

CURRICULUM VITAE

University of Pittsburgh
School of Health and Rehabilitation Sciences
April 26, 2024

PART I. BACKGROUND

Name

Bharadwaj, Hari M.

Academic Record

2014	Ph.D.	Boston University	Biomedical Engineering
2008	M.S.	University of Michigan, Ann Arbor	Electrical Engineering: Systems
2008	M.S.	University of Michigan, Ann Arbor	Biomedical Engineering
2006	B.Tech.	Indian Institute of Technology (IIT), Madras	Electrical Engineering

PART II. GENERAL INFORMATION

Academic Appointments

2022 –	Assistant Professor, Department of Communication Science and Disorders, University of Pittsburgh, Pittsburgh, PA.
2022 –	Adjunct Assistant Professor, Department of Speech, Language, and Hearing Sciences, Purdue University, West Lafayette, IN
2016 – 2022	Assistant Professor, Department of Speech, Language, and Hearing Sciences, Purdue University, West Lafayette, IN
2016 – 2022	Assistant Professor, Weldon School of Biomedical Engineering, Purdue University, West Lafayette, IN
2014 – 2016	Research Fellow, Departments of Neurology and Radiology, Harvard Medical School & Massachusetts General Hospital, Charlestown, MA
2014	Post-doctoral Associate, Center for Computational Neuroscience and Neural Technology, Boston University. Boston, MA
2009 – 2010	Research Analyst, Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Charlestown, MA

Awards and Honors

2024	Selected to deliver a lecture as part of the 2024 Senior Vice Chancellor's Research Seminar series, University of Pittsburgh Health Sciences.
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- 2018 – 2019 Ruth and M. D. Steer outstanding teaching award for being voted the “Outstanding Audiology Graduate Instructor”.
- 2018 American Speech, Language, and Hearing Association (ASHA) Early Career Research Contribution Award.
- 2017 – 2018 Ruth and M. D. Steer outstanding teaching award for being voted the “Outstanding Audiology Graduate Instructor”.
- 2017 Purdue University Bronze Acorn “Seeds for Success” Research Excellence award.
- 2015 – 2016 Hearing Health Foundation Emerging Research Award.
- 2014 Best doctoral dissertation of the year award, Department of Biomedical Engineering, Boston University.
- 2014 Best student paper award for article [J37], Boston University.
- 2014 Travel Award, Center for Computational Neuroscience and Neural Technology, Boston University.
- 2006 – 2008 Graduate Fellowship, Department of Biomedical Engineering, University of Michigan.
- 2004 – 2006 Undergraduate merit cum means scholarship, Indian Institute of Technology (IIT) Madras.

Memberships in academic, professional, and scholarly societies

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| 2019 – | Member | Society for Neuroscience (SfN) |
| 2018 – | Member | American Speech-Language-Hearing Association (ASHA) |
| 2016 – | Member | Acoustical Society of America (ASA) |
| 2010 – | Member | Association for Research in Otolaryngology (ARO) |

Section A: DISCOVERY

Published Work

Impact: (as of April 26, 2024) Number of citations: 2594, h-index: 23, i10-index: 31. Source: [Google Scholar](#).

Refereed Research Articles and Preprints

- [J1] Mok, B. A., Viswanathan, V., Borjigin, A., Singh, R., Kafi, H. I., & **Bharadwaj, H. M.** (2024). Web-based Psychoacoustics: Hearing Screening, Infrastructure, and Validation. *Behavior Research Methods*, 1-16. Volume 56, pages 1433-1448. Published online: 08 June 2023. PMID: 37326771 PMCID: PMC10704001.
- [J2] Borjigin, A., & **Bharadwaj, H. M.** (2023). Individual Differences Reveal the Utility of Temporal Fine-Structure Processing for Speech Perception in Noise. *bioRxiv: the preprint server for biology*, 2023.09.20.558670. <https://doi.org/10.1101/2023.09.20.558670>.
- [J3] Singh, R., & **Bharadwaj, H. M.** (2023). Cortical temporal integration can account for limits of temporal perception: investigations in the binaural system. *Communications biology*, 6(1), 981. doi: <https://doi.org/10.1038/s42003-023-05361-5>.

- [J4] Borjigin, A., Kokkinakis, K., **Bharadwaj, H. M.**, & Stohl, J. S. (2023). Deep Learning Restores Speech Intelligibility in Multi-Talker Interference for Cochlear Implant Users. *bioRxiv : the preprint server for biology*, 2022.08.25.504678. <https://doi.org/10.1101/2022.08.25.504678>.
- [J5] **Bharadwaj, H. M.**, Wilbur, R. B., & Siskind, J. M. (2023). Still an Ineffective Method With Supertrials/ERPs-Comments on “Decoding Brain Representations by Multimodal Learning of Neural Activity and Visual Features”. *IEEE transactions on pattern analysis and machine intelligence*, 45(11), 14052–14054.
- [J6] Ginsberg, H., Singh, R., **Bharadwaj, H. M.**, & Heinz, M. G. (2023). A multi-channel EEG mini-cap can improve reliability for recording auditory brainstem responses in chinchillas. *Journal of Neuroscience Methods*, 398, 109954.
- [J7] Alho, J., Samuelsson, J. G., Khan, S., Mamashli, F., **Bharadwaj, H. M.**, Losh, A., McGuiggan, N. M., Graham, S., Nayal, Z., Perrachione, T. K., Joseph, R. M., Stoodley, C. J., Hämäläinen, M. S., & Kenet, T. (2023). Both stronger and weaker cerebro-cerebellar functional connectivity patterns during processing of spoken sentences in autism spectrum disorder. *Human Brain Mapping*, 10.1002/hbm.26478. Advance online publication.
- [J8] Viswanathan, V., **Bharadwaj, H. M.**, Heinz, M. G., & Shinn-Cunningham, B. G. (2023). Induced Alpha And Beta Electroencephalographic Rhythms Covary With Single-Trial Speech Intelligibility In Competition. *Scientific Reports*, 13(1), 10216. PMID: 36712081. PMCID: PMC9884507.
- [J9] Salloom, W.B., **Bharadwaj, H.**, & Strickland, E.A. (2023). The effects of broadband elicitor duration on a psychoacoustic measure of cochlear gain reduction. *The Journal of the Acoustical Society of America*, 153(4), pp.2482-2482. PubMed PMID: 37092950.
- [J10] Alho, J., Khan, S., Mamashli, F., Perrachione, T.K., Losh, A., McGuiggan, N.M., Graham, S., Nayal, Z., Joseph, R.M., Hämäläinen, M.S., **Bharadwaj, H.***, & Kenet, T.* (2023). Atypical cortical processing of bottom-up speech binding cues in children with autism spectrum disorders. *NeuroImage: Clinical*, 37, p.103336; PubMed PMID: 36724734 PubMed Central PMCID: PMC9898310. [*Equal contribution as senior author formally listed in publication]
- [J11] Ahlfors, S.P., Graham, S., **Bharadwaj, H.**, Mamashli, F., Khan, S., Joseph, R.M., Losh, A., Pawlyszyn, S., McGuiggan, N.M., Vangel, M. and Hämäläinen, M.S., & Kenet, T. (2023). No Differences in Auditory Steady-State Responses in Children with Autism Spectrum Disorder and Typically Developing Children. *Journal of Autism and Developmental Disorders*, pp.1-14. PubMed PMID: 36932270.
- [J12] Borjigin, A., Kokkinakis, K., **Bharadwaj, H. M.**, & Stohl, J. S. (2022). Deep neural network algorithms for noise reduction and their application to cochlear implants. *bioRxiv*. 2022.08.25.504678; doi: <https://doi.org/10.1101/2022.08.25.504678>.
- [J13] **Bharadwaj, H. M.**, Hustedt-Mai, A. R., Ginsberg, H. M., Dougherty, K. M., Muthaiah, V. P. K., Hagedorn, A., Simpson, J. M., & Heinz, M. G. (2022). Cross-Species Experiments Reveal Widespread Cochlear Neural Damage in Normal Hearing. *Communications Biology*. 5, 733; doi: <https://doi.org/10.1038/s42003-022-03691-4>
- [J14] **Bharadwaj, H. M.**, Mamashli, F., Khan, S., Singh, R., Joseph, R. M., Losh, A., ... & Kenet, T. (2022). Cortical signatures of auditory object binding in children with Autism Spectrum

