

CURRICULUM VITAE

Maureen J. Shader, Au.D., Ph.D., CCC-A

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Employment

2022 - Current Assistant Professor, Purdue University, Department of Speech, Language, and Hearing Sciences, West Lafayette, IN, USA
2019 - Current Honorary Fellow, University of Melbourne, Medical Bionics Department, VIC, Australia
2019 - 2021 Post-Doctoral Research Fellow, Bionics Institute, Melbourne, VIC, Australia

Education

Dec 2008 Bachelor of Science (B.S.), Communication Sciences and Disorders, Nazareth College, Rochester, New York, USA
May 2013 Clinical Doctor of Audiology (Au.D.), Gallaudet University, Washington DC, USA
Aug 2019 Doctor of Philosophy (Ph.D.), University of Maryland, College Park, Maryland, USA

Research Support

2015 - 2017 Institutional Research Grant, NIH (NIDCD), T32DC000046E, Title: Comparative and Evolutionary Biology of Hearing
2017 - 2018 Postdoctoral Individual National Research Service Award, NIH (NIDCD), Research Dissertation Fellowship for Au.D. Audiologists (F32), F32DC016478, Title: Temporal processing ability in older cochlear-implant users. Sponsor: Matthew J. Goupell, Ph.D. Co-sponsor: Sandra Gordon-Salant, Ph.D.

Fellowships/Awards/Honors

May 2011 Handelsman and Hendrix Award, "Awarded for achievement and service, and personal qualities of compassion, integrity, leadership, and warm-heartedness," Gallaudet University
2013 - 2015 Dean's Fellowship, University of Maryland College Park
Oct 2015 Student Travel Award, Aging & Speech Communication Conference, Bloomington, IN
Apr 2016 Excellence in Teaching: Graduate Instructor Award, College of Behavioral and Social Sciences, University of Maryland College Park
Oct 2017 Student Travel Award, Aging & Speech Communication Conference, Bloomington, IN
Nov 2018 2018 New Century Scholars Doctoral Scholarship, American Speech-Language-Hearing Foundation
Apr 2022 Favorite Faculty Award, Most Distinguished Faculty for Academics, Purdue University Residences

Refereed Publications

Book Chapters

1. Gordon-Salant S., **Shader M.J.**, Wingfield A. (2020) Age-Related Changes in Speech Understanding: Peripheral Versus Cognitive Influences. In: Helfer K.S., Bartlett E.L., Popper A.N., Fay R.R. (eds) Aging and Hearing. Springer Handbook of Auditory Research, vol 72. Springer, Cham. doi: 10.1007/978-3-030-49367-7_9

Journal Articles/Letters

1. Goupell, M. J., Gaskins, C. R., **Shader, M. J.**, Walter, E. P., Anderson, S., and Gordon-Salant, S. (2017). Age-related differences in the processing of temporal envelope and spectral cues in a speech segment, *Ear and Hearing*, 38(6), e335-e342. doi: 10.1097/AUD.0000000000000447

