

SCIENTIFIC & TECHNOLOGY MEETING

BULLETIN OF THE AMERICAN AUDITORY SOCIETY, FEBRUARY 2018, VOLUME 43, NO. 1





WELCOME TO THE 2018 AMERICAN A

This 45th annual meeting brings updates on the latest developments in science, technology and clinical practice in a friendly and supportive environment. The 2018 program promises three days filled with scholarly presentations, engaging discussions and informal social interactions amidst the good weather and charm of Scottsdale, Arizona.

AAS is grateful for the continued support from NIDCD through a R13 conference grant, which has allowed us to bring outstanding Translational Research and Special Session speakers to the meeting while also supporting Student Travel awards. Join us on Friday afternoon as our NIDCD colleagues provide an update on NIDCD funding opportunities for students and young investigators.

The 2018 AAS program features outstanding submitted posters and podium sessions. As in previous years, our meeting will begin Thursday morning with a series of industry-sponsored presentations.

SPEAKERS AND SPECIAL PROGRAM

The Carhart Lecturer this year is Harvey Dillon, who will tell us about the diagnosis and remediation of those with auditory processing disorders.

Each year, the NIDCD grant funds a Young Investigator to tell his or her story about their journey on the road to becoming an independent investigator. We will hear from Daniel Rasetshwane, our 2018 Young Investigator at 8:00 AM Friday morning.

Our 2018 Translational Research Speakers include presentations on the epigenetics of hearing and deafness (by Karen Avraham), auditory brainstem implants (by Daniel Lee) and the perception of emotional prosody by those with hearing loss and cochlear implants (by Monita Chatterjee). This year, our Saturday afternoon Special Session will enlighten us about Neuroplasticity, with lectures delivered by Daniel Polley, Dan Sanes and Larry Roberts.

I AUDITORY SOCIETY SCIENTIFIC AND TECHNOLOGY CONFERENCE!

AWARDS

Anil Lalwani (AAS President) will host the Awards Luncheon on Friday. We will all pay tribute to the 2018 recipient of the Life Achievement Award, Glenis Long. It is during this luncheon that the Editor of Ear and Hearing, Brenda Ryals, will present the Editor's Award for the best manuscript in our journal.

NIDCD support includes Student Travel Awards, which are given to students to attend the Annual AAS meeting, and present a poster summarizing their research efforts. This year, 21 students were selected in the highly competitive Mentored Graduate Student and Resident Research Poster category. In addition, 17 AuD students who completed T35 Research Traineeships are receiving travel support to participate in our meeting.

To encourage the participation of new investigators in our Annual meeting, AAS has established the New Investigator Travel Award to provide financial support to attend the annual meeting. The four 2018 awardees are Hanin Karawani, Viji Easwar, Jamie Desjardins and Rachel Scheperle, whose outstanding abstracts were selected for podium presentations at the meeting.

SOCIAL EVENT

On Friday evening, the annual AAS Social will be held at the Musical Instrument Museum. We hope you will join us in exploring 'the world of music'.

PROGRAM COMMITTEE

The annual meeting represents a year of planning and requires reviewing the many abstracts submitted. I thank Darla Eastlack, our intrepid Executive Director, for her many organizational talents, and for making sure our 2018 meeting is a huge success. I am indebted to the members of the Program and Abstract Review Committee who have spent many hours reading and critiquing the 200+ abstracts we received to ensure that the 2018 AAS scientific program is of the highest caliber. The 2018 Program Committee members are:

Ruth Bentler	Sumit Dhar	Ravi Krishnan	Ian Mertes	Beth Prieve
Curtis Billings	Pat Feeney	Anil Lalwani	Frank Musiek	Kelly Tremblay
Barbara Cone	Rene Gifford	Sarah Leopold	Peggy Nelson	Chris Zalewski
Rafael Delgado	Fuh-Cherna Jena	Rvan McCreerv	Sheila Pratt	

Finally, the meeting would be meaningless without the several hundred people who join us annually in Scottsdale. I thank you, our AAS members and Annual Meeting attendees, and truly hope that you will enjoy the 2018 meeting of the American Auditory Society

