

Sterling W. Sheffield, Ph.D., Au.D., CCC-A

ACADEMIC ADDRESS

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Gainesville, FL
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EDUCATION

Ph.D. in Audiology, May 2016

Vanderbilt University, Nashville, TN

Dissertation title: "The Effects of Auditory Stimulus Level and Speech Recognition Performance on fNIRS Measured Cortical Activation in Adults with Normal Hearing and Adults with Cochlear Implants"

Committee: Rene Gifford (chair), G. Christopher Stecker, Baxter Rogers, Daniel Ashmead

Doctorate of Audiology, May 2011

M.A. in Audiology, May 2010

University of Iowa, Iowa City, IA

B.S. in Communication Disorders, August 2007

Brigham Young University, Provo, UT

PROFESSIONAL EXPERIENCE

Assistant Professor

2018-Present

Department of Speech, Language, and Hearing Sciences, University of Florida, Gainesville, FL

Adjunct Faculty

2016-2017

Department of Hearing and Speech Sciences, University of Maryland, College Park, MD

Post-doc Research Audiologist

2015-2018

Walter Reed National Military Medical Center, Bethesda, MD

- Mentor: Joshua Bernstein, PhD

Audiologist

2012-2015

Monroe Carell Jr. Children's Hospital at Vanderbilt, Department of Pediatric Otolaryngology

Graduate Research Assistant

2011-2015

Cochlear Implant Research Lab, Vanderbilt University, Nashville, TN

- Mentor: Rene Gifford, PhD

Graduate Teaching Assistant

2011-2015

Department of Hearing and Speech Sciences, Vanderbilt University, Nashville, TN

Audiology Extern and Research Assistant, Mayo Clinic Rochester

2010-2011

Mayo Clinic Rochester, Rochester, MN

- Mentors: Cynthia Hogan, PhD; Christopher Bauch, PhD

Graduate Research Assistant

2008-2010

Auditory Research Lab, University of Iowa, Iowa City, IA

- Mentor: Shawn Goodman, PhD

Graduate Teaching Assistant

2007-2009

Department of Communication Sciences and Disorders, University of Iowa, Iowa City, IA

CERTIFICATION AND LICENSURE

CURRENT:

CERTIFICATE OF CLINICAL COMPETENCE IN AUDIOLOGY, AMERICAN SPEECH-LANGUAGE-HEARING ASSOCIATION

PEER-REVIEWED PUBLICATIONS

- Gifford, R. H., Loisel, L., Natale, S., Sheffield, S. W., Sunderhaus, L. W., Dietrich, M. S., & Dorman, M. F. (2018). Speech Understanding in Noise for Adults With Cochlear Implants: Effects of Hearing Configuration, Source Location Certainty, and Head Movement. *Journal of Speech, Language, and Hearing Research*, 61(5), 1306-1321.
- Stevenson, R., Sheffield, S. W., Butera, I., Gifford, R., Wallace, M. (2017). Multisensory integration in cochlear implant recipients. *Ear and Hearing*, 38(5), 521-538.
- Sheffield, S. W., Simha, M., Jahn, K., Gifford, R. H. (2016). The effects of acoustic bandwidth on simulated bimodal benefit in children and adults with normal hearing. *Ear and Hearing*, 37(3), 282-8.
- Holder, J., Sheffield, S. W., Gifford, R. H. (2016). Speech understanding in children with normal hearing: Sound field normative data for BabyBio, BKB-SIN, and QuickSIN. *Otology and Neurotology*, 37(2), e50-e55.
- Sheffield, S. W., Haynes, D. S., Wanna, G. B., Labadie, R. F., Gifford, G. H. (2015). Availability of binaural cues for pediatric bilateral cochlear implant recipients. *Journal of the American Academy of Audiology*, 26(3), 289-298.
- Sheffield, S. W., Jahn, K., Gifford, R. (2015). Preserved acoustic hearing in cochlear implantation improves speech perception. *Journal of the American Academy of Audiology*, 26(2), 145-154.
- Kolberg, E., Sheffield, S. W., Davis, T., Sunderhaus, L., Gifford, R. (2015). Cochlear Implant Microphone Location Affects Speech Recognition in Diffuse Noise. *Journal of the American Academy of Audiology*, 26(1), 51-58.
- Gifford, R., Grantham, D., Sheffield, S. W., Davis, T., Dwyer, R., & Dorman, M. (2014). Localization and interaural time difference (ITD) thresholds for cochlear implant recipients with preserved acoustic hearing in the implanted ear. *Hearing Research*, 312, 28-37.
- Sheffield, S. W., & Gifford, R. (2014). The Benefits of Bimodal Hearing: Effect of Frequency Region and Acoustic Bandwidth. *Audiology and Neurotology*, 19(3), 151-163.
- Gifford, R., Dorman, M., Sheffield, S. W., Teece, K., & Olund, A. P. (2013). Availability of Binaural Cues for Bilateral Implant Recipients and Bimodal Listeners with and without Preserved Hearing in the Implanted Ear. *Audiology and Neurotology*, 19(1), 57-71.

