

## Conference Invitation

# Advances in Auditory Electrophysiology - Today and Tomorrow

If you are looking for a comprehensive auditory electrophysiology update, then this is the conference for you.

A variety of Auditory electrophysiology assessments are becoming more prevalent in the daily lives of clinical Audiologists. With the ever-changing landscape of medical care and cost containment, clinical efficiencies can be improved by utilizing better technologies, strategies and improved clinical skill sets.

Attendees of this conference will learn how these technologies and techniques can reduce the number of patient visits, improve test reliability, verification of implants, better manage/assess dizzy patients, evaluate for CAPD and more. Attendees will also get a glimpse into the next evolution of auditory electrophysiology.

Join us In  
New Orleans, LA.  
Home of the  
Mardi Gras.  
Hotel located  
near famous  
French quarter.



**November 16 & 17,  
2018**

**Course fee:**  
\$395 (includes breakfast & lunch)

**Where:**  
HILTON NEW ORLEANS / ST. CHARLES  
AVENUE, 333 St. Charles Ave.,  
New Orleans, LA 70130  
t: 504-378-2812 f: 504-378-2829  
Hilton St. Charles Avenue  
Group rate \$169/night. Limited  
availability.

Register for the event and reserve  
your hotel room rate. Please book by  
10/30/2018.

<https://tinyurl.com/y8p8p6zp>



**Facilitator:**  
David Speidel, M.S.

## The Presenters (Speaker Biographies on page 4)



Yvonne Sininger,  
Ph.D.



Michael Maslin,  
Ph.D.



John Ferraro,  
Ph.D.



Michelle Petrak,  
Ph.D.



James M. Harte,  
Ph.D



# Agenda

| Day 1 - Friday November 16 |   |                 |
|----------------------------|---|-----------------|
| TIME                       | TOPICS  | PRESENTER       |
| 8:00                       | AM Registration & Introductions   |                 |
|                            | <b>(Presentation Abstract)</b><br>Speed and accuracy of electrophysiologic measures are dramatically improved by recent technological advances. CE-Chirps produce larger responses and reduce test time. Improvements in automated response detection for both ABR and ASSR determine noise and statistical evidence of response, improving accuracy and objectivity results.   |                 |
| 8:30                       | Technological Advances in Auditory Electrophysiology: Improved Speed and Accuracy of Pediatric Evaluations  | Yvonne Sininger |
| 10:00                      | Break   |                 |
|                            | <b>(Presentation Abstract)</b><br>Much can be done to decrease test time in sleeping or anesthetized infants and toddlers who need a hearing test using electrophysiology. Old rules for how to proceed must be reexamined and discarded if unnecessary. A protocol used in a recent study at three children's medical centers will be presented.   |                 |
| 10:15                      | Recommended Protocol for Pediatric Diagnostic Electrophysiologic Assessments  |                 |
| 11:30                      | <b>Live Demo's</b><br>• Illustrate Technologies Discussed<br>• Live Demo of the ASSR  |                 |
| 12:00                      | Lunch, provided   |                 |
|                            | <b>(Presentation Abstract)</b><br>A large body of behavioral and physiological evidence supports the early implantation of hearing impaired children as part of the strategy for maximizing communication skills and hearing outcomes. However, this has produced new challenges in the need for objective assessment of implant candidacy, assessment of fitting success, and post-implant mapping of the device. The electrically evoked auditory brainstem responses and stapedial reflexes are two key tools used in these roles. This presentation will focus on the following topics. |                 |
| 1:00                       | <b>Auditory Late Response: pediatric and research applications</b><br><br><b>Background and historical perspectives</b><br><br><b>Current applications of ALRs, including:</b><br>1. Objective evaluation of infants with acoustic hearing aids<br>2. Objective evaluation of infants with implantable devices (bone anchored and cochlear implants)<br>3. Current applied/clinical research involving adult and pediatric hearing disorders  | Michael Maslin  |
| 2:30                       | Break   |                 |
|                            | <b>(Presentation Abstract)</b><br>A large body of behavioral and physiological evidence supports the early implantation of hearing impaired children as part of the strategy for maximizing communication skills and hearing outcomes. However, this has produced new challenges in the need for objective assessment of implant candidacy, assessment of fitting success, and post-implant mapping of the device. The electrically evoked auditory brainstem responses and stapedial reflexes are two key tools used in these roles. This presentation will focus on the following topics. |                 |
| 2:45                       | <b>eABR and eSRT: pediatric implant assessment</b><br><br><b>Background and historical perspectives</b><br><br><b>Applications of eABR and eSRT including:</b><br>1. Objective evaluation of implant candidacy pre-implantation<br>2. Intra-operative verification of implant fitting<br>3. Post-implant mapping  | Michael Maslin  |
| 4:15                       | Illustration of ALR recordings  |                 |
| 4:45                       | Q & A   |                 |
| 5:00                       | Conclude for the Day (Dinner on your own)   |                 |