- Disorder are anomalous in concordance with behavior and diagnosis. *PLOS Biology*. 20(2), e3001541; doi: <https://doi.org/10.1371/journal.pbio.3001541>
- [J15] Borjigin, A., Hustedt-Mai, A. R., & **Bharadwaj, H. M.** (2022). Individualized Assays of Temporal Coding in the Ascending Human Auditory System. *eNeuro*. 9 (2):ENEURO.0378-21.2022. doi: 10.1523/ENEURO.0378-21.2022.
- [J16] Peng, Z. E., Waz, S., Buss, E., Shen, Y., Richards, V., **Bharadwaj, H.**, Stecker, G. C., et al. (2022). Remote testing for psychological and physiological acoustics. *Journal of the Acoustical Society of America*. 151(5), 3116-3128. <https://doi.org/10.1121/10.0010422>.
- [J17] Singh, R., & **Bharadwaj, H. M.** (2021). Cortical Temporal Integration Window for Binaural Cues accounts for Sluggish Auditory Spatial Perception. *bioRxiv*. 2021.12.14.472656; doi: <https://doi.org/10.1101/2021.12.14.472656>.
- [J18] **Bharadwaj H.**, & Shinn-Cunningham B. (2021). What's been hidden in hidden hearing loss. *Neuron*. 109(6):909-911.
- [J19] Ahmed, H., Wilbur, R. B., **Bharadwaj, H. M.**, & Siskind, J. M. (2021). Object Classification from Randomized EEG trials. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition* pp. 3845-3854. [This work is an equal collaboration between the labs of Bharadwaj and Siskind.]
- [J20] Viswanathan, V., **Bharadwaj, H. M.**, Shinn-Cunningham, B. G., Heinz, M. G. (2021). Modulation Masking and Fine Structure Shape Neural Envelope Coding to Predict Speech Intelligibility across Diverse Listening Conditions. *The Journal of the Acoustical Society of America*. 150: 2230-2244. <https://doi.org/10.1121/10.0006385>
- [J21] Kim, S., Wu, Y. H., **Bharadwaj, H. M.**, & Choi, I. (2021). Effect of Noise Reduction on Cortical Speech-in-Noise Processing and Its Variance due to Individual Noise Tolerance. *Ear and Hearing*. doi: 10.1097/AUD.0000000000001144
- [J22] Alho, J., **Bharadwaj, H.**, Khan, S., Mamashli, F., Perrachione, T. K., Losh, A., ... & Kenet, T. (2021). Altered maturation and atypical cortical processing of spoken sentences in autism spectrum disorder. *Progress in Neurobiology*, 102077.
- [J23] Ahmed, H., Wilbur, R. B., **Bharadwaj, H.**, & Siskind, J. M. (2021). Confounds in the data-Comments on "Decoding Brain Representations by Multimodal Learning of Neural Activity and Visual Features". *IEEE Transactions on Pattern Analysis and Machine Intelligence*. doi: 10.1109/TPAMI.2021.3121268. [This work is an equal collaboration between the labs of Bharadwaj and Siskind.]
- [J24] Parida, S., **Bharadwaj, H.**, & Heinz, M. G. (2021). Spectrally specific temporal analyses of spike-train responses to complex sounds: A unifying framework. *PLoS computational biology*, 17(2), e1008155.
- [J25] Li, R., Johansen, J. S., Ahmed, H., Ilyevsky, T. V., Wilbur, R. B., **Bharadwaj, H. M.**, & Siskind, J. M. (2020). The Perils and Pitfalls of Block Design for EEG Classification Experiments. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 43(1), 316-333. [This work is an equal collaboration between the labs of Bharadwaj and Siskind.]

- [J26] Lu, H., Mehta, A. H., **Bharadwaj, H. M.**, Shinn-Cunningham, B. G., & Oxenham, A. J. (2020). Comment on ‘Rapid acquisition of auditory subcortical steady state responses using multichannel recordings’. *Clinical Neurophysiology*, 131(8), 1833.
- [J27] **Bharadwaj, H. M.**, Mai, A. R., Choi, I., Simpson, J. M., Heinz, M. G., & Shinn-Cunningham, B. G. (2019). Non-Invasive Assays of Cochlear Synaptopathy – Candidates and Considerations. *Neuroscience*, 407, 53-66.
- [J28] Wang, L., **Bharadwaj, H. M.**, & Shinn-Cunningham, B. G. (2019). Assessing cochlear-place specific temporal coding using multi-band complex tones to measure envelope-following responses. *Neuroscience*, 407, 67-74.
- [J29] Viswanathan, V., **Bharadwaj, H. M.**, & Shinn-Cunningham, B. G. (2019). Electroencephalographic Signatures of the Neural Representation of Speech during Selective Attention. *eNeuro*, 6(5).
- [J30] Mamashli, F., Khan, S., **Bharadwaj, H. M.**, Losh, A., Pawlyszyn, S. M., Hamalainen, M. S., & Kenet, T. (2018). Maturation trajectories of local and long-range functional connectivity in autism during face processing. *Human Brain Mapping*, 39(10), 4094-4104.
- [J31] Khan, S., Hashmi, J. A., Mamashli, F., Michmizos, K., **Bharadwaj, H. M.**, ... & Kenet, T. (2018). Maturation Trajectories of Cortical Resting-State Networks Depend on the Mediating Frequency Band. *NeuroImage*, 174, 57-68. doi: 10.1016/j.neuroimage.2018.02.018
- [J32] Mamashli, F., Khan, S., **Bharadwaj, H. M.**, Michmizos, K., Ganesan, S., Garel, K. L. A., ... & Kenet, T. (2016). Auditory processing in noise is associated with complex patterns of disrupted functional connectivity in autism spectrum disorder. *Autism Research*. doi: 10.1002/aur.1714
- [J33] Khan, S., Hashmi, J. A., Mamashli, F., **Bharadwaj, H. M.**, Ganesan, S., Michmizos, K., ... & Kenet, T. (2016). Altered Onset Response Dynamics in Somatosensory Processing in Autism Spectrum Disorder. *Frontiers in Neuroscience*. 10: 255. doi: 10.3389/fnins.2016.00255.
- [J34] Mehraei, G., Hickox, A. E., **Bharadwaj, H. M.**, Goldberg, H., Verhulst, S., Liberman, M. C., & Shinn-Cunningham, B. G. (2016). Auditory Brainstem Response Latency in Noise as a Marker of Cochlear Synaptopathy. *The Journal of Neuroscience*, 36(13), 3755-3764. doi: 10.1523/JNEUROSCI.4460-15.2016.
- [J35] Varghese, L., **Bharadwaj, H. M.**, & Shinn-Cunningham, B. G. (2015). Evidence against attentional state modulating scalp-recorded auditory brainstem steady-state responses. *Brain research*, 1626, 146-164. doi: 10.1016/j.brainres.2015.06.038.
- [J36] Verhulst, S., **Bharadwaj, H. M.**, Mehraei, G., Shera, C. A. & Shinn-Cunningham, B. G. (2015). Functional modeling of the human auditory brainstem response to broadband stimulation. *The Journal of the Acoustical Society of America*, 138: 1637-1659. doi: 10.1121/1.4928305.
- [J37] **Bharadwaj, H. M.**, Masud, S., Verhulst, S., Mehraei, G., & Shinn-Cunningham, B. G. (2015). Individual differences reveal correlates of hidden hearing deficits. *The Journal of Neuroscience*, 35(5): 2161-2172. doi: 10.1523/jneurosci.3915-14.2015.

