

Han Gyol Yi

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Work

Postdoctoral Scholar. **Edward F. Chang; Matthew K. Leonard**, *University of California, San Francisco*, 2017-.

Graduate Research Assistant. **Bharath Chandrasekaran**, *The University of Texas at Austin*, 2014-15, 2016-17.

Undergraduate Research Assistant. **Nina Kraus; Samira Anderson**, *Northwestern University*, 2009-10.

Education

PhD, Communication Sciences and Disorders, *The University of Texas at Austin*, 2017.

MA, Communication Sciences and Disorders, *The University of Texas at Austin*, 2013.

BS, Communication Sciences and Disorders, *Northwestern University*, 2010.

Peer-Reviewed Journal Articles

17. **Yi HG***, Leonard MK*, Chang EF. (2019). The encoding of speech sounds in the superior temporal gyrus. *Neuron*, 102(6), 1096-1110.
16. Feng G*, **Yi HG***, Chandrasekaran B. (2018). The role of the human auditory corticostriatal network in speech learning. *Cerebral Cortex*, bhy289.
15. **Yi HG**, Xie Z, Reetzke R, Dimakis AG, Chandrasekaran B. (2017). Vowel decoding from single-trial speech-evoked electrophysiological responses: A feature-based machine learning approach. *Brain and Behavior*, 7(6): e00665.
14. **Yi HG**, Chandrasekaran B. (2016). Auditory categories with separable decision boundaries are learned faster with full feedback than with minimal feedback. *The Journal of the Acoustical Society of America*, 140(2), 1332-1335.
13. Chandrasekaran B, **Yi HG**, Smayda K, Maddox WT. (2016). Effect of explicit dimension instruction on speech category learning. *Attention, Perception, & Psychophysics*, 78, 566-582.
12. **Yi HG**, Maddox WT, Mumford JA, Chandrasekaran B. (2016). The role of corticostriatal systems in speech category learning. *Cerebral Cortex*, 26(4), 1409-1420.
11. Maddox WT, Koslov S, **Yi HG**, Chandrasekaran B. (2015). Performance Pressure Enhances Speech Learning. *Applied Psycholinguistics*, doi: 10.1017/S0142716415000600.

10. Chandrasekaran B, **Yi HG**, Blanco N, McGeary JE, Maddox WT. (2015). Enhanced procedural learning of speech sound categories in a genetic variant of FOXP2. *The Journal of Neuroscience*, 35(20), 7808-7812.
9. Xie Z*, **Yi HG***, Chandrasekaran B. (2014). Nonnative audiovisual speech perception in noise: Dissociable effects of the speaker and listener. *PLoS ONE*, 9(12), e114439.
8. **Yi HG**, Smiljanic R, Chandrasekaran B. (2014). The neural processing of foreign-accented speech and its relationship to listener bias. *Frontiers in Human Neuroscience*, 8:768.
7. Maddox WT, Chandrasekaran B, Smayda K, Koslov S, **Yi HG**, Beevers CG. (2014). Elevated depressive symptoms enhance reflexive but not reflective auditory category learning. *Cortex*, 58, 186-198.
6. Chandrasekaran B, **Yi HG**, Maddox WT. (2014). Dual-learning systems during speech category learning. *Psychonomic Bulletin & Review*, 21(2), 488-495.
5. **Yi HG**, Phelps JE, Smiljanic R, Chandrasekaran B. (2013). Reduced efficiency of audiovisual integration for nonnative speech. *The Journal of the Acoustical Society of America*, 134(5), EL387-EL393.
4. Maddox WT, Chandrasekaran B, Smayda K, **Yi HG**. (2013). Dual systems of speech category learning across the lifespan. *Psychology and Aging*, 28(4), 1042.
3. Hornickel J, Anderson S, Skoe E, **Yi HG**, Kraus N. (2012). Subcortical representation of speech fine structure relates to reading ability. *NeuroReport*, 23(1), 6-9.
2. Anderson S, Parbery-Clark A, **Yi HG**, Kraus N. (2011). A neural basis of speech-in-noise perception in older adults. *Ear & Hearing*, 32(6), 750-757.
1. Anderson S, Chandrasekaran B, **Yi HG**, Kraus N. (2010). Cortical-evoked potentials reflect speech-in-noise perception in children. *European Journal of Neuroscience*, 32(8), 1407-1413.

Manuscripts

Llanos F, McHaney J, Schuerman WL, **Yi HG**, Leonard MK, Chandrasekaran B. (submitted). Non-invasive peripheral nerve stimulation enhances speech learning.

Yi HG*, Leonard MK*, Chandrasekaran B, Nourski KV, Howard III MA, Chang EF. (in prep). Learning novel speech sounds changes perceptual representations in the human cortex.

References

Edward F. Chang, Professor; **Matthew K. Leonard**, Assistant Professor, *Department of Neurological Surgery*, University of California, San Francisco.

Bharath Chandrasekaran, Professor and Vice Chair of Research, *Department of Communication Science and Disorders*, University of Pittsburgh.

