

CIAP 2015 Speaker Program

Monday July 13

8:30-10:00am Modeling the electrode-neural interface

- 8:30 Michael Heinz: Quantifying envelope coding metrics from auditory-nerve spike trains: implications for predicting speech intelligibility with hearing impairment
- 9:00 Julie Bierer: Modeling the electrode-neural interface to select cochlear implant channels for programming
- 9:30 Tania Hanekom: Design and application of user-specific models of cochlear implants
- 10-10:30am BREAK

10:30-noon Modeling the electrode-neural interface

- 10:30 Stoph Long: Investigating the electro-neural interface: the effects of electrode position and age on neural responses
- 11:00 Bob Carlyon: Spatial selectivity: How to measure and (maybe) improve it
- 11:30 Andrew Oxenham: Effects of spectral resolution on temporal-envelope processing of speech in noise
- 12-1pm LUNCH
- 2-4pm Mentoring session - Ruth Litovsky
- 4-6pm Poster viewing 6-7pm DINNER

7:00-9:00pm Cortical processing of electrical stimulation

- 7:00 Xiaoqin Wang: What is missing in auditory cortex under cochlear implant stimulation?
- 7:30 Jan Wouters: Human cortical responses to CI stimulation
- 7:55 BREAK
- 8:10 James Fallon: Effects of deafness and cochlear implant use on cortical processing
- 8:35 Diane Lazard: fMRI studies of cortical reorganization in postlingual deafness: Modification of left hemispheric dominance for speech.
- 9:00-midnight Poster and social session

Tuesday July 14

8:30-10:00am Cognitive, linguistic, and socio-emotional factors in cochlear-implant use throughout the lifespan

- 8:30 Michael Goldstein: Social influences on speech and language development in infancy
- 9:00 William Kronenberger: Executive functioning in prelingually deaf children with cochlear implants
- 9:30 Carolien Rieffe: The importance of a CI for children's social and emotional intelligence
- 10-10:30am BREAK

10:30-noon Cognitive, linguistic, and socio-emotional factors in cochlear-implant use throughout the lifespan

- 10:30 Astrid van Wieringen: Spoken language, perception and memory in children with CIs and children with SSD
- 10:50 Monita Chatterjee: Voice emotion recognition and production by listeners with cochlear implants
- 11:15 Deniz Bařkent: Context effects, time course of speech perception, and listening effort in cochlear-implant simulations
- 11:40 Yael Henkin: Insights into auditory-cognitive processing in older adults with cochlear implants
- 12-1pm LUNCH
- 4-6pm Poster viewing 6-7pm DINNER

7:00-9:00pm Bilateral Hearing

- 7:00 Ruth Litovsky: The impact of cochlear implantation on spatial hearing and listening effort
- 7:30 Matt Goupell: Better-ear glimpsing inefficiency in bilateral cochlear-implant listeners
- 7:50 BREAK
- 8:10 Hongmei Hu and David McAlpine: Differences in temporal weighting of interaural time differences between acoustic and electric hearing
- 8:30 Yoojin Chung: Sensitivity to interaural time differences in the inferior colliculus of an awake rabbit model of bilateral cochlear implants
- 8:45 Sridhar Srinivasan: Effects of introducing short inter-pulse intervals on behavioral ITD sensitivity with bilateral cochlear implants
- 9:00-midnight Poster and social session

Wednesday July 15

8:30-10:00am Functional and structural imaging applications with cochlear implants

- 8:30 Andrej Kral: Towards individualized cochlear implants: variations of the cochlear microanatomy
- 9:00 Annerie vd Jagt: Visualization of human inner ear anatomy with high resolution 7 Tesla magnetic resonance imaging; first clinical application

9:20 Jack Noble: Comparison of cochlear implant outcomes with clinical, random, and image-guided selection of the active electrode set:

9:40 David Corina: Cross modal plasticity in deaf children with cochlear implants

10-10:30am BREAK

10:30am-12:10pm Functional and structural imaging applications with cochlear implants

10:30 Shuman He: Acoustically-evoked auditory change complex in children with auditory neuropathy spectrum disorder: a potential objective tool for identifying cochlear implant candidates

11:00 Doug Hartley: Measuring cortical reorganisation in cochlear implant with functional near-infrared spectroscopy: a predictor of variable speech outcomes?

11:30 Colette McKay: Brain plasticity due to deafness as revealed by fNIRS in cochlear implant users

12:10-1pm LUNCH

1:30-4:00pm Company Presentations and FDA updates

4-6pm Posters viewing 6-7pm DINNER

7-8pm Posters and social

Wednesday 7:00pm to Midnight: Dance Night

Thursday July 16

8:30-10:00am Single-sided deafness

8:30 Larry Roberts: Ringing ears: the neuroscience of tinnitus

9:00 Thomas Wesarg: Comparison of cochlear implant with other treatment options for single-sided deafness

9:30 Josh Bernstein: Binaural unmasking for cochlear implantees with single-sided deafness

10-10:30am BREAK

10:30-noon EAS and Bimodal Hearing

10:30 Lina Reiss: Binaural pitch integration with cochlear implants

11:00 Mario Svirsky: Speech perception and bimodal benefit in quiet for CI users with contralateral residual hearing

11:20 Paul Abbas: Using Neural Response Telemetry (NRT) to monitor responses to acoustic stimulation in hybrid CI users

11:40 Clifford Hume: Direct intracochlear acoustic stimulation using a PZT microactuator

12-1pm LUNCH

4-6pm Poster viewing 6-7pm DINNER

7-9pm Experimental and computational approaches to improving speech understanding with implants

7:00 DeLiang Wang: From auditory masking to supervised separation: a tale of improving intelligibility of noisy speech for hearing-impaired listeners

7:30 Olivier Macherey: Polarity effects in cochlear implant stimulation: Insights from human and animal studies

7:55 BREAK

8:10 Johan Frijns: Modeled neural response patterns from various speech coding strategies

8:40 Enrique Lopez-Poveda: Mimicking the unmasking benefits of the contralateral medial olivocochlear reflex with cochlear implants

9:00-midnight Poster and social session

Friday July 17

8:30-10:00am Beyond the cochlear implant - biological approaches

8:30 Sharon Kujawa: Aging vs aging after noise: exaggeration of cochlear synaptic and neural loss in noise-exposed ears

9:00 Jeff Holt: TMC gene therapy restores auditory function in deaf mice

9:30 Rob Shepherd: Combining drug delivery with cochlear prostheses: developing and evaluating new approaches

10-10:30am BREAK

10:30am-Noon Beyond the cochlear implant - emerging technology

10:30 Tobias Moser: Optogenetic stimulation of the auditory pathway for research and future prosthetics

11:00 Ed Hight: Optogenetic technology provides spatiotemporal resolution sufficient for an optically-based auditory neuroprosthesis

11:15 Hubert Lim, Thomas Lenarz: The Auditory Midbrain Implant: research and development towards a second clinical trial

11:35 Bob Shannon: Auditory brainstem implants in children: implications for neuroscience

12-1pm LUNCH

1pm End of Conference