity hearing protection for musicians. He is a member of the Board of Trustees of VanderCook College of Music.

Keila Knobel, Ph.D. - University of Campinas | Brazil
Disclosure: Keila Knobel, Ph.D. has no relevant financial or nonfinancial relationships to disclose.
Keila is currently an Audiologist. She has worked on the evaluation and treatment of patients with tinnitus, hyperacusis and (central) auditory processing disorders. For the past three years she has been dedicated to preventing NIHL among children and teenagers by studying the culture that lies behind exposures to loud sounds and by developing and researching a Brazilian version to the Dangerous Decibels® educational program. Keila is also interested in classroom noise control and hearing screening for scholars.

Jeffrey Komrower - Noise Control Engineering, Inc. | USA
Disclosure: Jeffrey Komrower has no financial or nonfinancial relationships to disclose.
Mr. Komrower is a Senior Engineer at Noise Control Engineering in Billerica, MA where he is currently under contract to the Office of Naval Research on a major program to reduce Noise Induced Hearing Loss of our warfighters and also is working with the US Department of the Interior’s Bureau of Reclamation to reduce noise levels in hydroelectric powerplants. He has been in the noise, vibration and shock field for over 30 years with previous experience at LMS North America, Zonic Corporation, NKF Engineering and General Dynamics Electric Boat Division. Mr. Komrower received his B.S. in Mechanical Engineering from Rensselaer Polytechnic Institute in Troy, NY and his M.S. in Ocean Engineering with an acoustics specialty from Florida Atlantic University in Boca Raton, FL. He is the author of over 70 technical papers and reports.
Colleen Le Prell, Ph.D. - Department of Speech, Language, and Hearing Sciences, University of Florida | USA
Disclosure: Colleen Le Prell, Ph.D. has no relevant financial or nonfinancial relationships to disclose.
Colleen Le Prell, Ph.D., is an Associate Professor in the Department of Speech, Language, and Hearing Sciences at the University of Florida, where she also directs the Center for Hearing Research. She has received research funding from the NIH, foundations, and industry. Current research programs in her laboratory include efforts to identify and prevent the progression of biochemical processes that lead to cell death in the inner ear, as well as collaborative translational research programs directed at prevention of noise-induced hearing loss in human subjects using novel therapeutics. Dr. Le Prell is an editor of the 2011 Springer Handbook, “Noise-Induced Hearing Loss: Scientific Advances,” she is serving as Director of Education for the National Hearing Conservation Association (2012-2013), and she teaches hearing conservation and research methods courses for Au.D. students at UF.

Edward Lobarinas, Ph.D. - University of Florida | USA
Disclosure: Edward Lobarinas, Ph.D. has no relevant financial or nonfinancial relationships to disclose.
Dr. Edward Lobarinas is an Assistant Professor at the University of Florida’s Department of Speech, Language and Hearing Sciences. He received his Ph.D. from the State University of New York at Buffalo in Hearing Science/Audiology in 2006. Originally trained in Behavioral Pharmacology at Rutgers University where he did his undergraduate education, he has focused his research on finding treatments for tinnitus using animal models and on perceptual consequences of noise, blast and drug induced hearing loss. Dr. Lobarinas developed an animal model of tinnitus and has continued to explore novel treatments for tinnitus as well as using objective measures such as brain imaging to find neural correlates of tinnitus. Dr. Lobarinas is a member of the American Speech and Hearing Association, the American Academy of Audiology, and has served as a grant reviewer for the American Tinnitus Association, Tinnitus Research Initiative, Veterans Health Administration, and the Department of Defense. For his research efforts, Dr. Lobarinas has received funding from the National Institute of Health, the American Tinnitus Association, and the Tinnitus Research initiative.

Elizabeth Maples, Ph.D. - University of Alabama at Birmingham | USA
Disclosure: Financial - Employed by the University of Alabama and receives a salary.
Nonfinancial - No relevant nonfinancial relationships exist.
Elizabeth H. Maples, Ph.D. earned her Ph.D. in Health Education / Health Promotion from a joint program with the University of Alabama at Birmingham and University of Alabama. She is Deputy Director for the Deep South Center for Occupational Health and Safety (NIOSH ERC at UAB and Auburn University) and an Assistant Professor in the UAB School of Public Health, Environmental Health Sciences. Elizabeth works with graduate students that come — literally - from all corners of the world. They come with a desire to make a difference in worker health and safety. When offering continuing education programs, she has the opportunity to meet practitioners in safety and health — an incredible group of folks that also want to make a difference. She was honored to receive the Safety Professional of the Year for Alabama by the AL Chapter of the American Society of Safety Engineers in January 2011.

Elizabeth Masterson, Ph.D., C.P.H., C.O.H.C. - National Institute for Occupational Safety and Health | USA
Disclosure: Elizabeth Masterson, Ph.D., C.P.H., C.O.H.C. has no relevant financial or nonfinancial relationships to disclose.
Elizabeth Masterson is an Epidemiologist in the Surveillance Branch of the Division of Surveillance, Hazard Evaluations and Field Studies at the National Institute for Occupational Safety and Health, Cincinnati, Ohio. She has been working in Public and Environmental Health for 16 years and began hearing loss surveillance in 2010. She is certified in Public Health and received a Ph.D. in Environmental Health/Epidemiology from the University of Cincinnati in 2012.

Deanna Meinke, Ph.D. - University of Northern Colorado | USA
Disclosure: Deanna Meinke, Ph.D. has no relevant financial or nonfinancial relationships to disclose.
Dr. Deanna Meinke is currently an Associate Professor of Audiology and Speech-Language Sciences at the University of Northern Colorado. She has served as past president of the National Hearing Conservation Association (NHCA) and the Colorado Academy of Audiology. Presently, she chairs the National Institute for Occupational Safety and Health (NIOSH) “Safe-in-Sound Expert Committee” and the NHCA Task Force on Children and Noise. At UNC, her research interests include recreational firearm sound levels, hearing protector performance in children and the use of distortion product otoacoustic emissions for the early detection and monitoring of noise-induced hearing loss, work which is funded by the Office of Naval Research (ONR). Her passion for hearing loss prevention targeting children is highlighted by her collaborations with colleagues from the Oregon Health and Science University in the delivery of Dangerous Decibels® educator training workshops in the U.S., Canada and New Zealand.