PUBLICATIONS IN PREP

- Sheffield, S.W., Goupell, M., Spencer, N., Stakhovskaya, O., & Bernstein, J.G.W. (in revision). Binaural optimization of cochlear implants: Discarding frequency content without sacrificing head-shadow benefit.
- Sheffield, S.W., Romigh, G.D., Zurek, P.M., Bernstein, J.G.W., & Brungart, D.S. (in revision). A method for degrading sound localization while preserving binaural detection.
- Sheffield, S.W., Stecker, G.C., Rogers, B., Ashmead, D., Gifford, R.H. (submitted). fNIRS detects differences in speech recognition performance and auditory stimulus level in adults with cochlear implants and adults with cochlear implant simulations.

- Sheffield, S.W., Wheeler, H., Brungart, D.S., Bernstein, J.G.W. (in prep). The effect of sound localization on auditory-only and audiovisual speech recognition in a simulated multi-talker environment
- Sheffield, S.W., Goupell, M., Spencer, N., Stakhovskaya, O., & Bernstein, J.G.W. (in prep). Modeling head-shadow benefit and the importance of frequency content in listeners with cochlear implants.

SELECTED SCHOLARLY PRESENTATIONS

- Sheffield, S. W., & Bernstein, J. S. W. (May 2018). *Assessing perceived listening difficulty using behavioral gaze patterns for audiovisual speech*. 175th Meeting of the Acoustical Society of America, Minneapolis, MN. Poster Presentation.
- Sheffield, S. W., & Bernstein, J. S.W. (January 2018). *Gaze patterns for audiovisual speech recognition*. Mid-Atlantic Seminar on Hearing (MASH), College Park, MD. Podium presentation.
- Sheffield, S. W., & Bernstein, J. S.W. (November 2017). *Localization and Binaural Unmasking for Speech Recognition in a Simulated Audiovisual Multi-talker Environment*. 8th Annual Midwest Conference on Cochlear Implants, Madison, WI. Podium presentation.
- Sheffield, S. W., Goupell, M., Spencer, N. J., Stakhovskaya, O., Bernstein, J. S.W. (July 2017). *Binaural optimization of cochlear implants: discarding frequency content without sacrificing head-shadow benefit*. Conference on Implantable Auditory Prostheses, Tahoe City, CA. Poster presentation.
- Sheffield, S. W., Goupell, M., Spencer, N. J., Stakhovskaya, O., Bernstein, J. S.W. (March 2017). *Frequency Dependence of the Head-shadow Benefit for Single-Sided Deaf and Bilateral Cochlear Implantees*. Association for Research in Otolaryngology 40th Annual Midwinter Meeting, Baltimore, MD. Poster presentation.
- Sheffield, S. W., Wheeler, H. J., Brungart, D. S., Bernstein, J. S. W. (November 2016). *Localization-based audiovisual speech-recognition benefit with degraded spatial cues*. 5th Joint Meeting, Acoustical Society of America and Acoustical Society of Japan, Honolulu, HI. Podium Presentation.
- Nelson, E., Sheffield, S. W., Butera, I., Gifford, R. H. (March 2016). *Auditory Cortical Activation with Image-Guided Cochlear Implant Programming: fNIRS*. American Auditory Society Annual Meeting, Scottsdale, AZ. Poster Presentation.
- Sheffield, S.W., Bernstein, J. S.W. (January 2016). *Two ears improve target localization for audio-visual benefit*. Mid-Atlantic Seminar on Hearing (MASH), College Park, MD. Podium presentation.
- Gifford, R. H., Loisel, L., Cook, S., Davis, T. J., Sheffield, S. W., & Dorman, M. F. (2015). Additions to a single CI to improve speech understanding. *The Journal of the Acoustical Society of America*, 137(4), 2262-2262.
- Sheffield, S. W., Jahn, K., Simha, M., Gifford, R. H. (December 2014). *Acoustic Bandwidth Effects on Bimodal Benefit in Children*. 14th Symposium on Cochlear Implants in Children, Nashville, TN. Poster presentation.
- Holder, J. T., Sheffield, S. W., Jahn, K., Browder, C., Gifford, R. H. (December 2014). *Speech Understanding in Children with Normal Hearing: BabyBio Normative Data*. 14th Symposium on Cochlear Implants in Children, Nashville, TN. Poster presentation.
- Sheffield, S. W., Gifford, R. (October 2014). *Near-infrared spectroscopy detects differences in auditory cortical activation across cochlear implant configurations*. 8th International Symposium on Objective Measures in Auditory Implants, Toronto, Canada. Poster and podium presentation.

