Rose Rizzi, Ph.D.
Curriculum Vitae
Email: rrizzi@umd.edu

Education

Postdoc	2026 –	University of Maryland, Center for Comparative and Evolutionary Biology of Hearing
Ph.D.	2022 – 2026	Indiana University, dual Speech, Language and Hearing Sciences (SLHS) and Neuroscience
B.S.	2017 – 2020	Virginia Tech, Cognitive and Behavioral Neuroscience; Minor: Psychology

Research Interests

My research uses EEG, MRI, and diffusion-weighted imaging (DWI) to understand the neuroanatomical and neurophysiological mechanisms underlying individual differences in speech perception and how these processes change with aging.

Grant Funding

1. NIDCD F31DC023124 – "Neural Correlates and Functional Benefits of Categorical vs. Continuous Listening," Ruth L. Kirschstein Predoctoral NSRA Fellowship. 04/26-08/26, $28,163.

Honors and Awards

2026	Society for Neuroscience Trainee Professional Development Award
2026	Association for Research in Otolaryngology Travel Award
2025	NIH Outstanding Scholars in Neuroscience Award Program
2024, 2025	Travel Award, IU Program in Neuroscience (PNS)
2024	PhD Research Support Grant, IU SLHS
2023	Gierut Award for Outstanding PhD Research, IU SLHS

Positions and Academic Appointments

2026 –	NIDCD T32 Postdoctoral Trainee, University of Maryland Affiliated with Center for Comparative and Evolutionary Biology of Hearing (C-CEBH), Hearing and Speech Sciences (HESP), and Neuroscience and Cognitive Science (NACS)
2026	NIDCD F31 Predoctoral Fellow, Indiana University
2024 – 2026	Associate Instructor, Indiana University
2021 – 2024	Research Assistant, Bidelman Auditory Cognitive Neuroscience Lab
2019, 2021	Intern, NASA Langley Research Center

Publications

Journal Articles

1. **Rizzi, R.**, Stirn, J. R., Eisenhut, Z., & Bidelman, G. M. (2026). Structural connectivity of auditory-linguistic brain networks predicts success in speech categorization and listening

in noise. *Neuroscience*, 616, 136-147. https://doi.org/10.1016/j.neuroscience.2026.09.024 [Preprint: https://doi.org/10.64898/2026.07.06.736789]

2. Bidelman, G. M., Stirn, J. R., **Rizzi, R.**, MacLean, J. A., & Cheng, H. (2026). Auditory brainstem-cortical anatomy relates to the magnitude of frequency-following responses (FFRs) and event-related potentials (ERPs) coding speech-in-noise. *Neuroimaging,* 1(1). 1-6. https://doi.org/10.3390/neuroimaging1010006 [Preprint: https://doi.org/10.64898/2026.01.03.697410]
3. **Rizzi, R.,** & Bidelman, G. M. (2025). Consistency in phonetic categorization predicts successful speech-in-noise perception. *JASA Express Letters,* 5(125203), 1-7. https://doi.org/10.1121/10.0041846 [Preprint: https://doi.org/10.1101/2025.09.11.675656]
4. **Rizzi, R.,** & Bidelman, G. M. (2024). Functional benefits of continuous vs. categorical listening strategies on the neural encoding and perception of noise-degraded speech. *Brain Research*, 1844(149166), 1-12. https://doi.org/10.1016/j.brainres.2024.149166 [Preprint: https://doi.org/10.1101/2024.05.15.594387]
5. MacLean, J. A., Drobny, E., **Rizzi, R.,** & Bidelman, G. M. (2024). Musicianship modulates cortical effects of attention on processing musical triads. *Brain Sciences*, 14(11), 1079. https://doi.org/10.3390/brainsci14111079 [Preprint: https://doi.org/10.1101/2024.09.21.614251]
6. Bidelman, G. M., Sisson, A., **Rizzi, R**., MacLean, J., & Baer, K. (2024). Myogenic artifacts masquerade as neuroplasticity in the auditory frequency-following response (FFR). *Frontiers in Neuroscience,* 18, 1-13. https://doi.org/10.3389/fnins.2024.1422903 [Preprint: https://doi.org/10.1101/2023.10.27.564446]
7. **Rizzi, R.**, & Bidelman, G. M. (2023). Duplex perception reveals brainstem auditory representations are modulated by listeners' ongoing percept for speech. *Cerebral Cortex*, 33(18), 10076-10086. https://doi.org/10.1093/cercor/bhad266 [Preprint: https://doi.org/10.1101/2023.05.09.540018]
8. Bidelman, G. M., Chow, R., Noly-Gandon, A., Ryan, J. D., Bell, K. L., **Rizzi, R.,** and Alain, C. (2022). Transcranial direct current stimulation (tDCS) combined with listening to preferred music alters cortical speech processing in older adults. *Frontiers in Neuroscience*, 16(884130), 1-13. https://doi.org/10.3389/fnins.2022.884130

