Jacie R. McHaney

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jrmchaney.github.io

EDUCATION

2023	**Ph.D.,** Communication Science and Disorders University of Pittsburgh, Pittsburgh, PA Dissertation title: *Sensory and Cognitive Factors Underlying Self-Perceived Listening Difficulties in Adults with Normal Hearing Thresholds*
2015	**B.S.,** Psychology, *Psychology Honors*, Biology Minor The University of Texas at Austin, Austin, TX
2015	**A.S.,** General Studies in Science Austin Community College, Austin, TX

RESEARCH EXPERIENCE

05/2023-Present	**Research Associate** Department of Communication Science and Disorders University of Pittsburgh
05/2022 – 04/2023	**NRSA Predoctoral Fellow** Department of Communication Science and Disorders University of Pittsburgh
09/2019 – 08/2021	**T32 Predoctoral Trainee** Department of Communication Science and Disorders University of Pittsburgh
09/2018 – 08/2019	**Project Coordinator** Department of Communication Science and Disorders University of Pittsburgh
01/2016 – 08/2018	**Laboratory Manager** Department of Communication Sciences and Disorders The University of Texas at Austin
08/2014 – 12/2015	**Research Assistant** Department of Psychology The University of Texas at Austin

ABSENCE FROM RESEARCH

08/2021 – 02/2022	Parental Leave

GRANT SUPPORT

08/2015 – 12/2015	**Undergraduate Research Fellowship** The University of Texas at Austin	$1,000

09/2019 – 08/2021 **Training Program in Auditory and Vestibular Neuroscience** $85,252
T32DC011499
Role: Predoctoral Trainee (PIs: Kandler and Yates)
National Institute for Deafness and Communication Disorders
Training in Auditory and Vestibular Neuroscience

02/2022 – 01/2023 **University of Pittsburgh Clinical and Translational Science Institute Quantitative Methodologies Pilot Program** $25,000
UL1TR001857
Role: Co-Principal Investigator (PI: Chandrasekaran)
National Center for Advancing Translational Sciences
Decision Strategies in Speech Perception in Aging

05/2022 – 04/2023 **NRSA Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research** $49,252
F31DC020085
Role: Principal Investigator
National Institute for Deafness and Communication Disorders
Neural Mechanisms of Speech Perception in Noise in Middle-Age

PUBLICATIONS

Peer-reviewed

1. Koski, J. E., **McHaney, J. R.**, Rigney, A. E., & Beer, J. S. (2020). Reconsidering Longstanding Assumptions About the Role of Medial Prefrontal Cortex (MPFC) in Social Evaluation. *NeuroImage*, *214*, 116752.
2. Llanos, F., **McHaney, J. R.,** Schuerman, W. L., Yi, H. G., Leonard, M. K., & Chandrasekaran, B. (2020). Non-invasive peripheral nerve stimulation selectively enhances speech category learning in adults. *npj Science of Learning, 5*(1), 1-11.
3. **McHaney, J. R.,** Gnanateja, G. N., Smayda, K. E., Zinszer, B. D., & Chandrasekaran, B. (2021). Cortical Tracking of Speech in Delta Band Relates to Individual Differences in Speech in Noise Comprehension in Older Adults. *Ear and Hearing, 42*(2), 343-354.
4. **McHaney, J. R.,** Tessmer, R., Roark, C. L., & Chandrasekaran, B. (2021). Working memory relates to individual differences in speech category learning: Insights from computational modeling and pupillometry. *Brain and Language, 222,* 105010.
5. Lescht, E., Venker, C., **McHaney, J. R.,** Bohland, J., & Hampton Wray, A. (2022). Novel Word Recognition in Childhood Stuttering. *Topics in Language Disorders, 42*(1), 41-56.

Submitted

1. **McHaney, J. R.,** Schuerman, W. L., Leonard, M. K., & Chandrasekaran, B. (invited for revision). Transcutaneous vagus nerve stimulation modulates pupillary responses during non-native speech category learning.
2. Roark, C. L., Paulon, G., Rebaudo, G., **McHaney, J. R.**, Sarkar, A., & Chandrasekaran, B. (revisions in review). Individual differences in working memory impact task engagement and decision processes during speech category learning.
3. Mukhopadhyay, M., **McHaney, J. R.,** Chandrasekaran, B., & Sarkar, A. (revisions in review). Bayesian Semiparametric Longitudinal Inverse-Probit Mixed Models for Category Learning.

4. Cancel, V. E., **McHaney, J. R.**, Milne, V. Palmer, C., & Parthasarathy, A. (revisions in review). Speech in Noise Difficulties with Normal Audiograms: Insights from the Auditory Processing Disorder Test Battery.