- Sheffield, S. W., Gifford, R. (March 2014). *Near-infrared spectroscopy detects brain activity differences between CI simulations*. American Auditory Society Annual Meeting, Scottsdale, AZ. Poster presentation.
- Sheffield, S. W., Gifford, R. (November 2013). *What the brain looks like for CI simulations of speech: NIRS and fMRI studies*. Neural Imaging: from the cochlea to the cortex, Tempe, AZ. Podium presentation.
- Sheffield, S. W., Gifford, R., Stevenson R., Krueger J., Wallace M. (July 2013). *Multisensory Integration In Adult Cochlear Implant Users With Hearing Preservation*. Conference on Implantable Auditory Processes, Tahoe City, CA. Poster presentation.
- Sheffield, S. W., Gifford, R. (March 2012). *Electric and acoustic stimulation: Minimum frequency bandwidth for bimodal benefit*. American Auditory Society Annual Meeting, Scottsdale, AZ. Poster presentation.
- Sheffield, S. W., Olund, A., Hogan, C., Bauch, C., Martin, J. (April 2011). *Transducer Variability in Mechanically-Altered Ears*. AudiologyNOW!, American Academy of Audiology Annual Meeting, Chicago, IL. Poster presentation.
- Sheffield, S. W., Goodman, S. (May 2010). *Monitoring Ototoxicity*. Tianjin Medical University Cancer Institute and Hospital, Tianjin, China. Podium presentation.

RESEARCH SUPPORT

- Vanderbilt Institute for Clinical and Translational Research Grant: Supported by the National Center for Advancing Translational Sciences of the National Institute of Health under Award Number UL1 TR000445
Title: Functional near-infrared spectroscopy in Adults with Normal Hearing and Adults with Cochlear Implants
Funding: \$9490

COURSES TAUGHT

- Graduate
 - Principles of Audiological Evaluation
 - Instrumentation for Hearing and Speech Sciences
 - Cochlear Implants for Speech Pathologists
 - Cochlear implants
 - Signal and System Theory
- Undergraduate
 - Hearing loss and audiometry
 - Basic Acoustics for Speech and Hearing

HONORS

- Student Award, 8th International Symposium on Objective Measures in Auditory Implants, 2014
- Resident and Graduate Student Poster Session Award, American Auditory Society, 2014
- Resident and Graduate Student Poster Session Award, American Auditory Society, 2012
- Audiology/Hearing Science Research Travel Award, American Speech and Hearing Association, 2012

AFFILIATIONS/MEMBERSHIPS

- Acoustical Society of America member, 2016-present
- Association of Research for Otolaryngology member, 2016-present
- American Speech and Hearing Association Member, 2012-present

- Certified for Clinical Competence in Audiology, 2012-present
- National Hearing Conservation Association member, 2009-present