

SCHEDULE

9:00 - 9:30 a.m.

Welcome and Introduction to the Waisman Center

Albee Messing, VMD, PhD, Professor of Neuropathology, Waisman Center Director

9:30 - 10:00 a.m.

Recent Advances in Cochlear Implants

Ruth Litovsky, PhD, Professor, Department of Communication Sciences and Disorders, Department of Surgery and Waisman Center Investigator
Nearly 350,000 people worldwide have cochlear implants. Many patients perform very well, with excellent speech recognition and knowledge of everyday sounds. Many young children attain language at rates that are near-normal. Numerous changes in clinical care emerged recently which change the type of patient eligible for cochlear implantation and the type of auditory implants available. The approaches include bilateral cochlear implants, implantation in patients with single-sided deafness, "hybrid hearing" which integrates cochlear implants with hearing aids, and auditory brainstem implants. In addition, this talk introduces exciting, new ways for neural imaging of the brain in cochlear implant users employing laser technology.

10:00 - 10:30 a.m.

Improving Signal Processing for Cochlear Implants

Ray Goldsworthy, PhD, Associate Professor, Department of Otolaryngology, University of Southern California

A cochlear implant is a biomedical device that restores a degree of hearing to profoundly deafened individuals. Cochlear implant technology has evolved to the point that the majority of recipients readily understand speech in quiet environments; consequently, scientific emphasis is increasingly placed on the more challenging problems of speech reception in noise and music performance. This presentation discusses approaches with demonstrated potential for improving hearing for cochlear implant users.

..... BREAK

10:45 - 11:15 a.m.

Hearing Impairment and Listening Effort: How Do We Measure It and Why Does It Matter?

Matthew Winn, AuD, PhD, Postdoctoral Researcher, Waisman Center

Hearing impairment is not simply a matter of hearing at a low volume nor a matter of getting fewer words correct when listening in the sound booth. Understanding speech requires more effort for a person with hearing loss, and that effort has considerable impact on a person's daily life, including work, socialization, family life and health. Unfortunately, it is rare to find measures of effort in audiology clinics. This presentation discusses research that identifies some important consequences of elevated listening effort in people with hearing impairment.

11:15 a.m. - 12:15 p.m. LUNCH Optional panel discussion with clinicians

12:15 - 1:00 p.m. Panel Discussion

Moderated by Ruth Litovsky, PhD, Professor, Communication Sciences and Disorders, Department of Surgery and Waisman Center Investigator

ABOUT THE PANELISTS

■ **Sharla Benson** is 17 years old and finishing her junior year of high school. She has been profoundly deaf since she was three due to meningitis and received her first cochlear implant at age four. She attended a deaf preschool, but was able to be mainstreamed by the time she went to kindergarten. With some itinerate help, Sharla has excelled in school maintaining an "A" average. She plays the violin in the school orchestra, takes harp and piano lessons, plays on the school's tennis team and enjoys art, computer graphics, and writing. She especially loves being able to hear with her implant so that she can listen to and play music.

■ **Troy Doetch** is a 25-year-old pre-service secondary school teacher and a teaching intern at Northern Illinois University (NIU). He was born hearing but became deaf from a case of pneumococcal meningitis when he was eight years old. He received his unilateral cochlear implant shortly after this experience. Troy taught first-year composition at NIU and worked as a tutor in the university's ESL Center. He will student teach in an eighth-grade literature and English language arts class in the fall. He currently lives in DeKalb, Ill., with his wife and enjoys reading, drumming, and listening to podcasts and music.

■ **Hunter Eikland**, almost three years old, was 15 months old when he developed bacterial meningitis that resulted in profound hearing loss. His family wanted him to have the opportunity to regain his hearing so Hunter had implant surgery two months after becoming ill. He was activated one month later in February 2014 and is working with speech therapy and improving every day. He lives in Fort Atkinson with his parents, Clark and Elisa, and his 11-month-old younger sister, Avery.

■ **Karl Nollenberger** is an associate professor at UW-Oshkosh in the master's program in public administration and a consultant with Gov HR USA, specializing in management consulting assignments, executive search and financial evaluation. He has more than 45 years of experience in government, management consulting and the private sector. Karl has extensive leadership and chief executive experience in city and county governments and has served in management positions in eight local governments in five states. He lost his hearing in one ear when he was one-year-old and in his second ear in February 2007. He received a cochlear implant in June 2007. He has eight years of experience using his cochlear implant in diverse environments.

■ **Heather Wavra** is a staff development coordinator RN, a BSN student, and a mother of a pre-teen son. She has been hearing impaired since birth, with the moderately severe bilateral sensorineural hearing loss rapidly progressing in her late twenties to the point that she required cochlear implants. A bilateral implantation was performed in May 2014 that has been tremendously successful. Now with Bluetooth capabilities, Heather enjoys listening to music again and is beginning to go back to talking on the phone more. In her free time, Heather enjoys spending time with her boyfriend, James, and her son, Braiden.

If you have questions for the panel, please write them on the enclosed insert. At 10:30 a.m., Waisman Center staff will collect these forms. This will make it possible for the panelists to select initial questions to answer and have time to prepare responses.