In preparation

1. **McHaney, J. R.,** Hancock, K. E., Polley, D. B., & Parthasarathy, A. (in preparation). Neurophysiological markers of central gain and their relationship to speech-in-noise intelligibility.
2. **McHaney, J. R.,** Zhen, L. Q., Parthasarathy, A., & Chandrasekaran, B. (in preparation). Decisional Processes that Support Speech in Noise Categorization Underlie an Aspect of Self-Perceived Listening Difficulties in Adults with Normal Hearing.
3. **McHaney, J. R.,** Xie, Z., Zhen, L. Q., Parthasarathy, A., & Chandrasekaran, B. (in preparation). Neural Tracking of Linguistic Information in Continuous Speech Differs Based on Self-Perceived Listening Difficulties.
4. **McHaney, J. R.,** Lam, B. P. W., & Chandrasekaran, B. (in preparation). Lexical knowledge facilitates speech perception in noise.
5. Parker, A., **McHaney, J. R.,** Coleman, B., Chandrasekaran, B., & Hampton Wray A. (in preparation). Phonological Awareness Relates to Individual differences in Speech in Noise Categorization in Children Who Stutter.
6. Zink, M. E., **McHaney, J. R.,** Mitchell, C., Chandrasekaran, B., & Parthasarathy, A. (in preparation). Increased listening effort during speech perception in noise in middle-aged adults is mediated by putative cochlear neural degeneration.

ARCHIVED PRE-PRINTS

1. Mukhopadhyay, M., **McHaney, J. R.,** Chandrasekaran, B., & Sarkar, A. (2021). Bayesian semiparametric longitudinal inverse-probit mixed models for category learning. *arXiv preprint arXiv:2112.04626.*
2. Roark, C. L., Paulon, G., Rebaudo, G., **McHaney, J. R.**, Sarkar, A., & Chandrasekaran, B. (2022). Individual differences in working memory impact task engagement and decision processes during speech category learning. *PsyArXiv.* doi:10.31234/osf.io/fzqht.
3. **McHaney, J. R.,** Schuerman, W. L., Leonard, M. K., & Chandrasekaran, B. (2022). Transcutaneous vagus nerve stimulation modulates pupillary responses during non-native speech category learning. *bioRxiv.* doi:2022.07.19.500625.

CONFERENCE POSTER PRESENTATIONS

1. Koski, J. E., **Richardson, J. B.**[†]**,** Rigney, A. E., & Beer, J. S. (April 2016). Too much information or warm fuzzy feelings? Understanding the role of MPFC in processing the self versus others. Poster presented at the Social and Affective Neuroscience (SANS) Annual Meeting, New York, NY.

[†] Last name changed to McHaney from Richardson in 2017

2. Smayda, K. E, **McHaney, J. R.**, & Chandrasekaran, B. (May 2017). Music Training for the Enhancement of Speech-In-Noise Processing in Older Adults. Poster presented at the Texas Leadership Luncheon, Austin, TX.
3. **McHaney, J. R.**, Zinszer, B. D., Smayda, K. E., & Chandrasekaran, B. (March 2018). Effect of listening environment on cortical entrainment to continuous speech in older adults. Poster presented at the Cognitive Neuroscience Society 25th Annual Meeting, Boston, MA.
4. Llanos, F., **McHaney, J. R.,** Leonard, M. K., Schuerman, W. L., Yi, H. G., & Chandrasekaran, B. (August 2018). Transcutaneous vagus nerve stimulation enhances non-native speech categorization. Poster presented at the 10th Annual Meeting of the Society for the Neurobiology of Language, Québec City, Québec, Canada.
5. **McHaney, J. R.,** Zinszer, B. D., Smayda, K. E., Xie, Z., & Chandrasekaran, B. (December 2018). Cortical entrainment to the speech envelope relates to speech comprehension in older adults under adverse listening conditions. Poster presented at the 12th Annual Aging Institute Research Day, Pittsburgh, PA.
6. **McHaney, J. R.**, Schuerman, W. L., Leonard, M. K., & Chandrasekaran, B. (October 2020). Non-invasive peripheral nerve stimulation paired with speech sounds modulates pupillary responses and selectively enhances learning. Poster presented at the Twelfth Annual Meeting of the Society for Neurobiology of Language, Virtual.
7. Roark, C. L., Reetzke, R., Llanos, F., **McHaney, J. R.**, & Chandrasekaran, B. (December 2020). Learning Mandarin tone categories with natural speech and a non-speech homologue. Poster to be presented at the 179th Meeting of the Acoustical Society of America, Chicago, IL. (Conference canceled)
8. Lescht, E., Venker, C., **McHaney, J. R.,** & Hampton Wray, A. (January 2021). Novel word learning in children who stutter. Poster presented at the 12th Oxford Dysfluency Conference, Virtual.
9. **McHaney, J. R.,** Hancock, K. E., Polley, D. B., & Parthasarathy, A. (February 2022). Neurophysiological markers of central gain and their relationship to speech-in-noise intelligibility. Poster presented at the 45th Annual MidWinter Meeting of the Association for Research in Otolaryngology, Virtual.
10. Cancel, V. E., **McHaney, J. R.,** Milne, V., Palmer, C., & Parthasarathy, A. (February 2022). Hearing Difficulties with Normal Audiograms: Insights from the Auditory Processing Disorder Test Battery. Poster presented at the 45th Annual MidWinter Meeting of the Association for Research in Otolaryngology, Virtual.
11. Cancel, V. E., **McHaney, J. R.,** Milne, V., Palmer, C., & Parthasarathy, A. (April 2022). Hearing Difficulties with Normal Audiograms: Insights from the ADP Test Battery. Poster presented at the American Academy of Audiology 2022 + HearTECH Expo, St. Louis, MO. *****Received the James and Susan Jerger Award for Excellence in Student Research, American Academy of Audiology Foundation*
12. **McHaney, J. R.,** Yurasits, K., Hancock, K. E., Polley, D. B., & Parthasarathy, A. (July 2022). Neurophysiological markers of central gain and their relationship to speech-in-noise intelligibility in normal-hearing listeners. Poster presented at the Auditory System Gordon Research Conference: Preventing Loss and Recovering Function of the Auditory System, Smithfield, RI.