Preprints and In-Prep Manuscripts

1. Stirn, J. R., **Rizzi, R.**, & Bidelman, G. M. (in prep). Yanny or Laurel? Cortical encoding predicts perceptual bias in a viral auditory illusion better than extended high-frequency hearing.
2. Bidelman, G. M., Stirn, J., Eisenhut, Z., Borowski, L., Shin, C., Lewis, E., Zhou, M., Shah, P., Doty, A., MacLean, J., & **Rizzi, R.** (2026). Structural integrity of auditory-linguistic brain networks varies with cognitive status and accounts for speech-in-noise deficits across the adult lifespan. *bioRxiv* [preprint].

   https://doi.org/10.64898/2026.08.21.746271
3. **Rizzi, R.**, Stirn, J. R., Eisenhut, Z., & Bidelman, G. M. (2026). Perceptual consistency in phoneme categorization is driven by neural consistency and predicts improved speech-in-noise performance. *bioRxiv* [preprint]. https://doi.org/10.64898/2026.07.02.736174
4. Bidelman, G. M., Eisenhut, Z., Borowski, L., **Rizzi, R.** & Pisoni, D. B. (2026). Auditory experience shapes how listeners exploit perceptual equivalency classes in speech and

cope with noise degradation: Evidence from “elliptical speech". *bioRxiv* [preprint]. https://doi.org/10.64898/2026.01.02.695202

Book Chapters

1. Bidelman, G. M., Brown, J. A., **Rizzi, R.**, MacLean, J. (2025). Neuroplastic effects of music expertise on speech-language processing. In E. Andrews (Eds.), Cambridge Handbook of Language and Brain. Cambridge, UK: Cambridge University Press.

Dissertation

1. **Rizzi, R.** (2026). *The Relative Contribution of Sub- and Neo-Cortical Auditory Brain Structures in Shaping Perceptual Listening Strategy and Speech-In-Noise Processing.* [Doctoral dissertation]. Indiana University.

Conference Presentations

Conference Talks

1. **Rizzi, R.**, Stirn, J., Eisenhut, Z., & Bidelman, G. M. (2026, Nov 14, planned). *Perceptual consistency in phoneme categorization is driven by neural consistency and predicts improved speech-in-noise performance.* Neuroscience 2026, Washington, DC.
2. **Rizzi, R.** (2026, May 28). *Individual differences in speech sound categorization are influenced by subcortical and cortical auditory response consistency*. 6th Annual NIH IRP Outstanding Scholars in Neuroscience Award Program Symposium, Bethesda, MD.
3. Bidelman, G. M., Eisenhut, Z., Borowski, L., **Rizzi, R.**, & Pisoni, D.B. (2026, Feb 7). *Elliptical speech reveals the use of broad phonetic categories aids noise-degraded speech perception*. 49th Annual ARO MidWinter Meeting, San Juan, PR.
4. Bidelman, G. M., Stirn, J., Shin, C., Lewis, E., Zhou, M., **Rizzi, R.**, & MacLean, J. (2025, Feb 25). *Structural integrity of the brain’s auditory-language network accounts for speech-in-noise deficits and vary with cognitive status in older adults.* 48th Annual ARO MidWinter Meeting, Orlando, FL.
5. **Rizzi, R.** & Bidelman, G. M. (2024, July 13). *Functional benefits of continuous vs. categorical listening strategies on the neural encoding and perception of noise-degraded speech*. 2024 Auditory System Gordon Research Seminar, Smithfield, RI.
6. **Rizzi, R.** and Bidelman, G. M. (2024, June 13). *Duplex perception reveals brainstem auditory representations are modulated by listeners’ ongoing percept for speech*. 5th Frequency Following Response Workshop (FFR2024), Chicago, IL
7. **Rizzi, R.** and Bidelman, G. M. (2024, Feb 6). *Examining the effects of categorical vs. continuous listening strategies on speech in noise perception*. 47th Annual ARO MidWinter Meeting, Anaheim, CA.

Poster Presentations: * denotes mentees

1. **Rizzi, R.**, Schinkai, A.*, Goupell, M. J., & Anderson, S. (2027, Feb, accepted). *Investigating the effects of aging on ITD sensitivity in Frequency-Following Responses to binaural beats.* 50th Annual ARO MidWinter Meeting, San Francisco, CA.
2. **Rizzi, R.**, Stirn, J.*, Bidelman, G. M. (2027, Feb, accepted). *Yanny or Laurel? Cortical encoding predicts perceptual bias in a viral auditory illusion better than extended high-frequency hearing.* 50th Annual ARO MidWinter Meeting, San Francisco, CA.