- [J38] Choi, I., **Bharadwaj, H. M.**, Bressler, S., Loui, P., Lee, K., & Shinn-Cunningham, B. G. (2014). Automatic processing of abstract musical tonality. *Frontiers in Human Neuroscience*, 8: 988. doi: 10.3389/fnhum.2014.00988.
- [J39] Choi, I., Wang, L., **Bharadwaj, H. M.**, & Shinn-Cunningham, B. G. (2014). Individual differences in attentional modulation of cortical responses correlate with selective attention performance. *Hearing research*, 314, 10-19. doi: 10.1016/j.heares.2014.04.008.
- [J40] Bressler, S., Masud, S., **Bharadwaj H. M.**, and Shinn-Cunningham, B. G. (2014). Bottom-up influences of voice continuity in focusing selective auditory attention. *Psychological Research*, 78(3), 349-360. doi: 10.1007/s00426-014-0555-7.
- [J41] **Bharadwaj, H. M.**, Verhulst, S., Shaheen, L., Liberman, M. C., & Shinn-Cunningham, B. G. (2014). Cochlear Neuropathy and the Coding of Supra-threshold Sound. *Frontiers in Systems Neuroscience*, 8: 26. doi:10.3389/fnsys.2014.00026.
- [J42] **Bharadwaj, H. M.**, & Shinn-Cunningham, B. G. (2014). Rapid acquisition of auditory subcortical steady-state responses using multichannel recordings. *Clinical Neurophysiology*, 125(9): 1878–1888. doi: 10.1016/j.clinph.2014.01.011.
- [J43] **Bharadwaj, H. M.**, Lee, A. K., & Shinn-Cunningham, B. G. (2014). Measuring Auditory Selective Attention using Frequency Tagging. *Frontiers in Integrative Neuroscience*, 8: 6. doi: 10.3389/fnint.2014.00006.
- [J44] Zhu, L., **Bharadwaj, H. M.**, Xia, J., & Shinn-Cunningham, B. (2013). A comparison of spectral magnitude and phase-locking value analyses of the frequency-following response to complex tones. *The Journal of the Acoustical Society of America*, 134(1), 384-395.
- [J45] Ruggles, D., **Bharadwaj, H. M.**, & Shinn-Cunningham, B. G. (2012). Why middle-aged listeners have trouble hearing in everyday settings. *Current Biology*, 22(15), 1417-1422.
- [J46] Kenet, T., Orekhova, E. V., **Bharadwaj, H. M.**, Shetty, N. R., Israeli, E., Lee, A. K. C. et al. (2012). Disconnectivity of the cortical ocular motor control network in autism spectrum disorders. *NeuroImage*, 61(4), 1226-1234.
- [J47] Lee, A. K. C., Rajaram, S., Xia, J., **Bharadwaj, H. M.**, Larson, E., Hamalainen, M. S., & Shinn-Cunningham, B. G. (2012). Auditory selective attention reveals preparatory activity in different cortical regions for selection based on source location and source pitch. *Frontiers in Neuroscience*, 6: 190.
- [J48] Ruggles, D., **Bharadwaj, H. M.**, & Shinn-Cunningham, B. G. (2011). Normal hearing is not enough to guarantee robust encoding of suprathreshold features important in everyday communication. *Proceedings of the National Academy of Sciences of U.S.A*, 108(37), 15516-15521.

Book Chapters

- [B1] Shinn-Cunningham, B. G., Varghese, L., Wang, L., & **Bharadwaj, H. M.** (2017). Individual differences in temporal perception, and their implications for everyday listening. In *Frequency Following Response: A Window into Human Communication*, N Kraus, S Anderson, T White-Schwoch, RR Fay, and AN Popper (eds.), Springer Handbook of Auditory Research 61 (pp. 159-192). Springer Verlag.

[Invited Review Chapter. Description from Springer Website: The Springer Handbook of Auditory Research presents a series of synthetic reviews of fundamental topics dealing with auditory systems. Each volume is independent and authoritative; taken as a set, this series will be the definitive resource in the field.]

- [B2] Shinn-Cunningham, B. G., Ruggles, D. R., & **Bharadwaj, H. M.** (2013). How Early Aging and Environment Interact in Everyday Listening: From Brainstem to Behavior Through Modeling. *Basic Aspects of Hearing: Physiology and Perception* (pp. 501-510). Springer New York.

[Description from Springer Website: The International Symposium on Hearing is a highly-prestigious, triennial event where world-class scientists present and discuss the most recent advances in the field of hearing research in animals and humans. Presented papers range from basic to applied research, and are of interest neuroscientists, otolaryngologists, psychologists, and artificial intelligence researchers. Basic Aspects of Hearing: Physiology and Perception includes the best papers from the 2012 International Symposium on Hearing. Over 50 chapters focus on the relationship between auditory physiology, psychoacoustics, and computational modeling.]

Conference Proceedings

- [C1] Salloom, W. B., Wade, K., **Bharadwaj, H.**, & Strickland, E. A. (2024). The effect of broadband elicitor duration on transient-evoked otoacoustic emissions and a psychoacoustic measure of gain reduction. In AIP Conference Proceedings, (Vol. 3062, No. 1). AIP Publishing.
- [C2] Peng, E., Buss, E., Shen, Y., **Bharadwaj, H.**, Stecker, C., Beim, J., Bosen, A., Braza, M., Diedesch, A., Dorey, C., Dykstra, A., Freyman, R., Gallun, F., Goldsworthy, R., Gray, L., Hoover, E., Ihlefeld, A., Koelewijn, T., Kopun, J., Mesik, J., Richards, V., Shub, D., Venezia, J. (2021). Remote testing for psychological and physiological acoustics: Initial report of the ASA P&P Task Force on Remote Testing. *Proceedings of Meetings on Acoustics*. 42, 050009; doi: 10.1121/2.0001409
- [C3] **Bharadwaj, H. M.**, Masud, S., & Shinn-Cunningham, B. G. (2013). The role of high-frequency cues for spatial hearing in rooms. *Proceedings of Meetings on Acoustics* 19:015049.
- [C4] Verhulst, S., **Bharadwaj, H. M.**, Mehraei, G., & Shinn-Cunningham, B. G. (2013). Understanding hearing impairment through model predictions of brainstem responses. *Proceedings of Meetings on Acoustics* 19:050182.
- [C5] Choi, I., Bressler, S., **Bharadwaj, H. M.**, & Shinn-Cunningham, B. (2013). Subcortical and cortical neural correlates of individual differences in temporal auditory acuity. *Proceedings of Meetings on Acoustics* 19:050125.
- [C6] Rajaram, S., **Bharadwaj, H. M.**, Shinn-Cunningham, B. G., & Lee, A. K. C. (2011). Cortical functional connectivity inference using MEG. *Noninvasive Functional Source Imaging of the Brain and Heart & 8th International Conference on Bioelectromagnetism (NFSI & ICBEM)* 77-80. IEEE.