13. **McHaney, J. R.,** Zhen, L., Roark, C. L., Parthasarathy, A. & Chandrasekaran, B. (October 2022). Sensory Encoding and Decision-making in Speech Perception in Noise. Poster presented at the Fourteenth Annual Meeting of the Society for Neurobiology of Language, Philadelphia, PA.
14. Zhen, L. Q., **McHaney, J. R.,** Zink, M. E., Mitchell, C., Parida, S., Anthony, S., Hallihan, M., Brown, C. A., Chandrasekaran, B., & Parthasarathy, A. (February 2023). Age-related Differences in Neural and Perceptual Signatures of Temporal Fine Structure Processing Underlying Muti-talker Speech Intelligibility. Poster to be presented at the Association for Research in Otolaryngology 46th Annual MidWinter Meeting, Orlando, FL.
15. Zink, M. E., **McHaney, J. R.,** Mitchell, C., Hallihan, M., Anthony, S., Chandrasekaran, B., & Parthasarathy, A. (February 2023). Neurophysiological Markers of Sensory Gain and Their Relationship to Speech Perception in Noise in Young and Middle-Aged Adults. Poster to be presented at the Association for Research in Otolaryngology 46th Annual MidWinter Meeting, Orlando, FL.
16. Parker, A., **McHaney, J. R.,** Xie, Z., Chandrasekaran, B., & Hampton Wray, A. (February 2023). Cortical Tracking of Continuous Speech-in-Noise: Children's Use of Linguistic and Acoustic Information. Poster to be presented at the Association for Research in Otolaryngology 46th Annual MidWinter Meeting, Orlando, FL.
17. **McHaney, J. R.** & Chandrasekaran, B. (March 2023). Lexical knowledge facilitates phoneme categorization at intermediate noise levels. Poster presented at the American Auditory Society's 50th Annual Scientific & Technology Conference, Scottsdale, AZ.
18. Mitchell, C., Zink, M. E., **McHaney, J. R.,** Anthony, S., Hallihan, M., Chandrasekaran, B., & Parthasarathy, A. (April 2023). Relationship between altered auditory temporal processing and speech perception in noise in young and middle-aged adults. Poster to be presented at the American Academy of Audiology 2023 + HearTECH Expo, Seattle, WA.
19. Yurasits, K., Zhen, L. Q., Parida, S., Klara, J., **McHaney, J. R.,** Cancel, V., Zink, M. E., Mitchell, C., Chandrasekaran, B., & Parthasarathy, A. (April 2023). Age-related changes in the representation of stimulus temporal fine structure cues and their relationship to multi-talker speech intelligibility. Poster to be presented at the American Academy of Audiology 2023 + HearTECH Expo, Seattle, WA.
20. Parker, A., **McHaney, J. R.,** Coleman, B., Chandrasekaran, B., & Hampton Wray, A. (November 2023). Phonological Awareness and the Impact of Noise Level on Speech Perception. Abstract submitted for consideration for the 2023 American Speech-Language-Hearing Association Convention, Boston, MA.

CONFERENCE PODIUM PRESENTATIONS

1. **McHaney, J. R.,** Zhen, L., Anthony, S., Xie, Z., Parthasarathy, A., & Chandrasekaran, B. (February 2023). Deficits in Sensory Decision-Making Underlie Self-Perceived Hearing Difficulties. Talk to be presented at the Association for Research in Otolaryngology 46th Annual MidWinter Meeting, Orlando, FL.