| Day 2 - Saturday November 17 |   |                 |
|------------------------------|---|-----------------|
| TIME                         | TOPICS  | PRESENTER       |
|                              | <b>(Presentation Abstract)</b><br>Vestibular Evoked Myogenic Potentials are used in the evaluation of Otolithic function and support the differential diagnosis of the vestibular patient. In recent years new technologies (B-81) and new research has emerged advancing the diagnostic value of this test. This presentation will focus on the following areas:   |                 |
| 8:30                         | <b>Current and Emerging Application of VEMP</b><br>• cVEMP in the Diagnosis and assessment of the otolithic disorders, specifically saccular disorders<br>• oVEMP in the Diagnosis and assessment of otolithic disorders, specifically utricular disorders<br>• Differential diagnosis in vestibular disorders  | Michelle Petrik |
|                              | <b>Advances in Technology and emerging research</b><br>• B-81 as new stimulus generator, oVEMP in migraine, comparisons of VEMP and SVV results   |                 |
| 10:00                        | Break   |                 |
|                              | <b>(Presentation Abstract)</b><br>Although ECochG has been used clinically for over 80 years, recent studies have revealed new and potential applications that continue to keep this particular tool very relevant for clinical use. This presentation will focus on the following topics.  |                 |
| 10:15                        | <b>Current and Emerging Applications of Electrocochleography in both Adults and Children</b><br><br><b>Background and Historical Perspectives</b><br><br><b>Current and Emerging Applications of ECochG, including:</b><br>• Diagnosis, Assessment and Possible Prediction of Meniere's Disease/Endolymphatic Hydrops<br>• Diagnosis of Superior Semicircular Canal Dehiscence (SSCD)<br>• Diagnosis of Hidden Hearing Loss<br>• Diagnosis of Auditory Neuropathy | John Ferraro    |
|                              | <b>ECochG Recording and Measurement Protocols: The Need for Standardization</b>   |                 |
| 12:00                        | Lunch, provided   |                 |
| 1:00                         | <b>cVEMP &amp; oVEMP demo's</b>   |                 |
|                              | <b>(Presentation Abstract)</b><br>Current hardware and software platforms will need to be dramatically transformed in order to accommodate the growing need for higher level auditory evoked potential measurement techniques and analysis. This presentation will consider the future of evoked potential applications and associated technologies that will be required to find solutions and provide researchers the platforms needed to expand our knowledge. |                 |
| 1:30                         | <b>On the Horizon</b>   | James M. Harte  |
| 3:00                         | Break   |                 |
| 3:15                         | <b>Round Table - Panel Discussion Q &amp; A</b>   |                 |
| 3:45                         | <b>Attendees complete evaluations</b>   |                 |
| 4:00                         | Conclude  |                 |



## Speaker Biographies

**Yvonne Sininger, Ph.D.** received her bachelor's degree in Speech and Hearing and master's degree in Audiology from Indiana University. She received her Ph.D. in Speech and Hearing Science from the University of California Santa Barbara & San Francisco. Dr. Sininger started her career and developed an interest in infants and children as a clinical audiologist for the University of Cincinnati Medical Center. After her Ph.D. she moved to House Ear Institute in Los Angeles as a Post-doctoral fellow in electrophysiology and later as the director of the Children's Auditory Research and Evaluation Center. In 2001, she moved to the David Geffen School of Medicine at UCLA to the Department of Head & Neck Surgery. She retired as Professor in Residence in 2012 and runs her own consulting business (C&Y consulting).