2. Xie, Z., Gaskins, C. R., **Shader, M. J.**, Gordon-Salant, S., Anderson, S., and Goupell, M. J. (2019). Age-related temporal processing deficits in word segments in adult cochlear-implant users, *Trends in Hearing*, 23, 1-19. doi: 10.1177/2331216519886688
3. **Shader, M. J.**, Nguyen, N., Cleary, M., Hertzano, R., Eisenman, D. J., Anderson, S., Gordon-Salant, S., and Goupell, M. J. (2020). Effect of stimulation rate on speech understanding scores in older cochlear-implant users, *Ear and Hearing*, 41(3), 640-651. doi: 10.1097/AUD.0000000000000793
4. **Shader, M. J.**, Yancey, C.M., Gordon-Salant, S., and Goupell, M. J. (2020). Spectral-temporal trade-off in vocoded sentence recognition: Effects of age, hearing thresholds, and working memory, *Ear and Hearing*, 41(5), 1226-1235. doi: 10.1097/AUD.0000000000000840
5. Xie, Z., **Shader, M. J.**, Gordon-Salant, S., Anderson, S., and Goupell, M. J. (2020). Letter to the Editor: Sex effects on the processing of temporal cues in word segments in adult cochlear-implant users, *Trends in Hearing*, 24, 1-2. doi: 10.1177/2331216520946675.
6. **Shader, M. J.**, Gordon-Salant, S., and Goupell, M. J. (2020). The impact of aging and the electrode-to-neural interface on temporal processing ability in cochlear-implant users: Amplitude modulation detection thresholds, *Trends in Hearing*, 24, 1-14. doi: 10.1177/2331216520936160
7. **Shader, M. J.**, Gordon-Salant, S., and Goupell, M. J. (2020). The impact of aging and the electrode-to-neural interface on temporal processing ability in cochlear-implant users: Gap detection thresholds, *Trends in Hearing*, 24, 1-13. doi: 10.1177/2331216520956560
8. Luke, R., Larson, E., **Shader, M. J.**, Innes-Brown, H., Van Yper, L., Lee, A. K. C., Sowman, P. F., McAlpine, D. (2021). Analysis methods for measuring passive auditory fNIRS responses generated by a block-design paradigm, *Neurophotonics*, 8(2), 025008. doi: 10.1117/1.NPh.8.2.025008
9. Johnson, K. C., Xie Z., **Shader, M. J.**, Mayo, P. G., and Goupell, M. J. (2021). Age effects on rate discrimination in adult cochlear-implant users, *Trends in Hearing*, 25, 1-15. doi: 10.1177/23312165211007367.
10. **Shader, M. J.***, Luke, R.*, Gouailhardou, N., and McKay, C. M. (2021). The use of broad vs restricted regions of interest in functional near-infrared spectroscopy for measuring cortical activation to auditory-only and visual-only speech, *Hearing Research*, 406, 108256. doi: 10.1016/j.heares.2021.108256
11. Luke, R., **Shader, M. J.**, and McAlpine, D. (2021). Characterization of Mayer wave oscillations in functional near-infrared spectroscopy using a physiologically informed model of the neural power spectra, *Neurophotonics*, 8(4), 041001. doi: 10.1117/1.NPh.8.4.041001
12. **Shader, M. J.**, Kwon, B. J., Gordon-Salant, S., and Goupell, M. J. (2022). Open-set phoneme recognition performance with varied temporal cues in younger and older cochlear-implant users, *Journal of Speech, Language, and Hearing Research*, 65(3), 1196-1211. doi: 10.1044/2021_JSLHR-21-00299
13. Luke, R., **Shader, M. J.**, Gramfort, A., Larson, E., Lee, A. KC., McAlpine, D. (**under review**). Oxygenated hemoglobin signal provides greater predictive performance of experimental condition than de-oxygenated, *Neurophotonics*. doi: 10.1101/2021.11.19.469225 (pre-print)
14. **Shader, M. J.***, Luke, R.*, and McKay, C. M. (**under review**). Contralateral dominance to speech in the adult auditory cortex immediately after cochlear implantation, *iScience*.