Kevin Michael, Ph.D. - Michael & Associates, Inc. | USA
Nonfinancial - No relevant nonfinancial relationships exist.
Dr. Michael is President of Michael & Associates, Inc, an independent accredited psychoacoustics laboratory in State College, PA. The Michael & Associates test laboratory evaluates hearing protectors to American, Australian and European test standards. In 2011, the laboratory built an impulse noise test facility using the BC Precision Tool shock tube and the GRAS 45CB artificial test fixture. In 2012, the laboratory has constructed a hemispheric array of speakers in a non-reverberant test space to facilitate quantitative evaluations of auditory localization.
Vishakha Rawool obtained her Ph.D. from Purdue University and completed a post-doctoral fellowship at Johns Hopkins University. She is currently Disclosure: Vishakha Rawool, Ph.D., CCC-A has no relevant financial or nonfinancial relationships to disclose. Vishakha Rawool, Ph.D., CCC-A - West Virginia University | USA populations including infants and older adults. She has extensive clinical experience in providing comprehensive audiological services to all Educational, and Home Settings (2011, Thieme)' . She has several publications to her credit including a text book titled 'Hearing Conservation In Occupational, Recreational, Industrial Audiology' .

Ian O’Brien is a researcher, audiologist, and musician with the Queensland Symphony Orchestra and a former sound engineer. His ongoing career as a performer spans twenty years. Ian began researching the problem of noise exposure to musicians over a decade ago and had since completed a Masters of Philosophy on the subject and a Masters in Audiology. Ian is the author of a landmark study into the nature of orchestral noise, has published widely in the field and continues his research as a member of the University of Sydney’s Sound Practice Project. He devised a groundbreaking hearing conservation strategy for the Queensland Symphony Orchestra and regularly consults to musicians, music teachers, professional orchestras, music institutions and schools on their own strategies. In 2011, Ian co-founded Musicians’ Hearing Services, Australia’s only audiology clinic dedicated to performing artists.

Richard Neitzel, Ph.D., C.I.H. - University of Michigan | USA Disclosure: Richard Neitzel, Ph.D., C.I.H. has no relevant financial or nonfinancial relationships to disclose. Rick is an Assistant Professor in the Risk Science Center within the University of Michigan's Department of Environmental Health Sciences. He received a Ph.D. in Environmental and Occupational Hygiene from the University of Washington in 2009, and has been a Certified Industrial Hygienist since 2003. He has been conducting research on noise and hearing loss since 1997. His current research interests include quantitative and subjective exposure assessment in occupational and non-occupational settings and development and evaluation of effective occupational health interventions and controls.

CAPT William Murphy, Ph.D. - National Institute for Occupational Safety and Health / USPHS | USA Disclosure: CAPT William Murphy, Ph.D. has no relevant financial or nonfinancial relationships to disclose. CAPT William Murphy is a co-leader of the Hearing Loss Prevention Team in the Engineering and Physical Hazards branch of the Division of Applied Research and Technology at the National Institute for Occupational Safety and Health. His research has specialized in measurement and rating of hearing protection devices, fit testing of hearing protection devices and in the assessment of impulse noise and its effects on hearing. He has served as an officer in the Commissioned Corps of the United States Public Health Service since 1993.

Richard Neitzel, Ph.D., C.I.H. - University of Michigan | USA Disclosure: Richard Neitzel, Ph.D., C.I.H. has no relevant financial or nonfinancial relationships to disclose. Rick is an Assistant Professor in the Risk Science Center within the University of Michigan's Department of Environmental Health Sciences. He received a Ph.D. in Environmental and Occupational Hygiene from the University of Washington in 2009, and has been a Certified Industrial Hygienist since 2003. He has been conducting research on noise and hearing loss since 1997. His current research interests include quantitative and subjective exposure assessment in occupational and non-occupational settings and development and evaluation of effective occupational health interventions and controls.

Doug Ohlin, Ph.D. - 3M Corporation | USA Disclosure: Financial - Consulting and independent contractor for 3M Corporation and receives a consulting fee. Nonfinancial - No relevant nonfinancial relationships exist. Dr. Doug Ohlin is an Audiologist who for 35 years served as a consultant to the US Army Hearing Conservation Program. In his consultant capacity he was Program Manager for Hearing Conservation at the US Army Center for Health Promotion and Preventive Medicine, Chair of a Department of Defense Tri-Service Working Group for 13 years and a member of NORA, the National Occupational Research Agenda, for NIOSH. He is past president of the National Hearing Conservation Association and the Military Audiology Society. Dr. Ohlin is a former member of the Advisory Board to the National Research Center for Rehabilitative Auditory Research for Veterans Affairs and is presently a member of the American National Standards Institute Working Group S12/WG 11, and a contract consultant to 3M company.

Thais Morata, Ph.D. - National Institute for Occupational Safety and Health | USA Disclosure: Thais Morata, Ph.D. has no relevant financial or nonfinancial relationships to disclose. Thais C. Morata has worked on hearing loss prevention since 1987, when she consulted for the Brazilian Union of Chemical Workers. She did post-doctoral work at the National Institute for Occupational Safety and Health (NIOSH), USA, where she worked as a research audiologist for 15 years. In November 2012, she became the Coordinator of the National Occupational Research Agenda Manufacturing Sector Council, also within NIOSH. She was a guest researcher at the National Institute for Working Life and the Karolinska Institute in Sweden. Dr. Morata taught graduate courses in Brazil, mentors and collaborates with researchers across the globe. She is a sought after speaker, having been invited to give Keynote Addresses at several international and national conferences. She directs the Safe-in-Sound Excellence in Hearing Loss Prevention Awards™. She is a Founding Associate Editor of the International Journal of Audiology and a member of the Editorial Board of the Cochrane Occupational Safety and Health Review Group. Her pioneering work in noise interactions influenced national and international occupational health policies. In 2008, she received the National Hearing Conservation Association Outstanding Hearing Conservationist Award for her accomplishments.

CAPT William Murphy, Ph.D. - National Institute for Occupational Safety and Health / USPHS | USA Disclosure: CAPT William Murphy, Ph.D. has no relevant financial or nonfinancial relationships to disclose. CAPT William Murphy is a co-leader of the Hearing Loss Prevention Team in the Engineering and Physical Hazards branch of the Division of Applied Research and Technology at the National Institute for Occupational Safety and Health. His research has specialized in measurement and rating of hearing protection devices, fit testing of hearing protection devices and in the assessment of impulse noise and its effects on hearing. He has served as an officer in the Commissioned Corps of the United States Public Health Service since 1993.
Theresa Schulz, Ph.D., CCC-A – Honeywell Safety Products | USA  
**Disclosure: Financial - Employed by Honeywell Safety Products and receives a salary for a management position.**  
**Nonfinancial - No relevant nonfinancial relationships exist.**  
Theresa Schulz received her B.S. (1981) and M.A. (1983) degrees from the University of Texas at Austin and her Ph.D. (1994) from Ohio State University. She was recognized as the US Air Force Outstanding Audiologist of the Year in 1989 and 1996, and received the Elizabeth Guild Award for Contributions to Military Hearing Conservation in 1996. She was nominated by the Air Force for the 2003 National Public Service Award and received the military’s Outstanding Volunteer Medal in 2004 and NHCA’s Michael Beall Threadgill award in 2009 for her extensive work to prevent noise-induced hearing loss both in the military and in the public sector. Theresa is a die-hard NHCAer having served the association in many roles, she is currently President of the NHCA Foundation. Dr. Schulz provides consultation in hearing loss prevention issues and hearing conservation programs and is a frequently requested, enthusiastic speaker on hearing conservation.