Maya L. Henry, Assistant Professor, *Department of Communication Sciences and Disorders*, The University of Texas at Austin.

Awards and Honors

Honorable Mention, Merit Awards. 2018. Society for the Neurobiology of Language. Complimentary registration fees.

Graduate School Named Endowed Continuing Fellowship. 2015–2016. The University of Texas at Austin. *The award speaks highly of your record of accomplishments as a graduate student at the University.* Total stipend of \$26,000 for up to 12 months of support. Full tuition support. Annual reimbursement of \$2,000 for research-related costs. \$2,181 to defray the costs of medical insurance.

Donald Harrington Graduate Fellows Program. 2011–2014. The University of Texas at Austin. *The Harrington Graduate Fellows Program supports up to 16 Fellows each academic year with stipends that equal or exceed those of other prestigious fellowship programs.* Annual stipend of \$36,000. Full tuition support. Annual reimbursement of \$2,000 for research-related costs. \$1,204 to defray the costs of medical insurance

Summer Undergraduate Research Grant. 2010. The Roxelyn and Richard Pepper Department of Communication Sciences and Disorders, School of Communication, Northwestern University *Encoding of stimulus regularities in the human auditory brainstem: Older adults and linkage to speech in noise perception.* \$3,000.

Communication Century Scholar. 2010. The Roxelyn and Richard Pepper Department of Communication Sciences and Disorders, School of Communication, Northwestern University *To recognize individual students for their academic excellence and contributions to classroom learning.*

Lois L. Elliott Book Award. 2010. The Roxelyn and Richard Pepper Department of Communication Sciences and Disorders, School of Communication, Northwestern University *Presented to an undergraduate human communication sciences major who has demonstrated outstanding achievement.*

Conference Presentations

22. Townsend JD, **Yi HG**, Beckett A, Leonard MK, Vu AT, Chang EF, Feinberg D. (2019). Non-invasive mapping of acoustic-phonetic speech features in human superior temporal gyrus using ultra-high field 7T fMRI. Nanosymposium, *49th Annual Meeting for Society for Neuroscience*, Chicago, IL.
21. **Yi HG***, Leonard MK*, Chandrasekaran B, Nourski KV, Howard III MA, Chang EF. (2018). Learning novel speech sounds reorganizes acoustic representations in the human superior temporal gyrus. Poster, *48th Annual Meeting for Society for Neuroscience*, San Diego, CA.
20. Llanos F, McHaney JR, Leonard MK, Schuerman WL, **Yi HG**, Chandrasekaran B. (2018). Transcutaneous vagus nerve stimulation enhances non-native speech categorization. Poster, *10th Meeting for Society for the Neurobiology of Language*, Quebec City, Quebec, Canada.
19. **Yi HG***, Leonard MK*, Chandrasekaran B, Nourski KV, Howard III MA, Chang EF. (2018). Learning novel speech sounds reorganizes acoustic representations in the human superior temporal gyrus. Slide Presentation, *10th Meeting for Society for the Neurobiology of Language*, Quebec City, Quebec, Canada.

18. Europa E, Grasso S, Dial HR, **Yi HG**, Henry ML. (2018). Effects of script training on neural activity in primary progressive aphasia: A pilot fMRI study. Poster, *Clinical Aphasiology Conference*, Austin, TX.
17. **Yi HG**, Feng G, Leonard MK, Wang S, Wong PCM, Chandrasekaran B. (2017). Corticostriatal learning systems in auditory categorization. Poster, *6th International Conference on Auditory Cortex*, Banff, Alberta, Canada.
16. Feng G, **Yi HG**, Chandrasekaran B. (2017). Corticostriatal circuitry associated with speech representational plasticity in the superior temporal gyrus. Poster, *6th International Conference on Auditory Cortex*, Banff, Alberta, Canada.
15. Chan AHD, Ching A, Wong G, **Yi HG**, Wong PCM, Wong FCK. (2017). Cognitive precursors for learning and reading performance in two different languages: A study with artificial language. Poster, *11th International Symposium on Bilingualism*, Limerick, Ireland.
14. **Yi HG**, Tessmer R, Chandrasekaran B. (2016). Optimizing Lexical Learning through Manipulation of Phonological Training Environment. Poster, *171st Meeting of the Acoustical Society of America*, Salt Lake City, UT.
13. **Yi HG**, Xie Z, Reetzke R, Dimakis AG, Chandrasekaran B. (2016). Midbrain-based decoding of vowel and speaker information in humans. Podium, *Association for Research in Otolaryngology 2016 MidWinter Meeting*, San Diego, CA.
12. Xie Z, Reetzke R, **Yi HG**, Dimakis AG, Chandrasekaran B. (2016). Subcortical decoding of stimulus, group experience, and individuality. Poster, *Association for Research in Otolaryngology 2016 MidWinter Meeting*, San Diego, CA.
11. Reetzke R, Xie Z, **Yi HG**, Dimakis AG, Chandrasekaran B. (2016). Dynamics of short-term experience-dependent plasticity in human subcortical auditory function. Podium, *Association for Research in Otolaryngology 2016 MidWinter Meeting*, San Diego, CA.
10. **Yi HG**, Koslov SR, Maddox WT, Chandrasekaran, B. (2016). Mapping the auditory corticostriatal pathway in humans using diffusion tensor imaging. Poster, *Association for Research in Otolaryngology 2016 MidWinter Meeting*, San Diego, CA.
9. **Yi HG**, Koslov SR, Maddox WT, Chandrasekaran, B. (2015). Corticostriatal white matter connectivity predicts speech category learning success. Poster, *Seventh Annual Meeting of the Society for the Neurobiology of Language*, Chicago, IL.
8. **Yi HG**, Xie Z, Reetzke R, Chandrasekaran B. (2015). Corticocollicular influences on subcortical encoding of speech sounds. Poster, *Seventh Annual Meeting of the Society for the Neurobiology of Language*, Chicago, IL.
7. Asteris M, Kyrillidis A, Dimakis A, **Yi HG**, Chandrasekaran B. (2015). Stay on path: PCA along graph paths Poster, *32nd International Conference on Machine Learning*, Lille, France.
6. **Yi HG**, Maddox WT, Mumford JA, Chandrasekaran B. (2014). The role of corticostriatal learning systems in speech categorization. Poster, *Psychonomic Society's 55th Annual Meeting*, Long Beach, CA.