* both authors contributed equally

Podium Presentations

1. **Shader, M. J.**, Nguyen, N., Hertzano, R., Eisenman, D. J., Anderson, S., Gordon-Salant, S., and Goupell, M. J. "Acute effect of stimulation rate on speech recognition in young, middle-age, and older cochlear-implant users," Mid-Atlantic Seminar on Hearing, College Park, MD, January 2014.
2. **Shader, M. J.**, Nguyen, N., Hertzano, R., Eisenman, D., Anderson, S., Gordon-Salant, S., and Goupell, M. J. "Acute effect of stimulation rate on speech recognition scores in young, middle-age, and older adult cochlear-implant users," 13th International Conference on Cochlear Implants and Other Implantable Auditory Technologies, Munich, Germany, June 2014.
3. **Shader, M. J.**, Cleary, M. I., Nguyen, N., Hertzano, R., Eisenman, D., and Goupell, M. J. "Insights from clinicians concerning aging and cochlear implants," Midwest Cochlear-Implant Conference, Madison, WI, November 2014.
4. Gaskins, C., **Shader, M. J.**, Anderson, S., Gordon-Salant, S., and Goupell, M. J. "Age affects consonant perception related to gap detection in cochlear-implant users," Mid-Atlantic Seminar on Hearing, College Park, MD, January 2015.
5. Gaskins, C. R., **Shader, M. J.**, Gordon-Salant, M. J., Anderson, S., and Goupell, M. J. "Age-related differences in consonant perception in real and simulated cochlear-implant users," Association for Research in Otolaryngology (ARO) 38th Midwinter Meeting, Baltimore, MD, February 2015.
6. **Shader, M. J.**, Nguyen, N., Hertzano, R., Eisenman, D. J., Anderson, S., Gordon-Salant, S., and Goupell, M. J. "Do lower stimulation rates improve speech understanding in typically low-performing groups of cochlear-implant users?" Association for Research in Otolaryngology (ARO) 38th MidWinter Meeting, Baltimore, MD, February 2015.
7. **Shader, M. J.** & Goupell, M. J. "Do age and duration of deafness affect gap detection ability in cochlear-implant users?" Midwest Mini-Conference on Cochlear Implants, Madison, WI, October 2016.
8. **Shader, M. J.**, Nguyen, N., Hertzano, R., Eisenman, D., Anderson, S., Gordon-Salant, S., and Goupell, M. J. "Can we improve speech understanding ability in older cochlear-implant users and those with prolonged durations of deafness?" University of Maryland and NIDCD Joint Workshop, Center for Comparative and Evolutionary Biology of Hearing: C-CEBH, College Park, MD, October 2016.
9. **Shader, M. J.**, Gordon-Salant, S., and Goupell, M. J. "Peripheral vs. central contributions to auditory temporal processing ability," Mid-Atlantic Seminar on Hearing, College Park, MD, January 2017.
10. **Shader, M. J.**, Gordon-Salant, S., and Goupell, M. J. "Age-related auditory temporal processing deficits in cochlear-implant users," 18th Conference on Implantable Auditory Prostheses (CIAP), Lake Tahoe, CA, July 2017.
11. **Shader, M. J.**, Kwon, B. J., Gordon-Salant, S., and Goupell, M. J. "Phoneme recognition with varying stimulation rate and temporal envelope smearing in younger and older cochlear-implant users," Mid-Atlantic Seminar on Hearing, College Park, MD, February 2019.
12. **Shader, M. J.**, Luke, R., Innes-Brown, H., Gouailhardou, N., Shoushtarian, M., Acevedo, N., Lee, W. L., and McKay, C. M. "Use of functional near-infrared spectroscopy for improved prognosis for cochlear implant candidates," Association for Research in Otolaryngology 44th MidWinter Meeting, Virtual Conference, February 2021.
13. McKay, C. M., **Shader, M. J.**, and Luke, R. "What physiological differences underlie variation in speech perception benefit for CI users?" 20th Conference on Implantable Auditory Prostheses (CIAP), Virtual Conference, July 2021.
14. Xie Z., Johnson, K. C., **Shader, M. J.**, Mayo, P. G., Gibbs, B. E., and Goupell, M. J. "Effect of chronological age on pulse rate discrimination in adult cochlear-implant users" 20th Conference on Implantable Auditory Prostheses (CIAP), Virtual Conference, July 2021.
15. Luke, R., **Shader, M. J.**, Fullerton, A., Moffat, R., VanYper, L., and McAlpine, D. "Utilising functional near-infrared spectroscopy to investigate audition," vfNIRS2021 Conference, October 2021.