Christopher Spankovich, Au.D., Ph.D., M.P.H. - University of Florida | USA  
**Disclosure: Christopher Spankovich, Au.D., Ph.D., M.P.H. has no relevant financial or nonfinancial relationships to disclose.**  
Christopher Spankovich is a Research Assistant Professor in the Department of Speech, Language, and Hearing Sciences at the University of Florida. His academic training includes a Master of Public Health (M.P.H.) from Emory University, a clinical doctorate in audiology (Au.D.) from Rush University, and a research doctorate in hearing sciences (Ph.D.) from Vanderbilt University. Dr. Spankovich’s balance of training spans clinical and basic science domains and is directed at early identification of auditory pathology, prevention of acquired forms of hearing loss, and public health applications in hearing conservation.

JR Stefanson, B.S., C.O.H.C. – United States Army Aeromedical Research Laboratory | USA  
**Disclosure: JR Stefanson, B.S., C.O.H.C., has no relevant financial or nonfinancial relationships to disclose.**  
JR William Stefanson, B.S., C.O.H.C. — General Dynamics Information Technology (USAARL). JR Stefanson is a research analyst in the Acoustics Branch of the United States Army Aeromedical Research Laboratory at Fort Rucker, Alabama. Over the past few years he has been involved with studies on hearing protection, otoacoustic emissions, impulse noise protection, and HPD field attenuation estimation systems. Mr. Stefanson graduated magna cum laude from Troy University with a Bachelor of Science degree in Biology and is accredited by the Council for Accreditation in Occupational Hearing Conservation (CAOHC).

Michael Stewart, Ph.D. - Central Michigan University | USA  
**Disclosure: Michael Stewart, Ph.D. has no relevant financial or nonfinancial relationships to disclose.**  
Dr. Stewart received his M.A. degree in audiology from Western Michigan University and his Ph.D. degree in audiology from Michigan State University. He has owned and operated a private practice in audiology specializing in hearing conservation services and audiological rehabilitation of the hearing-impaired for the past twenty-five years. He is also a professor in the Department of Communication Disorders at Central Michigan University where he teaches doctoral-level classes in audiology and conducts research in various aspects of recreational and industrial hearing conservation.

Valerie Stafford-Mallis, M.B.A. - Alternative Communication Serices (ACS), Inc. | USA  
**Disclosure: Financial - Employed by Alternative Communication Services (ACS), Inc. and receives salary.**  
**Nonfinancial - No relevant nonfinancial relationships exist.**  
Valerie Stafford-Mallis is the Business Development Manager for Alternative Communication Services (ACS) LLC. ACS is a full-service captioning and sign language interpreting company. Prior to joining ACS, she served as Health Educator Consultant for the Florida Coordinating Council for the Deaf and Hard of Hearing (FCCDHH). Valerie has conducted trainings and advises and educates public and private organizations on methods that improve communication access for persons who are deaf, hard of hearing, late-deafened, and deaf-blind. Valerie has consulted for, and served on, the Department of Emergency Management’s Functional Needs Support Services workgroups, the Florida Rehabilitation Council for Vocational Rehabilitation, the Department of Children and Families-Health and Human Services Advisory Committee, the Department of Health’s Disability Task Force, the FCAT Sensitivity and Bias Committees, and the Inclusion Council of the Governor’s Commission on Volunteerism and Community Service.
Susan Strauss, Ph.D., M.S. - University of Pretoria | South Africa  
**Disclosure:** Susan Strauss, Ph.D., M.S., has no relevant financial or nonfinancial relationships to disclose.  
Susan Strauss is an audiologist in South Africa. She graduated at the University of Pretoria in 1994 and has completed a master's degree at this University in 2005 and her Doctoral degree in 2012. She has been working in private practice since 1996 and is currently employed as Head of Research at the Ear Institute in Pretoria (she has held this position since 2006). Strauss has spent five years studying noise-induced hearing loss in the mining industry. She has just successfully completed her Ph.D. in 2012 at the University of Pretoria under supervision of Professor DCD Swanepoel and Professor JW Hall III (University of Florida).

Alice Suter, Ph.D. - Alice Suter & Associates | USA  
**Disclosure:** Alice Suter, Ph.D. has no relevant financial or nonfinancial relationships to disclose.  
Alice Suter, Ph.D. has worked in the area of noise effects and hearing conservation for more than 40 years. She has been influential in noise criteria development, regulation, and public policy, first at the U.S. EPA's Office of Noise Abatement and later at OSHA. At the EPA she participated in the development of criteria for noise effects, including the psychological, extra-auditory physiological, performance, and communication effects, in addition to the effects of noise on hearing. As Senior Scientist and Manager of the Noise Standard at OSHA, she was principal author of the hearing conservation amendment to the noise standard. She has also held positions of Visiting Scientist and Research Audiologist at NIOSH. She is now a consultant living in Portland, OR. She holds fellowship in the Acoustical Society of America and the American Speech-Language-Hearing Association, and has received several honors for her work including the Lifetime Achievement Award from the NHCA.

Jos Verbeek - Finnish Institute of Occupational Health | Finland  
**Disclosure:** Jos Verbeek has no relevant financial or nonfinancial relationships to disclose.  
Jos Verbeek is an occupational health physician from the Netherlands who has been living and working in Finland for the past ten years. Work as an occupational physician in the Netherlands has inspired his research interests which are mainly in the effectiveness of occupational health and safety interventions. He has studied a variety of occupational health topics such as occupational diseases, return to work in back pain and in cancer survivors and systematic reviews. He is happy to be employed by the Finnish Institute of Occupational Health to coordinate the Cochrane Occupational Safety and Health Review Group. In that capacity he has participated in the writing of almost 30 Cochrane Systematic Reviews. The Cochrane OSH Review Group has been very productive as shown by over 80 reviews of occupational health interventions in the Cochrane Library.

Laurie Wells, Au.D. - 3M Corporation | USA  
**Disclosure:** Financial - Employment by 3M Corporation and receives a salary.  
Nonfinancial - No relevant nonfinancial relationships exist.  
Dr. Laurie Wells joined 3M in August, 2012 as the Senior Acoustics Regulatory Affairs Specialist for 3M Occupational Health and Environmental Safety Division. Her primary experience lies in implementation and management of hearing loss prevention programs and in the professional review of the audiometric monitoring program. Laurie holds the Doctor of Audiology degree from Salus University School of Audiology and is Board Certified in Audiology. In addition, she is a certified Professional Supervisor of the Audiometric Monitoring Program© and a certified Course Director for the Council for Accreditation in Occupational Hearing Conservation (CAOHC). Currently, she represents the American Academy of Audiology (AAA) on the CAOHC Council where she holds the elected position of Vice-Chair of Education. Laurie is past-president of the National Hearing Conservation Association (NHCA), and served on the NHCA board from 1999 - 2007. Recently she was awarded the Michael B. Threadgill Award (2012) and the Outstanding Lecturer Award (2011) at the NHCA annual convention.