3. **Rizzi, R.**, Stirn, J.*, Eisenhut, Z.*, & Bidelman, G. M. (2026, Nov 14, planned). *Perceptual consistency in phoneme categorization is driven by neural consistency and predicts improved speech-in-noise performance.* Early Career Poster Session – Neuroscience 2026, Washington, DC.
4. **Rizzi, R.**, Stirn, J.*, Eisenhut, Z.*, & Bidelman, G. M. (2026, May 28). *Individual differences in speech sound categorization are influenced by subcortical and cortical auditory response consistency*. 6th Annual NIH IRP Outstanding Scholars in Neuroscience Award Program Symposium Poster Session, Bethesda, MD.
5. **Rizzi, R.**, Stirn, J.*, Eisenhut, Z.*, & Bidelman, G. M. (2026, Feb 8). *Subcortical speech coding predicts perceptual consistency in phoneme categorization and improved speech-in-noise perception*. 49th Annual ARO MidWinter Meeting, San Juan, PR.
6. **Rizzi, R.**, Stirn, J.*, Eisenhut, Z.*, & Bidelman, G. M. (2026, Feb 8). *(Micro)structure of the brainstem-cortical pathways and their relation to auditory categorization and speech-in-noise performance*. 49th Annual ARO MidWinter Meeting, San Juan, PR.
7. Stirn, J.*, Seigel, S., MacLean, J., **Rizzi, R.**, & Bidelman, G. M. (2026, Feb 10). *White matter density within the central auditory pathways predicts degraded speech perception abilities by constraining "top-down" auditory function.* 49th Annual ARO MidWinter Meeting, San Juan, PR.
8. **Rizzi, R.**, Lewis, E.*, & Bidelman, G. M. (2025, February 25). *Task induced changes in listening strategy modulate cortical and subcortical speech processing.* 48th Annual ARO MidWinter Meeting, Orlando, FL.
9. MacLean, J., Drobny, E.*, **Rizzi, R.**, & Bidelman, G. M. (2025, February 22). *Musicianship modulates cortical (but not brainstem) effects of attention on processing musical triads.* 48th Annual ARO MidWinter Meeting, Orlando, FL.
10. Ochoa, J.*, **Rizzi, R.**, & Bidelman, G. M. (2025, July 24). *Understanding individual differences in speech listening*. IU Undergraduate Research Summer Poster Symposium, Bloomington, IN.
11. Soto, G.*, **Rizzi, R.**, & Bidelman, G. M. (2025, July 24). *Clean vs. noise conditions in speech listening*. IU Undergraduate Research Summer Poster Symposium, Bloomington, IN.
12. **Rizzi, R.**, & Bidelman, G. M. (2024, July 15). *Functional benefits of continuous vs. categorical listening strategies on the neural encoding and perception of noise-degraded speech*. 2024 Auditory System Gordon Research Conference, Smithfield, RI.
13. **Rizzi, R.**, & Bidelman, G. M. (2024, July 13). *Functional benefits of continuous vs. categorical listening strategies on the neural encoding and perception of noise-degraded speech*. 2024 Auditory System Gordon Research Seminar, Smithfield, RI.
14. MacLean, J., Drobny, E.*, **Rizzi, R**., & Bidelman, G. M. (2024, July 22). *Musical training modulates cortical effects of attention in processing of musical triads*. Society for Music Perception and Cognition Conference, Banff, CA.
15. Bidelman, G. M., Sisson, A., **Rizzi, R.,** MacLean, J., & Baer, K. (2024, June 13). *Myogenic artifacts masquerade as neuroplasticity in the auditory frequency-following response (FFR).* 5th Frequency Following Response Workshop (FFR2024), Chicago, IL.
16. MacLean, J., Drobny, E.*, **Rizzi, R**., & Bidelman, G. M. (2024, June 13). *Musical training modulates cortical effects of attention in processing of musical triads*. 5th Frequency Following Response Workshop (FFR2024), Chicago, IL.
17. Bidelman, G. M., Sisson, A., **Rizzi, R.,** MacLean, J., & Baer, K. (2024, February 4). *Myogenic artifacts masquerade as neuroplasticity in the auditory frequency-following response (FFR).* 47th Annual ARO MidWinter Meeting, Anaheim, CA.