Invited Talks

Plenary Talks

- Characterizing the impact of cochlear deafferentation on human auditory scene analysis.* Eaton Peabody Labs Symposium – Clinical perspectives on degenerating and regenerating cochlear neural connections. Massachusetts Eye and Ear Infirmary, Boston, MA (Mar, 2023).
- Individual Differences in Temporal Processing and Their Influence on Everyday Auditory Perception.* Central Auditory Processing Disorder Global Conference. Audiology 2019 (AAA), Columbus, OH (Mar, 2019).
- Does Cochlear Synaptopathy contribute to suprathreshold perceptual deficits in humans?* Hearing Research Symposium at The ASHA Convention, Los Angeles, CA (Nov, 2017).

International

- Suprathreshold hearing in middle age and relationship to cochlear synaptopathy.* 173rd Meeting of the Acoustical Society of America, Victoria, BC, Canada (Nov, 2018).
- Individual differences in suprathreshold hearing and relationship to cochlear synaptopathy.* 172nd Meeting of the Acoustical Society of America, Minneapolis, MN (May, 2018).
- Individualized assays of suprathreshold hearing deficits - translational challenges.* 41st Mid-Winter Meeting of the Association for Research in Otolaryngology, San Diego, CA (Feb, 2018).
- Resource sharing in a collaborative study on cochlear synaptopathy and suprathreshold hearing deficits.* 171st Meeting of the Acoustical Society of America, Boston, MA (June, 2017).
- Individualized assessment of suprathreshold hearing and relationship to cochlear synaptopathy.* 172nd Meeting of the Acoustical Society of America, Honolulu, HI (Oct, 2016).
- Electrophysiological correlates of auditory object binding with application to autism spectrum disorders.* 172nd Meeting of the Acoustical Society of America, Honolulu, HI (Oct, 2016).
- Using individual differences to study the mechanisms of suprathreshold hearing deficits.* International Symposium on Auditory and Audiological Research (ISAAR 2015), Nyborg, Denmark (Aug, 2015).
- Individual differences revealed by the challenges of listening in a complex, crowded scene.* Special session: Comparative perspectives on the Cocktail Party Problem, 167th Meeting of the Acoustical Society of America (ASA), Providence, RI (May, 2014).
- Bottom-Up and Top-Down Contributions to Individual Differences in Auditory Spatial Attention Task Performance.* Young Investigator Symposium, 36th Mid-Winter Meeting of the Association for Research in Otolaryngology (ARO), Baltimore, MD (Feb, 2013).

National

- Cochlear Deafferentation and Central Gain in “Normal” Hearing.* Otolaryngology and Hearing & Communication Neuroscience Seminar Series. University of Southern California, Virtual (Zoom) Event (Feb, 2022).

Cochlear Deafferentation and Central Gain in “Normal Hearing” Humans. Massachusetts Eye & Ear Infirmary SAP Seminar Series, Boston, MA (Mar, 2020).

Listening in the real world – Human auditory electrophysiology and clinical applications. Boston Children’s Hospital, Boston, MA (Oct, 2015).

The cocktail-party problem – Human electrophysiology. University of Rochester (Dec, 2013).

Research Grants

Extramural

1. Agency/Title of Grant: NIH-NIDCD (R01DC009838)/Effects of sensorineural hearing loss on robust speech coding
2. Duration of Funding: 5 years (07/01/2023-6/30/2028)
3. Total Amount of Award: \$3,144,107 Direct Costs requested over 5 years
4. Your Role: Co-Investigator and PI for Pitt Subaward (PI: Michael Heinz)

1. Agency/Title of Grant: NIH-NIDCD (R01DC015989)/Individualized Assays of Suprathreshold Hearing Deficits
2. Duration of Funding: 5 years + 2 years of NCE (Mar 1, 2017 – Feb 28, 2024).
3. Total Amount of Award: \$1,881,505
4. Your Role: PI

1. Agency/Title of Grant: DoD HRRP (W81XWH-21-1-0829)/Cross-species characterization of peripheral and central effects of occupational and blast exposures: Towards a diagnostic and therapeutic testing framework
2. Duration of Funding: 4 years (09/01/2021 – 08/31/2025)
3. Total Amount of Award: \$357,470
4. Your Role: Co-PI (Other Co-PIs: Michael Heinz, Edward Bartlett)

1. Agency/Title of Grant: NIH-NIDCD (SBIR R44DC021123)/Open Source Hearing Assessment Platform for Open Science
2. Duration of Funding: 4 years (12/01/2023 – 11/30/2028)
3. Total Amount of Award: \$1,554,665 Direct Costs requested over 4 years
4. Your Role: Co-I and PI for Pitt Subaward (PI: Odile Clavier, Creare LLC)

1. Agency/Title of Grant: NIH-NIDCD (R25DC020922 Training Grant)/TRanslational Auditory NeuroScience: LAB-based Training for Empowered Self-efficacy (TRANSLATES) in audiology doctoral students
2. Duration of Funding: 5 years (04/01/2024 – 03/31/2029)
3. Total Amount of Award: \$1,245,268 Direct Costs requested over 4 years
4. Your Role: Co-I (PI: Catherine Palmer)

1. Agency/Title of Grant: NIH-NIDCD (F32DC021345)/Individualized Profiles of Sensorineural Hearing Loss from Non-Invasive Biomarkers of Peripheral Pathology
2. Duration of Funding: 2 years (09/01/2023 – 08/31/2025)
3. Total Amount of Award: \$186,480 direct costs
4. Your Role: Sponsor (PI: Samantha Hauser is a PhD student mentored by the candidate)

1. Agency/Title of Grant: NIH-NIDCD (F30DC020916)/Place and Time Processing of Pitch in the Context of Cochlear Dysfunction
2. Duration of Funding: 3 years (01/01/2023 – 12/31/2025)
3. Total Amount of Award: \$155,256 direct costs
4. Your Role: Co-Sponsor (PI: Andrew Sivaprakasam is a PhD student mentored by the candidate)

1. Agency/Title of Grant: NSF (Standard Grant 1840699)/NeurodataRR: Collaborative Research: Testing the relationship between musical training and enhanced neural coding and perception in noise
2. Duration of Funding: 2 years + 2 years of NCE (Sep 15, 2018 – Aug 31, 2022)
3. Total Amount of Award: \$125,000 (for Purdue Site)
4. Your Role: PI (for Purdue Site)

1. Agency/Title of Grant: Hearing Health Foundation (ERG)/Influence of Individual Pathophysiology and Cognitive Profiles on Noise Tolerance and Noise Reduction Outcomes
2. Duration of award: 1 year (09/01/2021 – 08/31/2022), renewable for second year
3. Total Amount of Award: \$50,000
4. Your Role: Co-PI and mentor (PI: Subong Kim, was a postdoctoral scientist mentored by the candidate)

1. Agency/Title of Grant: Royal National Institute of Deaf People (RNiD) Flexi Grant/Mechanism-based Approach to Optimization of Noise Reduction in Hearing Aids: Influence of Individual Traits on Outcomes and Preference
2. Duration of Funding: 1 year (Aug 1, 2021 – July 31, 2022)
3. Total Amount of Award: \$13,720
4. Your Role: Sponsor (PI: Subong Kim, was a postdoctoral scientist mentored by the candidate)