Poster Presentations

1. Stewart, E., **Shader, M. J.**, Fox-Thomas, L. G. "Efficacy of LACE Training Software with Adult Bimodal Listeners," American Academy of Audiology Convention, AudiologyNOW! Anaheim, CA, April 2013.
2. Goupell, M. J., Gaskins, C. R., **Shader, M. J.**, Presacco, A., Anderson, S., Gordon-Salant, S. "Gap detection in cochlear-implant users reveals age-related central temporal processing deficits," 17th Conference on Implantable Auditory Prostheses, Lake Tahoe, CA, July 2015.
3. Gaskins, C. R., **Shader, M. J.**, Anderson, S. B., Gordon-Salant, S., Goupell, M. J. "Age-related temporal processing deficits in word segments in cochlear-implant users," 6th Aging and Speech Communication Conference, Bloomington, IN, October 2015.
4. **Shader, M. J.**, Nguyen, N., Hertzano, R., Eisenman, D., Anderson, S. B., Gordon-Salant, S., Goupell, M. J. "The effect of stimulation rate on speech recognition in older cochlear-implant users," 6th Aging and Speech Communication Conference, Bloomington, IN, October 2015.
5. **Shader, M. J.**, Gordon-Salant, S., Goupell, M. J. "Older listeners process envelope modulations less effectively than younger listeners for understanding of cochlear-implant simulated speech," America Auditory Society Annual Meeting, Scottsdale, AZ, March 2016.
6. Presacco, A., Goupell, M. J., Gaskins, C., **Shader, M. J.**, and Anderson, S. "Neural correlates of age-related perceptual deficits in cochlear-implant users," America Auditory Society Annual Meeting, Scottsdale, AZ, March 2016.
7. **Shader, M. J.**, Gordon-Salant, S., and Goupell, M. J. "Effects of age on gap detection thresholds in cochlear-implant users," Association for Research in Otolaryngology (ARO) 40th Midwinter Meeting, Baltimore, MD, February 2017.
8. **Shader, M. J.**, Gordon-Salant, S., and Goupell, M. J. "Age and peripheral neural survival impacts temporal processing ability in cochlear-implant users at fast stimulation rates," 16th Eastern Auditory Retreat, Washington, D.C., June 2017.
9. **Shader, M. J.**, Gordon-Salant, S., and Goupell, M. J. "The effects of age on temporal amplitude modulation processing ability in cochlear-implant users," 7th Aging and Speech Communication Conference, Tampa, FL, October 2017.
10. **Shader, M. J.**, Yancey, C. M., Gordon-Salant, S., and Goupell, M. J. "Recognition of noise-vocoded sentences in younger and older normal-hearing listeners: Effects of age and cognition," Undergraduate Research Day, University of Maryland, College Park, MD, April 2018.
11. Tinnemore, A., **Shader, M. J.**, Goupell, M. J., and Gordon-Salant, S. "Why study listeners with cochlear implants?" Language Science Day, University of Maryland, College Park, MD, September 2018.
12. **Shader, M. J.**, Gordon-Salant, S., Kwon, B.J., and Goupell, M. J. "The effect of age on cochlear-implant users' recognition of consonant contrasts that vary in discrete temporal cues at different stimulation rates and envelope modulation rates," 19th Conference on Implantable Auditory Prostheses (CIAP), Lake Tahoe, CA, July 2019.
13. Jaekel, B. N., Tinnemore, A. R., Milvae, K. D., Xie, Z., Weinstein, S., Gaskins, C., **Shader, M. J.**, Kuchinsky, S., Stakhovskaya, O., Newman, R., Anderson, S., Gordon-Salant, S., and Goupell, M. J. "Cochlear implant research at UMD: How auditory prostheses impact speech and language perception," Language Science Day, University of Maryland, College Park, MD, September 2019.
14. Goupell, M. J., **Shader, M. J.**, Anderson, S., and Gordon-Salant, S. "Peripheral versus central age-related temporal processing deficits: Insights from cochlear-implant users," 8th Aging and Speech Communication Conference, Tampa, FL, November 2019.
15. **Shader, M. J.**, Luke, R., Gouailhardou, N., and McKay, C. M. "Spatial selectivity of fNIRS for measuring cortical activation in the temporal and occipital regions in response to auditory-only and visual-only speech," Association for Research in Otolaryngology (ARO) 44th MidWinter Meeting, Virtual Conference, February 2021.