18. **Rizzi, R**., & Bidelman, G. M. (2023, June 15). *Duplex perception reveals brainstem auditory representations are modulated by listeners' ongoing percept for speech*. Big Ten Neuroscience Annual Meeting, Indianapolis, IN.
19. **Rizzi, R**., & Bidelman, G. M. (2023, February 13). *Duplex perception reveals brainstem auditory representations are modulated by listeners' ongoing percept for speech*. 46th Annual ARO MidWinter Meeting, Orlando, FL.
20. **Rizzi, R**., Harnden, M., Pippin, M. (2019, August). *Small sensor PM2.5 variability across the Hampton Roads Peninsula during Summer 2019*. NASA LaRC Science Directorate Poster Session, Hampton, VA.
21. Harnden, M., **Rizzi, R**., Rhode, T., Verstynen, A., Pippin, M. (2019, August). *Spatial variability of ozone across and within TEMPO Pixels over the Hampton Roads Peninsula*. NASA LaRC Science Directorate Poster Session, Hampton, VA.

Other Talks

1. **Rizzi, R.** (2026, September 9). *Individual differences in phoneme categorization relate to speech-in-noise performance and are predicted by structure and function of auditory brain regions*. UMD Hearing and Speech Sciences Seminar. College Park, MD.
2. **Rizzi, R.** (2024, April 5). *Functional benefits of continuous vs. categorical listening strategies on the neural encoding and perception of noise-degraded speech.* IU Department of Speech, Language and Hearing Sciences Colloquium. Bloomington, IN.
3. **Rizzi, R.** (2023, April 14). *Duplex perception reveals brainstem auditory representations are modulated by listeners' ongoing percept for speech*. IU Department of Speech, Language and Hearing Sciences Colloquium. Bloomington, IN.
4. Verstynen, A., Harnden, M., Rhode, T., **Rizzi, R.** (2019, August). *Preliminary seasonal characterization of PM2.5 and ozone small sensors.* [Invited Talk]. Virginia DEQ, Richmond, VA.

Teaching

Spring 2026	Communication and its Disorders (SLHS-S104), Associate Instructor
Spring 2025	Speech Anatomy and Physiology (SLHS-S201), Instructor of Record
Fall 2024, 2025	Music, Language and the Brain (COLL-C105), Associate Instructor

Mentorship

Undergraduate Students

2026 –	Annie Schinkai, UMD HESP Honors Thesis *Supervising data collection and analysis for Honors Thesis project, collaborating on conference presentation*
2026 –	Isabelle Basta, Peyton Whyte *Overseeing data collection and analysis for undergraduate research project on auditory processing in ADHD*
2022 – 2026	Cox Research Scholars Jack Stirn, Zara Eisenhut *Supervising and co-designing undergraduate research project, lab training, assistance with poster presentations and scientific writing*
2025	Groups STEM Summer Research Experience Program (SREP) Jay Ochoa, Gilliana Soto

Supervising rising college freshmen on data analysis and poster presentations for two research projects

2025 Lucy Borowski, Alex Doty
Supervising undergraduate research project, lab training

2023 – 2024 Elizabeth Drobny, IU SLHS Honors Thesis
Lab training, assistance with scientific writing

Graduate Students

2024 – 2025 Elaina Lewis, MD Student, IU School of Medicine
Lab training, supervising data collection for lab projects

Research Assistants

2025 – 2026 Amanda Pasler, Research Assistant
Lab protocol and data collection training

Service

Journal Reviews

Journal of Speech, Language, and Hearing Research

Brain and Language

Imaging Neuroscience

University

Meeting Moderator, *CCEBH/NIDCD Joint Conference,* College Park, MD. October 2026.
Awards Committee, IU PNS (2024 – 2025)
Treasurer, IU SLHS Graduate Student Organization (2023 – 2024)
Colloquium Committee, IU SLHS Graduate Student Organization (2022 – 2023)
Exhibitor Committee, *52nd Annual MidSouth Conference on Communicative Disorders*, University of Memphis, Memphis, TN. February 2022.

National

Podium Moderator, "*Auditory Cortex and Thalamus," 49th ARO MidWinter Meeting*, San Juan, PR. February 2026.
Podium Moderator, "*Decoding Speech Perception: Insights from Neural, Behavioral, and Technological Perspectives," 48th Annual ARO MidWinter Meeting*, Orlando, FL. February 2025.
Member, Steering Committee; Student, postdoc, resident and fellow chapter of the Association of Research in Otolaryngology (spARO) (2023 –)
spARO Representative, ARO Membership Committee (2024 –)
Member, spARO Social Offset Committee (2024 – 2025)
Member, spARO Social Media Committee (2023 – 2024)
Leadership Consultant, Alpha Sigma Kappa – Women in Technical Studies (2021 – 2022)

Memberships

Society for Neuroscience (SfN) (2026 –)
Association for Research in Otolaryngology (ARO), spARO (2023 –)

IU SLHS Graduate Student Organization (2022 – 2026)
Nu Rho Psi Neuroscience Honor Society (2019 –)
Alpha Sigma Kappa – Women in Technical Studies, Omicron Chapter (Founder), Alum Chapter (2018 –)