Bob Burkard

PROGRAM CHAIR







7:30 am – 5:00 pm Registration SILVERMAN FOYER

8:00 am – 11:55 am TECHNOLOGY UPDATES

8:00 AM - 8:55 AM TECHNOLOGY UPDATES, SESSION 1

8:00 AM – 8:25 AM First Round

Session 1A Healthcare Consumerism Trends: Practical Updates for Audiologists

Jill Mecklenburger, AuD, ReSound MOHAVE

Session 1B A Variable Speed Compressor for All

Francis Kuk, PhD, Widex ORCA-USA KIVA-HACIENDA

8:30 AM – 8:55 AM Repeat of Sessions 1A - 1B

9:00 AM - 9:55 AM TECHNOLOGY UPDATES, SESSION 2

9:00 AM – 9:25 AM First Round

Session 2A Performance of Interacoustics "Next Generation" ASSR for Pediatric

Assessments

Yvonne Sininger, PhD, Interacoustics MOHAVE

Session 2B Say Hello to Rechargeables Reimagined

Michelle L. Hicks, PhD, Starkey Hearing Technologies KIVA-HACIENDA

9:30 AM – 9:55 AM Repeat of Sessions 2A – 2B

10:00 AM - 10:55 AM TECHNOLOGY UPDATES, SESSION 3

10:00 AM – 10:25 AM First Round

Session 3A On the Future of Hearing Tech Apps

Annette Mazevski, PhD, Oticon, Inc. MOHAVE

Session 3B Improvements to VEMP Testing using SmartEP

Rafael Delgado, PhD, Intelligent Hearing Systems KIVA-HACIENDA

10:30 AM – 10:55 AM Repeat of Sessions 3A – 3B

11:00 AM - 11:55 AM TECHNOLOGY UPDATES, SESSION 4

11:00 AM – 11:25 AM First Round

Session 4A Improving Own Voice Satisfaction

Thomas Powers, PhD, Sivantos, Inc. MOHAVE

Session 4B eAudiology- Bringing Engagement, Ease and Empowerment to

Service Provision

Christine Jones, AuD, Phonak KIVA-HACIENDA

Session 4C Silver-Zinc Rechargeable Batteries for Hearing Aids:

Enabling While Disrupting the Market Barry Freeman, PhD, Zpower LLC PALOMA

11:30 AM – 11:55 AM Repeat of Sessions 4A – 4C

11:55 am - 12:55 pm LUNCH OUTDOORS ON THE WEST PATIO

12:55 pm – 1:00 pm POSTER SESSION I SETUP – PUT UP POSTERS

1:00 pm – 1:10 pm Opening Comments KIVA-HACIENDA

Anil Lalwani, MD, AAS President

Robert Burkard, PhD, President-Elect and Program Chair

1:10 pm – 2:10 pm TRANSLATIONAL RESEARCH I KIVA-HACIENDA

Moderator: Robert Burkard, PhD

Epigenetics of the Auditory System: Implications for Hearing and Deafness

Prof. Karen B. Avraham, PhD

Vice Dean, Sackler Faculty of Medicine, Department of Human Molecular Genetics

and Biochemistry

Tel Aviv University, Tel Aviv, Israel



2:15 pm – 4:50 pm Concurrent Podium Presentations

PODIUM SESSION I: AUDITORY/VESTIBULAR PHYSIOLOGY MOHAVE I-III

Moderator: Rafael Delgado, PhD

2:15 PM – 2:35 PM	Changing Relationships between Stimulus-Frequency and Distortion-Product OAEs during Aging Carolina Abdala, PhD, University of Southern California, Los Angeles, CA
2:35 PM – 2:55 PM	Influence of High Sound Exposure on Wave I Amplitude in Collegiate Musicians Nilesh Washnik, PhD, Ohio University, Athens, OH
2:55 PM – 3:15 PM	Estimating Audiograms from the ABR for Infant Hearing Aid Fittings Marlene Bagatto, PhD, National Centre for Audiology, Western University, London, ON
3:15 PM – 3:35 PM	Toward A Clinical Test Battery for Cochlear Synaptopathy Carole Johnson, PhD, University of Oklahoma Health Sciences Center, Oklahoma City, OK
3:35 PM – 3:50 PM	BREAK
3:50 PM – 4:10 PM	Combined Imaging and Electrophysiology After Cochlear Implantation Assess Neural Integrity Fadwa Alnafjan, MS, Hearing Co-operative Research Centre, Macquarie University, North Ryde, Australia
4:10 PM – 4:30 PM	Auditory Brainstem Response Signal-to-Noise Ratio of Tursiops Truncatus Robert Burkard, PhD, University At Buffalo, Buffalo, NY
4:30 PM – 4:50 PM	Calcium Dependent Activity in Gravity Receptor Pathways following Otolith Stimulation Avril Genene Holt, PhD, Wayne State University, Detroit, MI