1. Agency/Title of Grant: NIH-NIDCD (R01-DC008327)/Temporal Effects in Forward Masking, Suppression, and Simultaneous Masking
2. Duration of Award: 5 years (Apr 01, 2016 – Mar 30, 2021)
3. Total Amount of Award: \$1,49,065
4. Your Role: Co-Investigator (PI: Strickland, Elizabeth)

1. Agency/Title of Grant: Hearing Health Foundation Emerging Research Grant/Subcortical and Cortical Contributions to Temporal Processing Deficits in Central Auditory Processing Disor-

ders

2. Duration of Award: 1 year and 1 month (Jul 1, 2015 – Jul 30, 2016)
3. Total Amount of Award:\$30,000
4. Your Role: PI

1. Agency/Title of Grant: Action on Hearing Loss F45 Flexi Grant/Cognitive Contributions to Individual Differences in Selective Attention: A Pilot Magnetoencephalography Study
2. Duration of Award: 4 months (Jul 1, 2015 – Jul 30, 2016)
3. Total Amount of Award:\$7,400
4. Your Role: Co-PI (with Inyong Choi)

Intramural

1. Agency/Title of Grant: Purdue Institute for Integrative Neuroscience/Grand Challenges in Neuroscience Grant: Data-science Infrastructure for Precision Auditory Neuroscience
2. Duration: 1 year (March 01, 2020 – April 30, 2021)
3. Total Award Amount: \$140,165
4. Your Role: Co-PI (Grant awarded to the hearing-science group at Purdue)

1. Agency/Title of Grant: Purdue Institute for Integrative Neuroscience/Connecting laboratory and clinical auditory neuroscience at Purdue.
2. Duration of Award: Seed grant for purchase of research equipment (Jun 03, 2016)
3. Total Award Amount: \$9,630
4. Your Role: PI

Conference Presentations

- [P1] Organtini, V. T., Antes, E., Parthasarathy, A., Zitelli, L., & Bharadwaj, H. M. (2024). Biomarker Profiles of Cochlear Injury in Tinnitus. Mid-Winter Meeting of the Association for Research in Otolaryngology, Anaheim, CA, 3–7 February.
- [P2] Hauser, S. N., Bharadwaj, H. M., & Heinz, M. G. (2024). Contributions to Otoacoustic Emission Amplitudes Beyond Outer Hair Cells: Effects of Sedation and Inner Hair Cell Dysfunction. Mid-Winter Meeting of the Association for Research in Otolaryngology, Anaheim, CA, 3–7 February.
- [P3] Antes, E., Organtini, V. T., Zitelli, L., & Bharadwaj, H. M. (2024). Characterizing Functional Changes of the Central Auditory System in Tinnitus. Mid-Winter Meeting of the Association for Research in Otolaryngology, Anaheim, CA, 3–7 February.
- [P4] A. Sivaprakasam, H. Bharadwaj, & M. Heinz. (2024) . Cross-Species Investigations of Place and Time Coding of Pitch Using Envelope-Following Responses. Mid-Winter Meeting of the Association for Research in Otolaryngology, Anaheim, CA, 3–7 February

- [P5] Athreya, V. M., Singh, R., & Bharadwaj, H. M. (2024). Effects of Age on Within-Channel and Across-Channel Temporal Processing and Relationship to Speech Perception in Noise. Mid-Winter Meeting of the Association for Research in Otolaryngology, Anaheim, CA, 3–7 February.
- [P6] Athreya, V. M., Sivaprakasam, A., Ginsberg, H., Bharadwaj, H. M., & Heinz, M. (2024). Pioneering Cortical Assays of Gap Detection to Explore Temporal Processing in Chinchilla Using a Multi-Channel Mini-EEG Cap. Mid-Winter Meeting of the Association for Research in Otolaryngology, Anaheim, CA, 3–7 February.
- [P7] Hauser, S., Heinz, M. G., & Bharadwaj, H. (2023). Cross-species characterization of joint otoacoustic emission profiles in sensorineural hearing loss. *The Journal of the Acoustical Society of America*, 153(3 supplement), A161-A161.
- [P8] Bharadwaj, H., & Athreya, V. M. (2023). Effects of age-related cochlear deafferentation and central gain on auditory scene analysis. *The Journal of the Acoustical Society of America*, 154(4 supplement), A333-A333.
- [P9] Hauser, S., Hagedorn, A., Hustedt-Mai, A. R., & Bharadwaj, H. M. (2023). Relationship Between Distortion Product Otoacoustic Emissions and Audiometric Thresholds in the Extended High-Frequency Range. Mid-Winter Meeting of the Association for Research in Otolaryngology, Orlando, FL, 11–15 February.
- [P10] Athreya, V. M., Singh, R., & Bharadwaj, H. M. (2023). Effects of Age on Within-Channel and Across-Channel Temporal Processing and Relationship to Speech Perception in Noise. Mid-Winter Meeting of the Association for Research in Otolaryngology, Orlando, FL, 11–15 February.
- [P11] Viswanathan, V., Bharadwaj, H. M., Heinz, M. G., & Shinn-Cunningham, B. G. (2023). Induced Alpha and Beta Electroencephalographic Rhythms Covary With Single-Trial Speech Intelligibility in Competition. Mid-Winter Meeting of the Association for Research in Otolaryngology, Orlando, FL, 11–15 February.
- [P12] Sivaprakasam, A., Schweinzger, I., Bharadwaj, H. M., & Heinz, M. G. (2023). Upper-Harmonic Deficits in Temporal Envelope Coding of Tone Complexes and Amplitude Modulations Differentiate Inner Hair Cell Damage From Synaptopathy. Mid-Winter Meeting of the Association for Research in Otolaryngology, Orlando, FL, 11–15 February.
- [P13] Sivaprakasam, A., Athreya, V. M., Ginsberg, H., Bharadwaj, H. M., & Heinz, M. G. (2023). A Chinchilla Mini-EEG Cap Improves Cross-Species Translation for Cortical and Subcortical Evoked Potentials. Mid-Winter Meeting of the Association for Research in Otolaryngology, Orlando, FL, 11–15 February.
- [P14] Kafi, H. I., Alexander, J. M., & Bharadwaj, H. (2022). Characterizing the effects of distorted tonotopy on neural coding and perception in sensorineural hearing loss. *The Journal of the Acoustical Society of America*, 151(4), A259-A259.
- [P15] Borjigin, A., Kokkinakis, K., Bharadwaj, H., & Stohl, J. (2022). Deep neural network models of speech-in-noise perception for hearing technologies and research. *The Journal of the Acoustical Society of America*, 151(4), A165-A165.