Nancy Wojcik, M.S. - ExxonMobil Biomedical Sciences, Inc. | USA  
**Disclosure:** Financial - Employment by Exxonmobil Biomedical Sciences, Inc. and receives salary.  
Nonfinancial - No relevant nonfinancial relationships exist.  
Nancy is an epidemiologist in the Occupational and Public Health Division of ExxonMobil Biomedical Sciences, Inc., located in Annandale, NJ. Nancy has over 25 years of experience, earned an M.S. degree from Seton Hall University, and has published on epidemiological methods for cohort mortality studies. She manages the company's employee health surveillance system and has conducted cohort mortality and cancer incidence studies of North American petrochemical workers. Her activities also include identifying and evaluating scientific advancements which can be applied to the company's existing employee health programs such as the Hearing Conservation Program.

Kurt Yankaskas - Office of Naval Research, Code 34 | USA  
**Disclosure:** Kurt Yankaskas has no relevant financial or nonfinancial relationships to disclose.  
Mr. Kurt Yankaskas is the Noise Induced Hearing Loss Program Manager for the Office of Naval Research. He manages a research portfolio investigating noise induced hearing loss and tinnitus, methods to protect Sailors and Marines and how to reduce the noise of military equipment. He has research products that will further the understanding of the mechanisms of noise induced hearing loss and tinnitus, develop micro-acoustic processors for advanced hearing protection, develop the next generation of hearing protection devices with integrated communications/dosimetry and noise control applications for ships and tactical jet engines. He has extensive experience in shipboard noise control. Kurt Yankaskas graduated from Rensselaer Polytechnic Institute in 1974 with a BS degree in Biology and Florida Atlantic University in 1977 with a BS in Ocean Engineering. In his spare time, Mr. Yankaskas is a certified multi-engine, instrument rated pilot and certified scuba instructor. He has been involved in the International Submarine Races for 12 years as safety judge and technical director (www.isssubraces.org). He is also very active in the Boy Scouts of America and serves the National Capitol Area Council as a camp director.
| Poster Presentation #1 | “Effects of Adopt-a-Band Training on Ear Plug Use by High School Marching Band Members”
Presenter: Melissa Aucht - University of Florida | USA
Colleen Le Prell, Ph.D. - University of Florida | USA
Many musicians do not like wearing earplugs, believing earplugs to be uncomfortable or detrimental to hearing their own performance. With better knowledge regarding hearing loss causes and consequences, their attitudes and behaviors might change. Etymotic’s Adopt-a-Band program provides information targeted to musicians, and musician ear plugs for all band members. This study assessed whether the educational program resulted in use of the provided earplugs by members of three high school marching bands. |
| Poster Presentation #2 | “Attenuation of Commercially Available Hearing Protection”
Presenters: Jessica Bever - Wichita State University | USA
Raymond Hull, Ph.D., CCC-SLP/A - Wichita State University | USA
Douglas F. Parham, Ph.D., CCC-SLP - Wichita State University | USA
The goal of this study was to examine the attenuation characteristics of commercially available hearing protection, to determine their actual protective value. Normal hearing subjects were tested in a soundproof free field environment to obtain thresholds for pure tones with five representative commercially available hearing protectors. These results confirmed that the attenuation provided by that sample of commercially available hearing protection is comparable to the manufacturer’s Noise Reduction Rating. |
| Poster Presentation #3 | “Threshold Shift and Effective HCP for Children of Traditional Art Performance Group in Taiwan”
Presenters: Hsiao-Chuan Chen, Ph.D. - National Kaohsiung Normal University | Taiwan
Sumali Maroonroge, Ph.D. - Texas A&M International University | USA
Sin-Heui Wang, M.S. - E-Da Hospital | Taiwan
This study was to identify the prevalence of noise-induced hearing loss (NITS) among 170 children who joined Traditional art performance group and aged between 10 to 15. Results indicated NITS was 2.9 % and 15.9% based on Niskar’s and Lin’s definitions. NITS was mostly unilateral and with 6k Hz-notch. Attributes related to higher incidence were age, gender and school location. The brief hearing conservation program was effective in providing knowledge and behavior change in these children. |
| Poster Presentation #4 | “Long-term Efficacy of a Hearing Conservation Program on Changing Attitude Among Racially Diverse Children”
Presenters: Shawna Dell, Au.D. - University of Florida | USA
Alice Holmes, Ph.D. - University of Florida | USA
Noise induced Hearing Loss (NIHL) affects 5.2 million US children and recent literature has shown this number is increasing by as much as 30%. However, NIHL is preventable and an evidence-based practice to combat NIHL is through the use of a hearing conservation program (HCP). This project examined the long-term efficacy of a HCP in modifying positive attitudes towards noise and increasing the knowledge of the dangers of noise among racially diverse children. |
| Poster Presentation #5 | “Hazardous Noise Levels Among Popular Infant/Toddler Toys”
Presenters: Shawna Dell, Au.D. - University of Florida | USA
Brittany Hensley, Au.D. - University of Florida | USA
Hannah Siburt, Au.D. - University of Florida | USA
Alice Holmes, Ph.D. - University of Florida | USA
The National Institute for Occupational Safety and Health (NIOSH) advises that the permissible exposure level is 85 dBA with a 3 dB exchange rate; therefore, a person exposed to sound sources with an intensity of 91 dBA can only be exposed for two hours before the auditory system is affected. We measured the sound output of popular infant/toddler toys. Out of 17 toys, seven are potentially hazardous to young ears. |
| Poster Presentation #6 | “Noise Exposure Among High School Student Musicians”
Presenters: Eloise Dietz - Hanover High School | USA
Jessica Weiss - Hanover High School | USA
In this study, we built a test mannequin to measure the listening levels of a sample of high school students and determined that 13% of these students exceeded recommended daily noise exposure limits, with boys listening at a significantly higher level than girls. Additional measurements revealed that 20% of musicians in the school band exceeded the recommended limit during school practice sessions. Combined exposure from both these sources further increased their risk of hearing damage. |
| Poster Presentation #7 | “Sound Level Measurements During Concerts and Hearing Complaints in Pop-Rock Musicians”
Presenters: Ana Claudia Fiorini, Ph.D. - PUC-SP and UNIFESP | Brazil
Joana D’Arc Aparecida Salgado, M.S., - PUC-SP | Brazil
Teresa Maria Momemsohn-Santos, Ph.D., PUC-SP | Brazil
Adrian Fuente, Ph.D. - Universidad de Chile | Chile
Objective: To measure sound levels and to identify auditory and non-auditory complaints in pop-rock musicians. Method: 34 male pop-rock musicians aged between 26 and 60 years were evaluated. The subjects answered a questionnaire and noise dosimetry was carried out in the musicians during a band concert in a nightclub in São Paulo. Results: The prevalence of auditory complaints, intolerance to loud sounds and the occluded ear sensation was 20.6%. 50% of the sample reported that they believe that their current music exposures can deteriorate their hearing. The highest sound level obtained on Lmax, Lavg and Lmin in dB (A) were of 129.6; 119.1 and 94.5, respectively. These values were above the maximum daily level allowed, according to the occupational legislation in Brazil. |
**Poster Presentation #8**