PRESENTATIONS

Aug 2017 *Effect of listening environment on continuous speech processing in older adults*, Sixth Annual Communication Sciences and Disorders Research Blitz, The University of Texas at Austin, Austin.

Dec 2019 *Aging, cognition, and speech processing*, Auditory and Vestibular Neuroscience T32 Seminar, University of Pittsburgh, Pittsburgh.

Mar 2020 *Cortical Tracking of Speech in Older Adults*, Auditory and Vestibular Neuroscience T32 Retreat, University of Pittsburgh, Pittsburgh.

Apr 2020 *Cortical Tracking of Speech in Older Adults*, Department of Communication Science and Disorders Research Round Table Seminar, University of Pittsburgh, Pittsburgh.

Jan 2021 *Working Memory During Non-Native Speech Category Learning*, Auditory and Vestibular Neuroscience T32 Seminar, University of Pittsburgh, Pittsburgh.

Feb 2021 *Influence of Working Memory on Non-Native Speech Category Learning*, Department of Communication Science and Disorders Research Round Table Seminar, University of Pittsburgh, Pittsburgh.

Apr 2021 *Working Memory Influences Speech Category Learning: A Pupillometry Study,* Auditory and Vestibular Neuroscience T32 Annual Retreat, University of Pittsburgh, Pittsburgh.

Nov 2022 *Sensory and Cognitive Factors Underlying Individual Variability in Speech in Noise Perception,* Hearing and Cookies Seminar Series, University of Pittsburgh, Pittsburgh.

HONORS & AWARDS

2012 Phi Theta Kappa Honor Society
2015 University Honors, The University of Texas at Austin
2015 Psi Chi International Honor Society in Psychology
2022 Society for Neurobiology of Language Travel Award
2022 Gordon Research Conference – Auditory System Travel Funds
2023 Association for Research in Otolaryngology Childcare Grant

PROFESSIONAL MEMBERSHIPS

Society for Neurobiology of Language
Association for Research in Otolaryngology
American Auditory Society

SERVICE

University of Pittsburgh
2019-2021 **PhD Student Representative**, Communication Science and Disorders
2020-2021 **Organizer,** Communication Science and Disorders Research Round Table Seminar

TEACHING

University of Pittsburgh

2021	**Assistant Instructor,** Neuroscience of Communication (CSD 2110)
2021	**Guest Lecturer**, Introduction to Neuroscience of Communication (CSD 1237)
2023	**Guest Lecturer,** Neuroscience of Communication (CSD 2110)
2023	**Guest Lecturer,** Advanced Physiological Assessment (CSD 2252)

MENTORSHIP

Undergraduate Honors Thesis

University of Texas at Austin

2016	Yuan Han
2017-2018	Elise LeBovidge

University of Pittsburgh

2018-2020	Megan McKenzie
2022-Present	Claire Mitchell

Undergraduate Research Assistants

University of Texas at Austin

2016	Karen Lin
2016	Kay Torriente
2016	Isabelle Arseneau Bruneau
2016-2017	Stephen Slaughter
2016-2017	Dominique Arzola
2016-2017	Danielle De La Rosa
2016-2017	Abigail Hall
2016-2017	Megan Burke
2017-2018	Sarina Lieberman
2017-2018	Sarah Campbell
2017-2018	Priyanka Deshmane

University of Pittsburgh

2019-2020	Danielle Wu
2019-2020	Laura Fahs
2019-2020	Olivia Gall
2019-2020	Inca Malik
2019-2020	Santosh Donepudi
2022	Rebecca Kime
2022	Angelina DiNardo
2022	Madison Andreano
2022	Olivia Flemm
2022-Present	Sarah Anthony
2022-Present	Shaina Wasileski
2022-Present	Katie Bergstrom
2022-Present	Megan Hallihan
2022-Present	Miaofang Hu
2022-Present	Jasmine Cardino

High School Students

Austin High School

2016	Emma Green

Winchester Thurston School

2022-Present	Marysia Brown

Shady Side Academy

2021-2022	Karen Linares Mendoza
2022	Cassidy Mineo
2022	Zoey Miller
2022	Savitha Thompson

DIVERSITY AND INCLUSION

2021	Hosted virtual lab tour a University of Pittsburgh for Innovative Mentoring and Professional Advancement through Cultural Training (IMPACT) program at Case Western Reserve University in collaboration with Hampton University, a historically black university.
2022	Co-mentor for Karen Linares Mendoza, recipient of a diversity supplement from NIDCD to conduct research through a summer internship.
2022	Mentor for two undergraduate CSD students from the Innovative Mentoring and Professional Advancement through Cultural Training (IMPACT) program through a summer research internship at the University of Pittsburgh.