PODIUM SESSION II: EPIDEMIOLOGY AND COGNITION KIVA-HACIENDA

Moderator: Kelly Tremblay, PhD

2:	15 PM – 2:35 PM	Cadmium and Lead and the 10-yr Incidence of Hearing Impairment Karen Cruickshanks, PhD, University of Wisconsin, Madison, WI
2:	35 PM – 2:55 PM	Kids Nowadays Hear Better Than We Did Robert Dobie, MD, University Of Texas
2:	55 PM – 3:15 PM	Prevalence and Factors Associated with Deafness or Serious Difficulty Hearing Chuan-Ming Li, PhD, National Institute On Deafness And Other Communication Disorders, Bethesda, MD
3:	15 PM – 3:35 PM	Epidemiology of "Hidden Hearing Loss" Christopher Spankovich, PhD, University of Mississippi Medical Center, Jackson, MS
3:	35 PM – 3:50 PM	BREAK
3:	50 PM – 4:10 PM	Cognition and Speech-in-Noise Performance: Population-Based Studies Jennifer Deal, PhD, Johns Hopkins University, Baltimore, MD
4:	10 PM – 4:30 PM	Ears, Eyes and Mind: The SENSE-Cog Project Harvey Abrams, PhD, Starkey Hearing Technologies, Lititz, PA
4:	30 PM – 4:50 PM	The Aging and Cognitive Health Evaluation in Elders (ACHIEVE) Randomized Control Trial Frank Lin, MD, Johns Hopkins University, Baltimore, MD
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PODIUM SESSION III: HEARING ACROSS THE LIFESPAN PALOMA I-III

Moderator: Charles Limb, MD

2:15 PM – 2:35 PM	Age-Related T	emporal Processing	a Deficits Reveale	d in Cortical Auditory

Evoked Potentials

New Investigator Presentation

Hanin Karawani, PhD, Department Of Hearing And Speech Sciences,

University Of Maryland, College Park, MD

2:35 PM – 2:55 PM Peripheral Auditory Aging in Humans: Different Measures,

Different Perspectives

Sumitrajit Dhar, PhD, Northwestern University, Evanston, IL

2:55 PM – 3:15 PM Ear-Canal Area Depends on Age and Gender: Applications to WAI

Measurements

Susan Voss, PhD, Smith College, Northampton, MA

3:15 PM – 3:35 PM Cochlear Implantation in Young Children with Single Sided Deafness:

Characteristics and Early Data

Lisa Park, AuD, University Of North Carolina At Chapel Hill, Chapel Hill, NC

3:35 PM – 3:50 PM **BREAK**

3:50 PM – 4:10 PM Phonetic Discrimination in Children Relates to Extended High Frequency

Hearing

Cecilia Nakeva von Mentzer, PhD, Dept. Neuroscience, Uppsala University,

Uppsala, Sweden

4:10 PM – 4:30 PM Psychophysical Tuning Curves in Children and Adults with Differing Histories

Julie Arenberg, PhD, University Of Washington, Seattle, WA

4:30 PM – 4:50 PM Mobile Technology for Booth-Less Audiometry in Youth

Deanna Meinke, PhD, University of Northern Colorado, Greeley, CO

5:00 pm – 6:15 pm CARHART MEMORIAL LECTURE KIVA-HACIENDA

Moderator: Anil Lalwani, MD

Perspectives on the Diagnosis and Remediation of Auditory Processing Disorders

Harvey Dillon, PhD

Research Consultant, NAL, Sydney, Australia Adjunct Professor, Macquarie University Visiting Professor, University of Manchester

6:30 pm – 7:30 pm OPENING RECEPTION PALOMA GARDEN

FRIDAY, MARCH 2, 2018

7:30 am – 2:00 pm Registration SILVERMAN FOYER

8:00 am - 8:30 am YOUNG INVESTIGATOR RESEARCH PRESENTATION HACIENDA-PALOMA

Moderator: Sumit Dhar, PhD

A Theoretical and Translational Approach to the Study of Hidden Hearing Loss in

Humans: Difficulties and Opportunities

Daniel M. Rasetshwane, PhD

Center for Hearing Research, Boys Town National Research Hospital, Omaha, NE



FRIDAY, MARCH 2, 2018

8:30 am – 11:00 am POSTER SESSION I PRESENTATIONS WEST PATIO, NORTH AND SOUTH FOYERS

Mentored Graduate Student and Resident Research Posters, T35 Student Research

Trainee Posters & General Posters

11:00 am – 12:00 pm Translational Research II HACIENDA-PALOMA

Moderator: Robert Dobie, MD

Electrical and Optical Studies of a New Generation Auditory Brainstem Implant

Daniel J. Lee, MD, FACS Associate Professor Harvard Medical School

Director of Pediatric Otology and Neurotology

Massachusetts Eye and Ear Infirmary

Boston, MA

12:00 pm – 12:10 pm POSTER SESSION I – TAKE DOWN POSTERS

12:10 pm – 1:20 pm Awards Luncheon MOHAVE-KIVA

Membership Update: Anil Lalwani, MD, AAS President

Life Achievement Award: Glenis R. Long, PhD

Ear and Hearing Editor's Award: Pienkowski, Martin (2017) Etiology of Listening Difficulties in Noise Despite Clinically Normal Audiograms, Ear and Hearing