- [P16] Singh, R., & Bharadwaj, H. M. (2021). Two Timescales of Temporal Processing in Scene Analysis and Tracking of Dynamic Auditory Cues (Binaural, Spectral, and Amplitude). Mid-Winter Meeting of the Association for Research in Otolaryngology, Virtual, 20–24 February.
- [P17] Borjigin, A., & Bharadwaj, H. M. (2021). Relationship Between Temporal Fine Structure Sensitivity and Speech Intelligibility Under Various Types of Noise Interference. Mid-Winter Meeting of the Association for Research in Otolaryngology, Virtual, 20–24 February.
- [P18] Love, J., Shinn-Cunningham, B., & Bharadwaj, H. (2021). Alpha Lateralization During Orienting of Spatial Auditory Attention. Mid-Winter Meeting of the Association for Research in Otolaryngology, Virtual, 20–24 February.
- [P19] Mok, B. A., Viswanathan, V., Borjigin, A., Singh, R., & Bharadwaj, H. (2020). Anonymous multipart web-based psychoacoustics: Infrastructure, hearing screening, and comparison with lab-based studies. *The Journal of the Acoustical Society of America*, 148(4), 2713-2714.
- [P20] Love, J., Shinn-Cunningham, B., & Bharadwaj, H. (2020). Endogenous brain oscillations in the 10–20 Hz range during auditory spatial attention. *The Journal of the Acoustical Society of America*, 148(4), 2468-2468.
- [P21] Kafi, H., Mai, A. R., Dougherty, K., Hagedorn, A. N., & Bharadwaj, H. M. (2020). *Neural Envelope Coding in Middle-aged Humans with Normal Audiograms*. Mid-Winter Meeting of the Association for Research in Otolaryngology, San Jose, 25–29 January.
- [P22] Dougherty, K., Mai, A. R., Hagedorn, A. N., & Bharadwaj, H. M. (2020). *Central Gain in the Human Auditory System: Investigations in “Normal Hearing” and in Tinnitus*. Mid-Winter Meeting of the Association for Research in Otolaryngology, San Jose, 25–29 January.
- [P23] Borjigin, A., & Bharadwaj, H. M. (2019). *Investigating the role of temporal fine structure in everyday hearing*. *The Journal of the Acoustical Society of America*, 145(3), 1872-1873.
- [P24] Singh, R., Bharadwaj, H. M. (2019). *Neural sensitivity to dynamic binaural cues: Human electroencephalogram and chinchilla single-unit responses*. *The Journal of the Acoustical Society of America*, 145(3), 1906-1906.
- [P25] Mai, A., Flesher, B., Dougherty, K., Hagedorn, A., Simpson, J. M., Heinz, M. G., & Bharadwaj, H. M. (2019). *Physiological assays of suprathreshold hearing are consistent with widespread deafferentation of the human auditory periphery*. *The Journal of the Acoustical Society of America*, 145(3), 1663-1663.
- [P26] Borjigin, A., & Bharadwaj, H. M. (2019). *Individual differences in spatial hearing may arise from monaural factors*. Mid-Winter Meeting of the Association for Research in Otolaryngology, Baltimore, 09–13 February.
- [P27] Singh, R., Sayles, M., & Bharadwaj, H. M. (2019). *Neural sensitivity to dynamic binaural cues: human EEG and chinchilla single-unit responses*. Mid-Winter Meeting of the Association for Research in Otolaryngology, Baltimore, 09–13 February.
- [P28] Dougherty, K., Ginsberg, H., Mai, A. R., Parida, S., Simpson, J. M., Heinz, M. G., & Bharadwaj, H. M. (2019). *Non-invasive assays of cochlear synaptopathy in humans and chinchillas*. Mid-Winter Meeting of the Association for Research in Otolaryngology, Baltimore, 09–13 February.

- [P29] Viswanathan, V., Bharadwaj, H. M., Shinn-Cunningham, B. G., & Heinz, M. G. (2019). *Human neurophysiological evaluation of envelope-based models of speech intelligibility*. Mid-Winter Meeting of the Association for Research in Otolaryngology, Baltimore, 09–13 February.
- [P30] Salloom, W., Bharadwaj, H. M., & Strickland, E. A. (2019). *Physiological and psychoacoustic measures of two different auditory efferent systems*. Mid-Winter Meeting of the Association for Research in Otolaryngology, Baltimore, 09–13 February.
- [P31] Bharadwaj, H. M., Flesher, B., Mai, A., Dougherty, K., Simpson, J. M., & Heinz, M. G. (2018). *Suprathreshold hearing in middle age and relationship to cochlear synaptopathy*. The Journal of the Acoustical Society of America, 144(3), 1899-1899.
- [P32] Flesher, B. E., Mai, A., Dougherty, K., Simpson, J. M., Heinz, M. G., & Bharadwaj, H. M. (2018). *Perceptual consequences of cochlear synaptopathy in middle age*. The Journal of the Acoustical Society of America, 143(3), 1750-1750.
- [P33] Bharadwaj, H. M. (2018). *Individual differences in suprathreshold hearing and relationship to cochlear synaptopathy*. The Journal of the Acoustical Society of America, 143(3), 1780-1780.
- [P34] Mai, A. R., Flesher, B. E., Simpson, J. M., Heinz, M. G., & Bharadwaj, H. M. (2018). *Effects of acoustic overexposure on the human auditory system – Measurements in a clinical setting*. Mid-Winter Meeting of the Association for Research in Otolaryngology, San Diego, 09–14 February.
- [P35] Bharadwaj, H. M., Varghese, L. A., & Shinn-Cunningham, B. (2017). *Repeatability of non-invasive physiological measures from the early auditory pathway*. The Journal of the Acoustical Society of America, 141(5), 3899-3899.
- [P36] Bharadwaj, H. M., Simpson, J. M., & Heinz, M. G. (2017). *Resource sharing in a collaborative study on cochlear synaptopathy and suprathreshold hearing deficits*. The Journal of the Acoustical Society of America, 141(5), 3631-3631.
- [P37] Bharadwaj, H. M., Varghese, L., Mehraei, G., Shera, C. A., & Shinn-Cunningham, B. G. (2016). *Individualized assessment of suprathreshold hearing and relationship to cochlear synaptopathy*. The Journal of the Acoustical Society of America, 140(4), 3153-3153.
- [P38] Bharadwaj, H. M., Khan, S., Hamalainen, M., & Kenet, T. (2016). *Electrophysiological correlates of auditory object binding with application to autism spectrum disorders*. The Journal of the Acoustical Society of America, 140(4), 3045-3045.
- [P39] Bharadwaj, H. M. (2016). *Generalized linear mixed models in hearing science*. The Journal of the Acoustical Society of America, 139(4), 2101-2101.
- [P40] Shinn-Cunningham, B., Ruggles, D., Choi, I., Bharadwaj, H., Mehraei, G., & Dai, L. (2016). *How individual differences in sensory coding and attentional control impact understanding speech in noise*. The Journal of the Acoustical Society of America, 139(4), 2044-2044.
- [P41] Bharadwaj, H. M., Varghese, L., Mehraei, G., Shera, C. A., & Shinn-Cunningham, B. G. (2016). *Evidence for auditory nerve contribution to individual differences in suprathreshold brainstem temporal coding*. Mid-Winter Meeting of the Association for Research in Otolaryngology, San Diego, 20–24 February.