“The NIOSH Hearing Protector Compendium, It Really has Been Updated!! See What is Inside”  
**Presenter: Pam Graydon - National Institute for Occupational Safety and Health | USA**  
This NIOSH Hearing Protection Device Compendium is able to list the ratings from several countries so the user will be able to select their location and the ratings will be reported accordingly. Multiple avenues of inquiry will facilitate the selection of appropriate hearing protection devices (HPDs). Complimentary training information will be developed to inform the public on the effective use of HPDs. For instance, the Compendium is hyperlinked to other NIOSH products and video training. Recommendations for Hearing Loss Prevention Programs and noise control development and implementation are also available. This information will make it easier for users to assess potential hazards in their workplaces and select the correct forms of protection. We need your information to populate the database with products that are currently available. To make sure your products are included stop by the NIOSH exhibit booth.

**Poster Presentation #9**

“Hearing Loss in the Dental Office: The Effects of High Speed Dental Drills on Dentists’ Hearing”  
**Presenter: Kristzina Johnson, Au.D. Student - East Tennessee State University | USA**  
Hearing test results of 23 dentists obtained before and after working hours are compared to determine if dentists experience any temporary hearing loss. The aim of the project is to determine whether dental drills cause hearing loss and to document the consequences of the loss. Hearing evaluations include pure-tone audiometry, middle-ear testing, and measurements of otoacoustic emissions. The results are expected to convince dentists of the danger of noise exposure and the need for hearing protection.

**Poster Presentation #10**

“A Proposed Model for Community-Based Hearing Health Intervention for Agricultural Youth”  
**Presenters: Marjorie McCullagh, Ph.D., R.N. - University of Michigan | USA**  
Evidence shows a higher incidence of hearing loss in children recently, and that those who participate in musical experiences may be at risk for music-induced hearing loss. School-age may be the ideal time for providing education regarding hearing conservation. A program designed to motivate young musicians to preserve their hearing by educating them in a fun and interactive way regarding sound levels to which they are exposed and hearing conservation options will be described.

**Poster Presentation #11**

“Effects of a Pilot Intervention on Use of Hearing Protectors”  
**Presenter: Marjorie McCullagh, Ph.D., R.N. - University of Michigan | USA**  
Despite high rates of noise exposure and hearing loss, farm operators’ use of hearing protection devices (HPDs) is low. This study examined the effects of introduction of an assortment of HPDs on their use among farm operators. A random sample (n=32) received an assortment of HPDs. At post-test, rates of HPD use improved 41%; patterns of selection of type of HPDs was described. Results will be used to develop interventions to increase HPD use.

**Poster Presentation #12**

“The Use of Earphones in Populations of 11 to 25 Years Old”  
**Presenters: Teresa Momensohn-Santos - PUC São Paulo | Brazil**  
This study surveyed teenagers and young adult’s knowledge, attitudes and auditory habits in relation to the use of earphones to listen to music and sound exposure. Results: a total of 500 questionnaires were responded: 63% (314) female and 37% male (186). Age group with the highest prevalence was young people between 19 and 25 years (78%). Use of earphones with PLD was “Yes” in 390 (76%), and 38% (192) use them every day.

**Poster Presentation #13**

“Impulse Noise Paradigm Developed for Otoprotection Trials”  
**Presenters: Kari Morgenstein, B.S. - University of Florida | USA**  
Pure-tone thresholds and distortion product otoacoustic emission amplitude were measured before and after exposure to video game-based shooting noise. The number of and level of digitally created shotgun blasts were sequentially increased to determine the lowest exposure parameters at which small, temporary sound-induced changes were first observed. The goal of the project is the development of a laboratory-based video game-based impulse noise model that can be used to safely screen novel therapeutics for potential otoprotective benefit.
| Poster Presentation #15 | “Accuracy of Sound Level Meter Applications for the iPhone”  
Presenters: Daniel Rudyard Nast - University of Florida | USA  
William Speer - University of Florida | USA  
Colleen Le Prell, Ph.D., University of Florida | USA  

Widespread use of smart phones and availability of inexpensive sound level meter (SLM) “apps” has created an opportunity for people to carry a SLM with them at all times, potentially helping to advance hearing conservation efforts in noisy places. The accuracy of a variety of SLM applications loaded on a new iPhone was assessed here. Sound level measurements (in dBA and dBC) from the apps were compared to measurements made using a Class 1 SLM. Differences between iPhone applications and the SLM were observed. |
| --- | --- |
| Poster Presentation #16 | “The Incidence of Noise-Induced Hearing Loss of Freshman Students Who Have Participated in Music Activities Prior to Attending the University of Southern Maine or the University of Maine”  
Presenters: Douglas Owens, D.A. - Old Dominion University | USA  
Brian Toy, Ph.D., A.T.C. - University of Southern Maine | USA  
Thomas Parchman, D.M.A. - University of Southern Maine | USA  

This pilot study investigates the incidence of noise-induced hearing loss among university freshman musicians (9 female, 12 male). Hearing threshold tests revealed that 86% of subjects (N=18) had the audiometric notch, potentially indicating noise-induced hearing loss in either one or both ears. 23% (N=5) had the audiometric notch in both ears; 61% (N=13) had the audiometric notch in one ear. 14% of subjects (N=3) exhibited no hearing loss or losses of 5 dB or less. |
| Poster Presentation #17 | “Noise Exposure Estimates of PLD Users at the University of Florida”  
Presenters: Yunea Park, B.A., B.S. - University of Florida | USA  
Diana Guercio, B.A. - University of Florida | USA  
Victoria Ledon, B.A. - University of Florida | USA  
Colleen Le Prell, Ph.D. - University of Florida | USA  

Current listening levels for college students using personal listening devices (PLDS) were measured and normal use patterns were surveyed to determine the percentage of the population at risk for noise-induced hearing loss (NIHL) as a consequence of PLD use. Subjects were sampled at three different locations (gym, library, campus square) to determine whether listening levels vary with location. Preliminary data indicate a subset of users may be at risk for developing NIHL. |
| Poster Presentation #18 | “Asymmetric Hearing Loss in Career Firefighters”  
Presenters: Stephanie Phelps, R.N., M.S. - University of California San Francisco | USA  
OiSaeng Hong, R.N., Ph.D. - University of California San Francisco | USA  