38(2):135-148

1:20 pm – 1:30 pm POSTER SESSION II SETUP - PUT UP POSTERS

1:30 pm – 4:00 pm POSTER SESSION II PRESENTATIONS WEST PATIO, NORTH AND SOUTH FOYERS

Mentored Graduate Student and Resident Research Posters, T35 Student Research

Trainee Posters & General Posters

4:00 pm – 5:30 pm NIDCD RESEARCH PRESENTATION PALOMA

Moderator: Moderator: Lisa Hunter, PhD

NIDCD FUNDING OPPORTUNITIES FOR STUDENTS AND YOUNG INVESTIGATORS

Alberto Rivera-Rentas, PhD

NIDCD, NIH

5:30 pm – 6:30 pm Student Social Hour AGAVE TERRACE

6:00 pm – 9:00 pm AAS SOCIAL AT THE MUSICAL INSTRUMENT MUSEUM

- TICKET PURCHASE REQUIRED TO ATTEND

Buses will pick up under the bridge (where the hotel bridges together in the east crosswalk, under the restaurant) at 5:45 pm. There will be a late bus available for MIM transport at 7:00 pm. Buses will return to the Embassy Suites at 9:00 pm.

SATURDAY, MARCH 3, 2018

7:30 am – 4:30 pm Registration SILVERMAN FOYER

8:00 am – 9:00 am TRANSLATIONAL RESEARCH III HACIENDA-PALOMA

Moderator: Brent Edwards, PhD

The Perception of Emotional Prosody by Listeners with Hearing Loss and Cochlear

Implants

Monita Chatterjee, PhD

Boys Town National Research Hospital, Omaha, NE

9:15 am – 12:15 pm Concurrent Podium Presentations

PODIUM SESSION IV: PROCESSING OF COMPLEX STIMULI MOHAVE

Moderator: Harvey Abrams, PhD

11:35 AM - 11:55 AM

11:55 AM - 12:15 PM

9:15 AM – 9:35 AM	Speech-Evoked Envelope Following Responses Reveal Frequency- Specific Differences in Development New Investigator Presentation Viji Easwar, PhD, University of Wisconsin-Madison, Madison, WI
9:35 AM – 9:55 AM	Speech Recognition Performance in Older Spanish-English Bilinguals New Investigator Presentation Jamie Desjardins, PhD, University Of Texas At El Paso, El Paso, TX
9:55 AM – 10:15 AM	Use of Sentential Context During Recognition of Spectrally Degraded Speech Aaron Moberly, MD, The Ohio State University, Department of Otolaryngology, Columbus, OH
10:15 AM – 10:35 AM	Infants Use Visual Cues to Enhance Speech Perception in Noise Kaylah Lalonde, PhD, Boys Town National Research Hospital, Omaha, NE
10:35 AM – 10:55 AM	BREAK
10:55 AM – 11:15 AM	Extended High Frequency Hearing Contributes to Speech Perception in Noise Lina Motlagh Zadeh, MS, University of Cincinnati, OH
11:15 AM – 11:35 AM	Sensing Real-World Environments with Hearing Aids to Understand Listeners' Perception

Jingjing Xu, PhD, Starkey Hearing Technologies, Eden Prairie, MN

The Development and Validation of the Speech Quality Instrument Stephanie Chen, MD, Washington University At St. Louis, St. Louis, MO

Do Earplugs Alter the Intensity or Dynamic Range of Music? Vishakha Rawool, PhD, West Virginia University, Morgantown, WV