- [P42] Viswanathan, V., Bharadwaj, H. M., & Shinn-Cunningham, B. G. (2016). *Neural signatures of speech-on-speech selective attention*. Mid-Winter Meeting of the Association for Research in Otolaryngology, San Diego, 20–24 February.
- [P43] Gramfort, A., Engemann, D. A., Larson, E., Luessi, M., Brodbeck, C., Jas, M., Brooks, T., Strohmeier, D., Goj, R., van Vliet, M., Leggitt, A., Billinger, M., Bharadwaj, H. M., Parkkonen, L., & Hämäläinen, M. S. (2015). *Trends in MEG and EEG data processing using MNE*. Annual Conference of the Organization for Human Brain Mapping. Honolulu, Hawaii, 14–18 June.
- [P44] Bharadwaj, H. M., Pardo, C., Shera, C. A., & Shinn-Cunningham, B. G. (2015). *Olivocochlear efferent effects on neural temporal coding of sounds in humans*. Mid-Winter Meeting of the Association for Research in Otolaryngology, Baltimore, 21–25 February.
- [P45] Choi, I., Goldberg, H. R., Bharadwaj, H. M., & Shinn-Cunningham, B. G. (2015). *Attentional modulation of cortical networks in a dynamic auditory scene*. Mid-Winter Meeting of the Association for Research in Otolaryngology, Baltimore, 21–25 February.
- [P46] Varghese, L. A., Bharadwaj, H. M., & Shinn-Cunningham, B. G. (2015). *Attention (still) does not affect the brainstem FFR*. Mid-Winter Meeting of the Association for Research in Otolaryngology, Baltimore, 21–25 February.
- [P47] Masud, S., Bharadwaj, H. M., & Shinn-Cunningham, B. (2014). *How high frequency envelopes influence spatial localization in rooms*. The Journal of the Acoustical Society of America, 135(4), 2282–2282.
- [P48] Goldberg, H. R., Choi, I., Varghese, L. A., Bharadwaj, H. M., & Shinn-Cunningham, B. G. (2014). *Auditory attention in a dynamic scene: Behavioral and electrophysiological correlates*. The Journal of the Acoustical Society of America, 135(4), 2415–2415.
- [P49] Mehraei, G., Bharadwaj, H. M., Verhulst, S., & Shinn-Cunningham, B. G. (2014). *Effects of low spontaneous rate auditory nerve fiber loss on auditory brainstem wave-V latency*. Mid-Winter Meeting of the Association for Research in Otolaryngology, San Diego, 22–26 February.
- [P50] Bharadwaj, H. M., Masud, S., Verhulst, S., Mehraei, G., & Shinn-Cunningham, B. G. (2014). *Cochlear neuropathy in “normal hearing” humans and the coding of supra-threshold sound*. Mid-Winter Meeting of the Association for Research in Otolaryngology, San Diego, 22–26 February.
- [P51] Verhulst, S., Bharadwaj, H. M., Shera C. A., & Shinn-Cunningham, B. G. (2014). *A human auditory brainstem response model for broadband stimulation*. Mid-Winter Meeting of the Association for Research in Otolaryngology, San Diego, 22–26 February.
- [P52] Bharadwaj, H. M., & Shinn-Cunningham, B. G. (2013). *Rapid acquisition of auditory brainstem frequency following responses*. Mid-Winter Meeting of the Association for Research in Otolaryngology, Baltimore, 16–20 February.
- [P53] Swaminathan, J., Bharadwaj, H. M., Dai, L., & Shinn-Cunningham, B. G. (2013). *Envelope coding in humans measured with frequency following responses*. Mid-Winter Meeting of the Association for Research in Otolaryngology, Baltimore, 16–20 February.

- [P54] Lee, A. K. C., Larson, E., Rajaram, S., Bharadwaj, H. M., & Shinn-Cunningham, B. G. (2012). *The cortical network controlling auditory spatial attention*. Biomag 18th International Conference on Biomagnetism, Paris, France, 26–30 August.
- [P55] Choi, I., Bharadwaj, H. M., & Shinn-Cunningham, B. G. (2012). *Attentional modulation of EEG signals*. The Journal of the Acoustical Society of America, 131(4), 3513–3513.
- [P56] Bharadwaj, H. M., & Shinn-Cunningham, B. G. (2012). *Hijacking neural oscillations to reveal control of auditory attention*, Mid-Winter Meeting of the Association for Research in Otolaryngology, San Diego, CA, 25–29 February.
- [P57] Ruggles, D., Bharadwaj, H. M., & Shinn-Cunningham, B. G. (2012). *Sub-cortical envelope and fine structure cues: the interaction of age and individual differences for normal-hearing adults in complex environments*. The Journal of the Acoustical Society of America, 131(4), 3317–3317.
- [P58] Rajaram, S., Bharadwaj, H. M., Shinn-Cunningham, B. G., & Lee, A. K. C. (2011). *Comparing coherence and phase-locking value measures of functional connectivity*. 8th International Conference on Bioelectromagnetism, Banff, Canada, 13–16 May.
- [P59] Kenet, T., Orekhova, E., Bharadwaj, H. M., Shetty, N. R., Lee, A. K. C., Vangel, M., Elam, M., Herbert, M., Hämäläinen, M. S., & Manoach, D. (2010). *A Study of Functional Connectivity During Preparation for Saccades in ASD*. International Society for Autism Research, Philadelphia, 20–22 May.
- [P60] Kenet, T., Orekhova, E., Bharadwaj, H. M., Israeli, E. R., Shetty, N. R., Lee, A. K. C., Vangel, M., Elam, M., Herbert, M., Hämäläinen, M. S., & Manoach, D. (2009). *A MEG study of functional connectivity during preparation for saccades in ASD*. Society for Neuroscience Annual Meeting, Chicago, 17–21 October.
- [P61] Bharadwaj, H. M., Peltier, S., Chun, J., Deldin, P. J. & Noll, D. C. (2008). *Simultaneous EEG-fMRI: Effect of choice of MRI pulse sequence*. Annual meeting of the International Society for Magnetic Resonance in Medicine (ISMRM), Toronto, 3–9 May.

Other Evidence of National and International Recognition

Conference Organization

Organizer and Chair (with Inyong Choi), Young Investigator Symposium on “Active Auditory Processing: Basic Mechanisms, Individual Differences and Clinical Applications”, 39th Mid-Winter Meeting of the Association for Research in Otolaryngology, San Diego, 20–24 February, 2016.

Editorial Service and Review for Professional Journals, Funding Agencies

2024	Grant review panel	Hearing Health Foundation, USA
2023	Grant review panel	NIH SBIR/STTR grants NV (12) - Small Business: Aging and Development, Auditory, Vision and Low Vision Technologies
2023	Grant review panel	National Institutes of Health Auditory System Study Section (AUD)

2023	Grant review panel	Hearing Health Foundation, USA
2022	Adhoc grant reviewer	NSF Perception, Action, and Cognition Program
2022	Special Emphasis Panel	National Institutes of Health (SEP: ZDC1 SRB-Z(47), NIDCD R01)
2022	Grant review panel	Hearing Health Foundation, USA
2021	Grant review panel	Hearing Health Foundation, USA
2020	Grant review panel	Hearing Health Foundataion, USA
2019	Grant review panel	National Institutes of Health (Study Section: ZAT1 PJ05, NCCIH)
2019 –	Associate Editor	Journal of the Acoustical Society of America
2019	Grant review panel	Hearing Health Foundataion, USA
2018	Grant review panel	Hearing Health Foundataion, USA
2017	Grant review panel	Hearing Health Foundataion, USA
2016 – 2017	Guest Associate Editor	Frontiers in Neuroscience
2015	Grant review panel	Action on Hearing Loss, UK
2008 –	Adhoc Reviewer	The Journal of the Acoustical Society of America Journal of the Association for Research in Otolaryngology Ear and Hearing The Journal of Neuroscience Hearing Research eLife The Journal of Cognitive Neuroscience Nature Scientific Reports International Journal of Audiology Frontiers in Neuroscience Clinical Neurophysiology Experimental Brain Research Biomedical Signal Processing and Control Neuroscience (Elsevier)

Consulting Activities

2019 –	Consultant, NIH P50 Clinical Research Center, “Cochlear Synaptopathy: Prevalence, Diagnosis and Functional Consequences”, PI: Sharon Kujawa, Massachusetts Eye & Ear Infirmary.
2019 – 2023	Consultant, Otonomy, Inc., San Diego, CA
2019	Advisory Board, Sirocco Therapeutics, San Diego, CA

Involvement in Graduate Research Program

Current Doctoral (PhD) Students

Sharadhi Bharadwaj, Carnegie Mellon University Program in Neural Computation, 2023 – present
Samantha Hauser, SLHS, , Purdue University, (Major Professor), 2021 – present
Andrew Sivaprakasam, BME Medical Scientist Training Program, , Purdue University, (Major Professor), 2021 – present

Juan Sebastien Martinez, ECE, (Advisory Committee Member; H. Tan, Major Professor), 2021 – present. Advanced to candidacy in Spring 2022.