Firefighters are exposed to intermittent loud noises that cause hearing loss. Asymmetrical hearing loss impacts the ability to localize sounds, a critical aspect for firefighters’ work. This study investigated the prevalence of asymmetric hearing loss and compared hearing threshold levels between ears. Of 425 participants, 13% exhibited asymmetric hearing loss. The left ear showed significantly poorer hearing ability at frequencies of 2–6 kHz than the right ear (p<0.05). Effective hearing conservation programs are warranted for firefighters. |
| Poster Presentation #19 | “Acoustical Evaluation of Personics Balloon Technology: Remarkable Findings”  
Presenter: Hilary Rosenstrauch, Au.D. - Personics Labs | USA  

Attenuation capabilities and perceived occlusion effect are critical factors considered in the selection of HPDs. New sound mitigating technology focused around these issues is being developed by Personics. Initial MIRE studies of their passive balloon yielded findings of a high-pass filter frequency response, high levels of attenuation and minimal occlusion effect. This poster will highlight the initial research findings and those obtained in a future study planned in a formal laboratory setting at Virginia Tech. |
| Poster Presentation #20 | “Towards a ‘Radio-Acoustic Virtual Environment’ in Noisy Work Environments”  
Presenters: Rachel Bou Serhal, Doctoral Candidate - Ecole de technologie superieure | Canada  
Jeremie Voix, Associate Professor - Ecole de technologie superieure | Canada  
Tiago Falk, Associate Professor - Institut National de la recherche scientifique (INRS) | Canada  

Using radio communication in noisy environments is a practical and affordable solution allowing communication between workers with hearing protection devices. Traditionally, one of its weaknesses lies in the lack of designating receivers: all those carrying a radio are subjected to the broadcasted signal. A new concept of a “radio-acoustical virtual environment” where the radio signal will only be received by workers within a given spatial range depending on the user’s vocal effort and background noise level is presented. |
| Poster Presentation #21 | “Temporary Threshold Shift in Musicians Measured by DPOAE and Pure-Tone Audiometry”  
Presenter: Jessica Stamey - University of Kansas | USA  

This study examined temporary threshold shifts in musicians by looking at changes in DPOAE as well as any shifts in pure-tone audiometry. Musicians rehearsed individually for less than one hour and assessments were performed to see if a temporary threshold shift occurred and whether a shift was evident on both DPOAE and pure-tone audiometry. Five male subjects participated, whose ages ranged from 20 to 35 years, and each played a different instrument. |
| Poster Presentation #22 | “Sound Awareness for Everyone: Community Hearing Loss Prevention Programs at the University of Iowa”  
**Presenters:** Karen Steurer, Au.D. Graduate Student - University of Iowa Department of Communication Sciences and Disorders | USA  
Elizabeth Stangl, Au.D., CCC-A - University of Iowa Department of Communication Sciences and Disorders | USA  
Stephanie Fleckenstein, Au.D., CCC-A - University of Iowa Department of Communication Sciences and Disorders | USA  
Britany Barber, Au.D. Graduate Student - University of Iowa Department of Communication Sciences and Disorders | USA  

The purpose of our poster presentation is to share our approach to promoting hearing health care in the community. We will focus on programs designed for specific audiences. Target populations include young adults in general as well as college students specifically, preschool as well as school-aged children, and musicians of all ages. Ways to implement these outreach programs will be addressed. |
| Poster Presentation #23 | “Validating the Effective Attenuation of Passive Hearing Protectors: A TTS Study”  
**Presenter:** Melissa Theis - Oak Ridge Institute for Science and Education | USA  

The purpose of this study was to measure effective attenuation of passive hearing protectors in terms of temporary threshold shift (TTS) response for individual human subjects with and without hearing protection and compare this response to REAT attenuation results. This presentation will discuss how properly conducted TTS studies are safe for human subjects and how REAT attenuation values, when compared to effective attenuation values using TTS, underestimated levels of noise attenuation for passive hearing protectors. |
| Poster Presentation #24 | “The Effect of Instruction on the Use of Hearing Protective Devices”  
**Presenters:** Jacquelyn Youde, Au.D., CCC-A - Vanderbilt Bill Wilkerson Center | USA  
Ross Roese, Ph.D., CCC-A - University of Texas at Dallas Callier Center for Communication Disorders | USA  

Introduction: This study’s aim was to determine how instruction type effected the attenuation of ER-20 hearing protective device (HPD) in inexperienced HPD users. Methods: Thirty normal hearing adult participants were randomly assigned into three groups. Real ear measurements were completed prior to receiving the HPD, using the HPD without instruction and following instruction. Each group received one method of instruction: a) no instruction b) manufacturer instructions or c) oral/visual instructions. Results/Conclusions: Indicate higher attenuation with instruction, however no significant difference was found between instruction methods. |
Jessica Bever - Wichita State University | USA  
*Disclosure: Jessica Bever has no relevant financial or nonfinancial relationships to disclose.*  
Jessica Bever, B.A., is completing the 4th year residency for her Doctorate in Audiology from Wichita State University. She is currently an intern at The Scholl Center in Tulsa, Oklahoma. She completed a NIH T-35 grant summer research traineeship at the National Center for Rehabilitative Auditory Research in Portland, Oregon this past summer where she worked under the guidance of Dr. Frederick Gallun on research exploring hearing aids and complex listening environments.

Shawna Dell, Au.D. - University of Florida | USA  
*Disclosure: Shawna Dell has no relevant financial or nonfinancial relationships to disclose.*  
Shawna M. Dell is currently a Ph.D. candidate at the University of Florida. She received her Au.D. and certification in Public Health with a specialization in Social Behavioral Science at the University of Florida. Dr. Dell's research interests include Hearing conservation and Prevention across the age span, Health Disparities among Diverse groups, Public Health, and Aural Rehabilitation.

Hsiao-Chuan Chen, Ph.D. - National Kaohsiung Normal University | Taiwan  
*Disclosure: Hsiao-Chuan Chen, Ph.D. has no relevant financial or nonfinancial relationships to disclose.*  
Hsiao-Chuan Chen is a professor of Graduate Institute of Audiology and Speech therapy in National Kaohsiung Normal University, Taiwan. She got her Ph.D. degree in hearing science from the University of Tennessee in 1989. Hearing conservation is one of her major research interests.

Eloise Dietz - Hanover High School | USA  
*Disclosure: Eloise Dietz has no relevant financial or nonfinancial relationships to disclose.*  
Eloise is a senior at Hanover High School. She became interested in noise exposure while attending the NHCA conference last year, where she was introduced to Jolene. She and Jessica Weiss completed this work as an extra-curricular activity to investigate the noise exposure of students at their high school.