SATURDAY, MARCH 3, 2018

PODIUM SESSION V: HEARING ASSESSMENT & TINNITUS KIVA

Moderator: Patrick Feeney, PhD

9:15 AM – 9:35 AM	Wideband Reflectance and Electrically Evoked Stapedial Reflexes Following Cochlear Implantation New Investigator Presentation Rachel Scheperle, PhD, Montclair State University, Bloomfield, NJ
9:35 AM – 9:55 AM	Middle Ear Muscle Contractions are not Dependable Hearing Protection Gregory Flamme, PhD, Sasrac, Forest Grove, OR
9:55 AM – 10:15 AM	Evaluating the Fixed-Level Frequency Test (FLFT) as a Clinical Measure of High-Frequency Hearing Douglas S. Brungart, PhD, Walter Reed National Military Medical Center, Bethesda, MD
10:15 AM – 10:35 AM	Use of Photovoice for Audiological Outcome Measurement and Rehabilitation Gabrielle Saunders, PhD, National Center For Rehabilitative Auditory Research, Portland, OR
10:35 AM – 10:55 AM	BREAK
10:55 AM – 11:15 AM	Tinnitus and Hidden Hearing Loss After Noise Exposure Naomi Bramhall, PhD, Va Rr&d, NCRAR, Portland, OR
11:15 AM – 11:35 AM	Electrophysiology and Behavior After Noise Serena Dann, AuD, National Center For Rehabilitative Auditory Research, Va Portland Health Care System, Portland, OR
11:35 AM – 11:55 AM	New Bimodal Neuromodulation Treatment for Tinnitus in 326 Patients Hubert Lim, PhD, Neuromod Devices Ltd, Dublin, Ireland
11:55 AM – 12:15 PM	Audiologic Management of Patients Reporting Tinnitus James Henry, PhD, Va Rr&d National Center For Rehabilitative Auditory Research, Portland, OR

PODIUM SESSION VI: AUDITORY PROSTHESES HACIENDA-PALOMA

Germany

Moderator: Rene Gifford, PhD

9:15 AM – 9:35 AM	Further Evaluation of a Consumer-Decides Hearing-Aid Provision Model Larry Humes, PhD, Indiana University, Bloomington, IN
9:35 AM – 9:55 AM	An Observational Approach to Understanding Hearing Aid Success Kelly Tremblay, PhD, University of Washington, Seattle, WA
9:55 AM – 10:15 AM	Re-Routing Options for Overcoming Severe-to-Profound Unilateral Hearing Loss in Classrooms Erin Picou, PhD, Vanderbilt University School of Medicine, Nashville, TN
10:15 AM – 10:35 AM	Advanced Digital Hearing Aids and Mild Loss: Outcomes and Self-Efficacy Carole Johnson, PhD, University of Oklahoma Health Sciences Center, Oklahoma City, OK
10:35 AM – 10:55 AM	BREAK
10:55 AM – 11:15 AM	Open Portable Platform For Hearing Aid Research Hendrik Kayser, PhD, Medizinische Physik And Cluster Of Excellence "hearing4all", University Of Oldenburg & Hrtech Ggmbh, Oldenburg,

SATURDAY, MARCH 3, 2018

11:15 AM – 11:35 AM Utilizing 3D Scanning Techniques to Investigate Ear Canal Dynamics

Elizabeth Eskridge, AuD, Earlens Corporation, Menlo Park, CA

11:35 AM – 11:55 PM Singing with Cochlear Implants

Justin Aronoff, PhD, University Of Illinois At Urbana-champaign,

Champaign, IL

11:55 AM – 12:15 PM Are the Noisier Speech Regions the Most Detrimental

to Intelligibility?

Frederic Apoux, PhD, The Ohio State University, Columbus, OH

12:15 pm – 12:30 pm Poster Session II – Take Down Posters

12:30 pm – 1:30 pm LUNCH OUTDOORS ON THE WEST PATIO

1:30 pm – 3: 50 pm SPECIAL SESSION: NEUROPLASTICITY HACIENDA-PALOMA

Moderator: Beth Prieve, PhD

1:30-2:10 PM: Restoring Central Auditory Processing After Hearing Loss

Daniel Polley, PhD

Massachusetts Eye and Ear / Harvard Medical School, Boston, MA

2:10-2:50 PM: Restoring Cortical Inhibition Improves Perception Following Early

Hearing Loss Dan H. Sanes, PhD

Center for Neural Science, New York University, New York, NY

2:50- 3:30 PM: Neural Plasticity and its Initiating Conditions in Tinnitus

Larry E. Roberts, PhD

McMaster University, Hamilton, Ontario, Canada

3:30-3:50 PM: Panel Discussion

3:50 pm – 4:00 pm Summary and Adjournment HACIENDA-PALOMA





Thank You

The American Auditory Society wishes to thank these companies for their support of complimentary memberships for 2018 AuD Students, PhD Students, and Neurotology Fellows. We are grateful for their generous educational support for these future audiologists, otolaryngologists and hearing researchers.

Intelligent Hearing Systems

Oticon

Sivantos

Sonion

Starkey Hearing Technologies