5. **Yi HG**, Maddox WT, Knopik VS, McGeary JE, Chandrasekaran B. (2014). Enhanced speech learning in genetic variants of COMT and FOXP2. Poster, *168th Meeting of the Acoustical Society of America*, Indianapolis, IN.
4. **Yi HG**, Smiljanic R, Chandrasekaran B. (2013). Natural variations in speech intelligibility: An fMRI study. Poster, *19th Annual Meeting of the Organization for Human Brain Mapping*, Seattle, WA.
3. Smayda K, **Yi HG**, Chandrasekaran B, Maddox WT. (2013). Reflexive and reflective system learning of auditory categories across the lifespan. Poster, *Dallas Aging and Cognition Conference*, Dallas, TX.
2. **Yi HG**, Chandrasekaran B, Maddox WT. (2012). Optimized speech sound category training bootstraps foreign word learning. Poster, *164th Meeting of the Acoustical Society of America*, Kansas City, MO.
1. Chandrasekaran B, **Yi HG**, Maddox WT. (2012). Delayed feedback disrupts optimal strategies during foreign speech sound learning. Poster, *164th Meeting of the Acoustical Society of America*, Kansas City, MO.

Teaching

Guest Lecturer. Spring 2017. *Principles of Cognitive Neuroscience*. Auditory perception and learning. Department of Psychology. The University of Texas at Austin.

Graduate Instructor. Fall 2015. *Language and the Brain*. Introductory neuroanatomy, neuroimaging, neural correlates of reading and writing. Department of Communication Sciences and Disorders. The University of Texas at Austin.

Guest Lecturer. Summer 2015. *Learning and the Brain*. Speech learning and the brain. Department of Psychology. The University of Texas at Austin.

Service

Mentorship

Alia Shafi. January 2018 - May 2019. Project supervision. Clinical research coordinator at the UCSF Chang Lab. (Current: Software Engineering Student, App Academy).

Jessie Liu. September 2017 - December 2017. Project supervision. PhD student, UC Berkeley - UCSF Graduate Program in Bioengineering.

Rachel Tessmer. September 2014 - June 2015. Project supervision. MA/PhD student, Department of Communication Sciences and Disorders, The University of Texas at Austin.

Ayesha Haque (née Dadabhoy). September 2012 - May 2013. Project supervision. SLP student, Department of Communication Sciences and Disorders, The University of Texas at Austin. (Current: Speech Language Pathologist, Capital Area Speech Therapy).

Peer Review

Journal of Phonetics, 2019; *The Journal of Acoustical Society of America*, 2016, 2018; *Journal of Cognitive Neuroscience*, 2017; *NeuroImage*, 2017; *Language and Speech*, 2017; *Applied Psycholinguistics*, 2017; *Cerebral Cortex*, 2016; *Psychophysiology*, 2016; *Frontiers in Human Neuroscience*, 2016; *Applied Psycholinguistics*, 2015; *Journal of Neurolinguistics*, 2014; *Perspectives on Hearing and Hearing Disorders: Research and Diagnostics*, 2013; *Ear and Hearing*, 2012.

Others

Co-chair. 2019. *Language: Physiology, Plasticity, and Cognition*. Nanosymposium at 49th Annual Meeting for Society for Neuroscience.

Organizer and Host. 2016. *Bilingual Mind, Brain and Child Development Symposium*. 21 researchers from UT Austin, UT Dallas, UT San Antonio, The University of Houston, and the University of Michigan presented their data. The University of Texas at Austin.

Media Coordinator. 2014 - 2017. *Communication Sciences and Disorders Doctoral Students Group*. Organization and publicization of the third (2014) and fourth (2015) annual departmental research presentation meetings. The University of Texas at Austin.