Ana Claudia Fiorini, Ph.D. - UNIFESP/PUCSP | Brazil  
*Disclosure: Ana Claudia Fiorini, Ph.D. has no relevant financial or nonfinancial relationships to disclose.*  
Ana Claudia Fiorini is an audiologist who has been working in the area of hearing loss prevention since 1988. A native of Brazil, she earned degrees in Speech Pathology and Audiology, and Communication Disorders from the Pontifical Catholic University of São Paulo (B.S.; M.S.) and the University of São Paulo (Ph.D.). A professor of Audiology and Speech-Language Sciences at the Federal University of São Paulo and Catholic University of São Paulo (UNIFESP and PUCSP).
Danielle Kelsay, M.S., CCC-A - University of Iowa Department of Communication Sciences and Disorders | USA

Disclosure: Danielle Kelsay, M.S., CCC-A has no relevant financial or nonfinancial relationships to disclose.

Danielle Kelsay received her B.S. in Biology and her M.A. in Audiology from the University of Iowa. Currently, Danielle is a Clinical Associate Professor in the Department of Communication Sciences and Disorders at the University of Iowa, where she has worked for the past 10 years. Danielle’s previous position as an Audiologist in the Department of Otolaryngology at The University of Iowa Hospitals and Clinics provided her with 15 years of clinical and research experience. Danielle’s current responsibilities include clinical instruction of graduate students in Audiology and Speech Language Pathology in the areas of hearing loss prevention and identification, diagnostic Audiology, and aural rehabilitation. Danielle first became interested in hearing loss prevention while working on a capstone project with a former Au.D. student in 2008. She is the chair of UISAFE (University of Iowa Sound Awareness for Everyone), a group of faculty, staff and students at the University of Iowa whose mission is to promote healthy hearing practices in the local community and the state.

Marjorie McCullagh, Ph.D., R.N. - University of Michigan | USA

Disclosure: Marjorie McCullagh, Ph.D., R.N. has no relevant financial or nonfinancial relationships to disclose.

Dr. Marjorie McCullagh is a registered nurse and practiced for many years in hospital and public health settings in New York and North Dakota. While a student at the University of Michigan in 1996, she became interested in the hearing health of farmers. Since that time, she has studied noise exposure, hearing, and hearing protection of this high risk and underserved group. Dr. McCullagh holds a Ph.D. from the University of Michigan in Ann Arbor and currently serves as the Director of Occupational Health Nursing there. She is a nationally recognized expert in prevention of noise-induced hearing loss among agricultural workers.

Teresa Momensohn-Santos - PUC São Paulo | Brazil

Disclosure: Teresa Momensohn-Santos has no relevant financial or nonfinancial relationships to disclose.

Full professor of Audiology at PUC São Paulo.

Krisztina Johnson, Au.D. Student - East Tennessee State University | USA

Disclosure: Krisztina Johnson, Au.D. Student has no relevant financial or nonfinancial relationships to disclose.

Krisztina Johnson grew up in Bekescsaba, Hungary - a small town in the far southeastern part of the country. After graduating from high school in Hungary, she worked as a professional tailor there for four years. She came to the U.S. in 1998 after meeting her future husband, a visiting American English teacher. Krisztina earned her B.S. degree in Microbiology in 2008 from East Tennessee State University (ETSU). She is currently a graduate student in ETSU’s Au.D. program, where her primary research interest is investigating the effects - both medical and financial - of occupational noise. Krisztina is particularly interested in understanding the effects of high speed dental drills on dentists’ hearing and the importance of hearing protection in the dental office.

Pam Graydon, M.S., C.O.H.C. - National Institute for Occupational Safety and Health | USA

Disclosure: Pam Graydon, M.S., C.O.H.C. has no relevant financial or nonfinancial relationships to disclose.

Pam Graydon is an Electronics Engineer who joined the Hearing Loss Prevention Team in 1999. Although she has been working for NIOSH since 1990. She is a Council for Accreditation in Occupational Hearing Conservation certified hearing conservationist. She has been involved with training carpenter apprentices about the benefits of hearing loss prevention and explaining the consequences of not protecting their hearing. She has taught students and teachers about noisy occupations and recreational activities and allowed them to find out how loud they play their I-Pods using a mannequin named Nick.

Kari Morgenstein, B.S. - University of Florida | USA

Disclosure: Kari Morgenstein, B.S. has no relevant financial or nonfinancial relationships to disclose.

Kari Morgenstein is a fourth year Doctor of Audiology student at the University of Florida. She is currently completing her externship at the University of Miami Medical Center and is the past-president of the Student Academy of Audiology (SAA). Kari was a Graduate Research Assistant for Dr. Colleen Le Prell and worked on various projects looking at the effects of significant noise exposure and hearing loss.
Douglas Owens, D.A. - Old Dominion University | USA
Disclosure: Douglas Owens, D.A. has no relevant financial or nonfinancial relationships to disclose.
Douglas T. Owens is an Associate Professor of Music and the F. Ludwig Diehn Endowed Chair of Instrumental Music Education at Old Dominion University in Norfolk, VA. His research emphasis is on music education, musicians' health and music entrepreneurship. He earned the Doctor of Arts degree in Music with emphases in Music Education and Jazz Pedagogy at the University of Northern Colorado. Dr. Owens earned the Master of Music degree in trumpet performance and the Bachelor of Music Education degree at the University of Colorado, Boulder. An experienced music educator since 1986, Dr. Owens was most recently Department Chairperson and an Associate Professor of Music at the University Massachusetts Dartmouth (2010-2012) and Associate Professor of Music Education at the University of Southern Maine (2003-2010). In addition, he has been a music educator at the elementary, middle, and high school levels in California and Wisconsin.

Yunea Park, B.A., B.S. - University of Florida | USA
Disclosure: Yunea Park, B.A., B.S. has no relevant financial or nonfinancial relationships to disclose.
Yunea Park is currently a third year Doctor of Audiology student at the University of Florida where she also obtained a dual degree in Communication Sciences and Disorders (B.A.) and Business Administration (B.S.) in 2009. She is on the board of the Student Academy of Audiology chapter at the University of Florida, and a student member of the American Academy of Audiology and the Florida Academy of Audiology. Upon graduation, she is interested in working with the adult and geriatric populations.

Stephanie Phelps, R.N., M.S. - University of California San Francisco | USA
Disclosure: Stephanie Phelps, R.N., M.S. has no relevant financial or nonfinancial relationships to disclose.
Stephanie Phelps is a Nursing Ph.D. student at the University of California San Francisco. She is nationally certified as an Adult Nurse Practitioner, Occupational Health Nurse Specialist, and Emergency Nurse. Her program of research revolves around identifying and preventing workplace injuries, including hearing loss.