16. **Shader, M. J.**, Luke, R., and McKay, C. M. "A clinically feasible method to identify neural dead regions in adult cochlear implant users," 20th Conference on Implantable Auditory Prostheses (CIAP), Virtual Conference, July 2021.
17. **Shader, M. J.**, Luke, R., and McKay, C. M. "Are cortical activation patterns to auditory-only and visual-only speech as revealed by fNIRS related to speech understanding scores immediately following implant switch-on?" 20th Conference on Implantable Auditory Prostheses (CIAP), Virtual Conference, July 2021.

Clinical Audiology Experience

2009 - 2011	Graduate Clinical Practicum, Gallaudet University
2011	Clinical Doctoral Intern, Rochester Hearing and Speech Center
2011	Clinical Doctoral Intern, Johns Hopkins Hospital, The Listening Center
2012	Clinical Doctoral Intern, National Institutes of Health (NIDCD)
2012 - 2013	Clinical Doctoral Extern, UNC Greensboro Speech and Hearing Center

Teaching Activities

Gallaudet University

Fall 2010	Instructor: Speechreading and Communication Strategies (HSL210)
Fall 2010	Teaching Assistant: Acoustics and Instrumentation (HSL814)
Fall 2010	Teaching Assistant: Diagnostic Audiology I (HSL834)
Spring 2011	Teaching Assistant: Diagnostic Audiology II (HSL835)

UNC Greensboro

Fall 2012	Instructor: Better Hearing and Communication Workshops
Spring 2013	Instructor: Better Hearing and Communication Workshops

University of Maryland College Park

Summer 2014	Instructor: Aural Rehabilitation/Habilitation (HESP635)
Summer 2015	Instructor: Aural Rehabilitation/Habilitation (HESP635)
Fall 2015	Instructor: Cochlear Implants and Other Implantable Technologies (HESP712)
Summer 2016	Instructor: Aural Rehabilitation/Habilitation (HESP635)

Purdue University

Spring 2022	Instructor: Introduction to Hearing Loss Treatment and Management (SLHS402)
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University Service

Fall 2014	Audiology Faculty Search Committee, HESP department
2014 – 2016	BSOS Dean's Graduate Student Advisory Council, HESP Representative
2016 – 2017	HESP Department Faculty Meeting Graduate Student Representative
2014 – 2015	Undergraduate Student Research Mentor (2 students)
2015 – 2016	Undergraduate Student Research Mentor (2 students)
2016 – 2017	Undergraduate Student Research Mentor (2 students)
2017 – 2018	Undergraduate Student Research Mentor (1 student)
2018 – 2019	Undergraduate Student Research Mentor (2 students)

Professional Service

Contributions to Scientific Community

- Contributor to fNIRS-BIDS (Brain Imaging Data Structure) Standards

Reviewing Activities for Journals:

- *Ear and Hearing*
- *Hearing Research*
- *Journal of the Association for Research in Otolaryngology*
- *Journal of the Acoustical Society of America*
- *Current Research in Neurobiology*

Community Outreach

March 2020 Interviewee for RRR Radio, Einstein-a-Go-Go, Melbourne, VIC Australia

2020 – 2021 Mentoring Girls in STEM (Science, Technology, Engineering, and Mathematics) Mentor, Bionics Institute and Ivanhoe Girls Grammar School, Melbourne, Australia (2 students)