**Michael Maslin, Ph.D.** completed his training as an audiological scientist the University of Manchester in 2006 and then in 2010 completed his Ph.D in plasticity of the human binaural auditory system. He remained on the academic staff for 2 years as a focused lecturer in audiology, teaching modules covering audiological and vestibular assessment and management culminating with a 3-year post-doctoral research program built directly on the underpinning work carried out during his PhD. Since 2015 Michael has worked for the Interacoustics Academy, which offers training and education spanning the scope of audiological practice as well as providing a link between clinical and research institutes and their industry partners. In 2017 Michael and his family relocated to New Zealand where he continues in the same role with the Interacoustics Academy as well as actively pursuing his research interests.

**Michelle Pettrak, Ph.D.** is the Director of Clinical Audiology and Vestibular Research for Interacoustics. Her primary role is development and clinical validation of new technologies in the vestibular and balance areas. Michelle is also a licensed private practice clinical audiologist at Northwest Speech and Hearing (NWSHPH) in Chicago. She received her doctorates in Electrophysiology (1992) and Biomolecular Electronics (1994) from Wayne State University and her Masters in Audiology in 1989. Special areas of expertise include vestibular and balance assessments and management of the dizzy patient. She is involved with new innovative product developments, clinical evaluations of new protocols, and publishing, teaching and training on the management of patients with dizziness. She continues to lecture extensively nationally and internationally and has numerous articles published in the hearing industry journals.

**John Ferraro, Ph.D.** is currently Professor of Audiology and Director of the Auditory Evoked Potential Laboratory in the Hearing and Speech Department, University of Kansas Medical Center. He served as Doughty-Kemp Chair of the Department from 1983 - 2018. Prior to his arrival at KU, Ferraro held positions of assistant and associate professor at the Ohio State University's Speech and Hearing Science Section (1974 - 1981), and his clinical neurophysiologist at Swedish Medical Center, Englewood Colorado, (1981 - 1984). He received his Ph.D. degree from the University of Denver (1972), and then completed a 2 year post-doctoral fellowship with Peter Dallos at Northwestern University. Ferraro's research interests are in the areas of auditory electrophysiology with special emphasis on the clinical applications of auditory- and vestibular-evoked potentials. He has pioneered techniques for using these potentials in the diagnosis, assessment and management of otological/neuro-otological disorders.

**James M. Harte, Ph.D.** was an Associate Professor of Technical Audiology and Physiological Acoustics at the Centre for Applied Hearing Research, Technical University of Denmark and then went on to be a lecturer of Biomedical Engineering at the University of Warwick, Institute of Digital Healthcare. In 2013 he helped establish the Interacoustics Research Unit (IRU) in Denmark where he is now the senior researcher and director. His focus is on applied and clinical projects in auditory electrophysiology, wideband tympanometry, otoacoustic emissions, and real-ear measurements for hearing aid fitting etc. The IRU is affiliated with the Hearing Systems group (Centre for Applied Hearing Research; Oticon Centre of Excellence for Hearing and Speech Sciences) in the Department of Electrical Engineering, sharing their world leading facilities. James has been published in over 32 peer reviewed national and international scientific journals.



Interacoustics Academy is approved by the American Academy of Audiology to offer Academy CEUs for this activity. Attending is worth a maximum of 1.3 Tier 1 CEUs. Academy approval of this continuing education activity is based on course content only and does not imply endorsement of course content, specific products, or clinical procedure, or adherence of the event to the Academy's Code of Ethics. Any views that are presented are those of the presenter/CE Provider and not necessarily of the American Academy of Audiology.