Hilary Rosenstrauch, Au.D. - Personics Labs | USA
Disclosure: Financial - Consulting employee, shareholder, Personics Lab
Nonfinancial - Board of Trustees, American Academy of Audiology Foundation, committee member (various committees) AAA
Hilary Rosenstrauch, Au.D., is the Director of Audiological Research at Personics Labs. She received a Master of Arts in Audiology and Hearing Science from Northwestern University, and Doctor of Audiology from the University of Florida. Prior to joining Personics Labs in 2012, Dr. Rosenstrauch was an assistant professor in the Department of Communication Disorders and Sciences at Rush University and held a position as a research audiologist at GN ReSound. She has been a clinical educator and Au.D. student advocate; she served as National Advisor to NAFDA and is a member of the Rush University Au.D. Advisory Board. Dr. Rosenstrauch is active in professional service and currently serves on the Board of Trustees to the American Academy of Audiology Foundation (AAAF) and various American Academy of Audiology (AAA) committees.

Rachel Bou Serhal, Doctoral Candidate - Ecole de technologie superieure | Canada
Disclosure: Rachel Bou Serhal has no relevant financial or nonfinancial relationships to disclose.
Rachel Bou Serhal completed her B.S. in Electrical Engineering at Michigan State University (MSU), where she was heavily involved with Audio Enthusiasts and Engineers, a student group that promotes project based learning environments and holds weekly educational forums on all things related to audio. She obtained her Master's in Electrical Engineering at MSU in Dec. 2011 on nonlinear control systems. She is now pursuing her Ph.D. at Ecole de technologie superieure (ETS) where her work involves speech signal enhancement and encoding. Her research interests are in hearing protection, speech signal processing, speech perception and nonlinear control techniques.
Jessica Stamey - University of Kansas | USA  
**Disclosure:** Jessica Stamey has no relevant financial or nonfinancial relationships to disclose.  
Jessica Stamey is a fourth year Au.D. student at the University of Kansas. She is currently a Clinical Extern at the Kansas City VA Medical Center. As a former Audio Engineer, Jessica has a special interest in musicians and hearing conservation. As a Graduate student, Jessica founded a hearing conservation group called P.L.U.G.S., Preventing Loss Using Good Sense. P.L.U.G.S. distributes free earplugs and hearing conservation information to patrons at event arenas in the Kansas City area, including the Sprint Center and Allen Fieldhouse.

Karen Steurer, Au.D. Graduate Student - University of Iowa Department of Communication Sciences and Disorders | USA  
**Disclosure:** Karen Steurer, Au.D. Graduate Student has no relevant financial or nonfinancial relationships to disclose.  
Karen Steurer received her B.S. in Communication Disorders from Brigham Young University in 2010. Currently, Karen is a second year Au.D. graduate student at the University of Iowa. Karen is a member of UISAFE (University of Iowa Sound Awareness for Everyone), a group of faculty, staff and students at the University of Iowa whose mission is to promote healthy hearing practices in the local community and the state. It was as a member of UISAFE that Karen first developed an interest in hearing conservation. Karen's capstone project focuses on the development of a hearing conservation program at the University of Iowa School of Music.

Melissa Theis - Oak Ridge Institute for Science and Education | USA  
**Disclosure:**  
Financial - Independent contractor for Oak Ridge Institute for Science and Education and receives a salary.  
Nonfinancial - No relevant nonfinancial relationships exist.  
Melissa Theis began her career in 2003 as an active duty Air Force audiologist. After serving as a clinician for eight years, she was transferred to the Air Force Research Lab at Wright Patterson Air Force Base as a research audiologist. She became involved in project management for studies involving acoustics and hearing protection. Her interests in research prompted her to separate from active duty so that she could return to graduate school and continue to work in the Air Force Research Laboratory as a contractor.

Jessica Weiss – Hanover High School | USA  
**Disclosure:** Jessica Weiss has no relevant financial or nonfinancial relationships to disclose.  
Jessica is a senior at Hanover High School. She and Eloise Dietz constructed an acoustic test fixture in the form of a mannequin with a synthetic ear, called Jolene, in order to measure sound levels of the school's band. They performed extensive analysis on the subject of teen hearing loss among high school musicians and helped promote awareness of this largely unknown risk.

Jacquelyn Youde, Au.D., CCC-A - Vanderbilt Bill Wilkerson Center | USA  
**Disclosure:** Jacquelyn Youde, Au.D., CCC-A has no relevant financial or nonfinancial relationships to disclose.  
Jacquelyn Youde, Au.D. graduated from the University of Texas at Dallas. She works at the Vanderbilt Bill Wilkerson Center specializing in adult and pediatric amplification and is currently developing the hearing conservation program. Dr. Youde enjoys contributing to the field of audiology by volunteering her time for various audiology organizations. She is in the process of returning to graduate school to obtain her Masters in Business Administration.
2014 Call For Papers!

2014 Workshop Submissions
Deadline: July 1, 2013
Submit at: www.hearingconservation.org
Available beginning April 2013

2014 Panel/Poster Submissions
Deadline: July 31, 2013

2014 Call For Program Chair Elect!
See page 6 for details!
Contact nhcaoffice@hearingconservation.org if interested!
NHCA 2013 Continuing Education Credit Instructions

If you are planning to receive continuing education credits offered at this conference, please be aware of the following requirements. All forms, signature sheets and evaluations will be available at the CEU registration table located near the registration desk. Completion of all required materials is the responsibility of the individual.

**ASHA (American Speech-Language-Hearing Association)**

All participants are required to pay $6.25 as well as complete the form provided by ASHA. Fill out the form completely and leave at the CEU registration table. Payment will be verified and information will be forwarded to ASHA following the conference. If you forget to leave your ASHA CEU form with NHCA staff prior to leaving the conference, you may fax the form directly to the NHCA office at 303-458-0002, however all forms MUST be received by Tuesday, March 5, 2013!

**AAA (American Academy of Audiology)**

AAA requires that all participants sign-in at the beginning of the conference and sign-out at the end to receive credit. The sign in/out form will be located at the CEU registration table. You must list your AAA member ID number.

**ABIH (American Board of Industrial Hygiene)**

Participants will need to complete the ABIH Verification Form. A signature is required to verify your attendance which you can request at the registration desk. Please keep this document as proof of attendance for your files.

**AAOHN (American Association of Occupational Health Nurses)**

In order to receive this credit you must sign in and out as well as complete the AAOHN evaluation form provided at the CEU registration table. Once the evaluation is complete return it to the CEU registration table.
Certificate of Completion

This is to certify that

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Attended NHCA’s 38th Annual Hearing Conservation Conference
February 21-23, 2013
St. Petersburg, Florida

American Speech-Language-Hearing Association
1.65 CEU
Provider code: AAOF
Activity number: 0213

American Academy of Audiology
1.75 CEU
Program number: 13NHA-300

American Board of Industrial Hygiene
0.5 IH CM Points per Half day
4 IH CM Points total

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Continuance of Certification Point: 1

Erin Erickson
NHCA Executive Director