Varsha Mysore Athreya, SLHS, (Major Professor), 2020 – present.

Homeira Kafi, BME, (Major Professor), 2019 – present.

Jordan Love, SLHS, (Advisory Committee Member; A. Francis, Major Professor), 2019 – present.

Emilee Madsen, BME, (Advisory Committee Member; J. Linnes, Major Professor), 2019 – present

Past Doctoral (PhD) Students

Agudemu Borjigin, BME, , Purdue University, (Major Professor), Graduated 2022. Currently postdoctoral fellow at the University of Wisconsin, Madison.

Ravinderjit Singh, BME Medical Scientist Training Program, Purdue University, (Major Professor), Graduated 2022. Currently in medical school.

William Salloom, PULSe Program, (Advisory Committee Member; E. Strickland, Major Professor), Graduated 2022. Currently postdoctoral fellow at University of Southern California.

Satyabrata Parida, BME, (Advisory Committee Member; M. Heinz, Major Professor), Graduated 2020. Currently postdoctoral fellow at the University of Pittsburgh, Pittsburgh.

Chandan Suresh, SLHS, (Advisory Committee Member; A. Krishnan, Major Professor), Graduated 2018. Currently Assistant Professor of Communication Disorders at California State University, Los Angeles.

Current Clinical Doctoral (AuD) Students

Sierra Johnson, CSD, University of Pittsburgh, 2023 – present

Hannah Rogan, CSD, University of Pittsburgh, 2023 – present

Olivia Flemm, CSD, University of Pittsburgh, 2023 – present

Emily Antes, CSD, University of Pittsburgh, 2022 – present

Victoria Organtini, CSD, University of Pittsburgh, 2022 – present

Past Clinical Doctoral (AuD) Students

Mary Schroeder, SLHS, Purdue University, (Co-mentored by postdoctoral fellow Subong Kim), Graduated 2023.

Anna Hagedorn, SLHS, Purdue University, Graduated 2023.

Kristen Wade, SLHS, Graduated 2022.

Brittany Mok, SLHS, Graduated 2022.

Kelsey Dougherty, SLHS, Graduated 2021.

Alexandra Mai, SLHS, Graduated 2020.

Brooke Flesher, SLHS, Graduated 2019.

Past MS Students (Theses)

Jason Ummel, BME, (Advisory Committee Member; J. Linnes, Major Professor), Graduated 2021.
Caitlin Heffner, BME, (Advisory Committee Member; M. Heinz, Major Professor), Graduated 2021.

Hannah Ginsberg, BME, (Advisory Committee Member; M. Heinz, Major Professor), Graduated 2020.

Involvement in Undergraduate Research Program

Current Undergraduate Students

Shaina Wasileski, CSD, University of Pittsburgh, 2023 – present.

Katie Bergstrom, CSD, University of Pittsburgh, 2023 – present.

Megan Hallihan, CSD, University of Pittsburgh, 2023 – present.

Past Undergraduate Students

Hanna Malik, BIO, Purdue University, 2019 – 2020.

Amogh Shanbhag, ECE, Purdue University, 2019 – 2020.

Anna Hagedorn, SLHS, Purdue University, 2016 – 2019.

Coralie Pardo, Mathematics, Amherst College, Graduated 2015. Currently in Medical School at Rush University.

Salwa Masud, Biomedical Engineering, Boston University, (Co-mentored with Barbara Shinn-Cunningham) Graduated 2014. Obtained PhD in 2019 from Harvard University.

Section B: LEARNING

Courses Taught in Past Five Years

CSD 2045	Physiological Assessment (Spring 2024)
CSD 1237	Neuroscience of Communication (Spring 2023, Spring 2024)
CSD 2087	Hearing Conservation & Restoration (Fall 2022, Fall 2023)
SLHS 553	Implantable Devices (Fall 2017, Fall 2018, Spring 2019, Spring 2020, Spring 2021, Spring 2022)
BME 511 (previously BME 595-MJ4)	Biomedical Signal Processing (Fall 2017, Fall 2019, Fall 2021)
SLHS 619	Seminars in Hearing Research (Fall 2018, Spring 2019, Fall 2019, Spring 2020, Fall 2020, Spring 2021)
BME 695/SLHS 619	Special Lectures in Neuroscience: Audition - from neural circuits to perception (Spring 2018, co-taught with M. Sayles and M. Heinz)

Directed and Independent Studies

CSD 2970	Teaching Practicum (Spring 2023)
CSD 3902	Directed Study (Spring 2023)
BIOL 294	Undergraduate Research Experience (Spring 2020)
BME 296	Undergraduate Research Experience (Fall 2019)
BIOL 494	Undergraduate Research Experience (Summer 2020)
SLHS 498	Undergraduate Research Experience (Spring 2018, Fall 2018)
SLHS 690	Directed Study of Special Problems (Spring 2020, Fall 2020, Spring 2021, Fall 2021)
SLHS 590	Directed Study of Special Problems (Spring 2018, Fall 2018, Spring 2019, Fall 2019, Spring 2020, Fall 2020)
SLHS 590	Audiology Graduate Research (Fall 2018, Fall 2019, Fall 2020, Fall 2021)
SLHS 699	Research PhD Thesis (2020 – 2022)
BME 699	Research PhD Thesis (2018 – 2022)

Section C: ENGAGEMENT

University, School, and Departmental Administrative Service

University of Pittsburgh

2022 – Hearing & Cookies Seminar Series Organizer (Co-organizing with Aravind Parthasarathy)

College of Health and Human Sciences, Purdue University

2022 Committee to Review Department Head of Speech, Language, and Hearing Sciences
2020 – 2021 Research Advisory Committee

College of Engineering, Purdue University

2019 – 2020 Engineering Academic Career Club (EACC) Mentoring Circle

Department of Communication Science and Disorders, University of Pittsburgh

2024 Search Committee: Open-rank Tenure-Track faculty position in Pediatric Auditory Science
2024 Search Committee: Vice Chair for Research
2023 – Au.D. Admissions Committee
2023 – Ph.D. Admissions Committee
2022 – 2023 Search Committee: Open-rank Appointment Stream faculty position in Speech-Language Pathology

Department of Speech, Language, & Hearing Sciences, Purdue University

2021 – 2022 Search Committee: Two tenure-track faculty positions, one in speech fluency, fluency disorders, or developmental speechmotor disorders and one in adult neurogenic disorders with primary focus on language and cognition

2019 – 2020 Search Committee: Tenure-track faculty position in Hearing Science/Audiology

2019 – 2022 Audiology Curriculum Committee

2018 – 2022 Seminars in Hearing Research Organizer

2018 – 2019 Search Committee: Tenure-track faculty position in Speech Physiology

2017 – Graduate Committee and Ph.D. Admissions

2017 – 2018 Au.D. Admissions Committee

2016 – 2017 Brown Bag Seminar Organizer

2016 – 2017 Library Committee

Weldon School of Biomedical Engineering, Purdue University

2020 – Ph.D. Qualifying Procedures (PQP) Committee

2019 – 2020 Graduate Committee

2016 – 2019 Graduate Admissions Committee

Service for Professional Societies

2020 – Psychological and Physiological Acoustics Taskforce on Remote Testing, Acoustical Society of America

2017 – 2020 Elected Member of the Technical Committee on Psychological and Physiological Acoustics, Acoustical Society of America