

Zilong Xie, Ph.D.

Florida State University
School of Communication Science and Disorders
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Tallahassee, FL 32306
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Education

- 2013-2018 **University of Texas at Austin, USA**
 Department of Communication Sciences and Disorders
 Ph.D. in Communication Sciences and Disorders
 Advisor: Bharath Chandrasekaran
- 2010-2013 **Peking University, China**
 Department of Psychology
 M.S. in Psychology
- 2005-2009 **Southwest University, China**
 School of Psychology
 B.S. in Psychology

Employment

- 08/2022- **Florida State University, USA**
 School of Communication Science and Disorders
 Assistant Professor
- 07/2020- **University of Kansas Medical Center, USA**
07/2022 **Department of Hearing and Speech**
 Assistant Professor
- 08/2018- **University of Maryland, College Park, USA**
06/2020 **Department of Hearing and Speech Sciences**
 Postdoctoral Associate (PIs: Matthew Goupell & Samira Anderson)
- 06/2018- **University of Texas at Austin, USA**
07/2018 **Department of Communication Sciences and Disorders**
 Social Science/Humanities Research Associate
- 2014-2018 **University of Texas at Austin, USA**
 Department of Communication Sciences and Disorders
 Research Assistant
- 2016 **University of Texas at Austin, USA**
 Department of Communication Sciences and Disorders
 Teaching Assistant

2009-2010 **Wenjiang Senior High School, Sichuan, China**
School Psychologist

Peer-Reviewed Articles

- 2022 22. **Xie, Z.**, Anderson, S., & Goupell, M. J. (2022) Stimulus context affects the phonemic categorization of temporally based word contrasts in adult cochlear-implant users. *Journal of the Acoustical Society of America*, 151(3), 2149-2158. DOI: 10.1121/10.0009838
- 2021 21. **Xie, Z.**, Stakhovskaya, O. A., Goupell, M. J., & Anderson, S. (2021) Aging Effects on Cortical Responses to Tones and Speech in Adult Cochlear-Implant Users. *Journal of the Association for Research in Otolaryngology*, 22(6):719-740. DOI: 10.1007/s10162-021-00804-4
20. Johnson, K.C., **Xie, Z.**, Shader, M. J., Mayo, P., & Goupell, M. J. (2021) Effect of chronological age on pulse rate discrimination in adult cochlear-implant users. *Trends in Hearing*, 25, 1-15. DOI: 10.1177/23312165211007367
- 2020 19. **Xie, Z.**, Shader, M. J., Anderson, S., Gordon-Salant, S., & Goupell, M. J. (2020). Letter to the Editor: Possible sex effects on the processing of temporal cues in word segments in adult cochlear-implant users. *Trends in Hearing*. DOI: 10.1177/2331216520946675
- 2019 18. **Xie, Z.**, Gaskins, C. R., Shader, M. J., Anderson, S., Gordon-Salant, S., & Goupell, M. J. (2019). Age-related temporal processing deficits in word segments in adult cochlear-implant users. *Trends in Hearing*, 23, 1-19. DOI: 10.1177/2331216519886688
17. **Xie, Z.**, Zinszer, B. D., Riggs, M., Beevers, C. G., & Chandrasekaran, B. (2019). Impact of depression on speech perception in noise. *PLoS ONE*, 14(8): e0220928. DOI: 10.1371/journal.pone.0220928
16. **Xie, Z.**, Reetzke, R., & Chandrasekaran, B. (2019). Machine learning approaches to analyze speech-evoked neurophysiological responses. *Journal of Speech, Language, and Hearing Research*, 62(3), 587-601. DOI: 10.1044/2018_JSLHR-S-ASTM-18-0244
15. Llanos, F., **Xie, Z.**, & Chandrasekaran, B. (2019). Biometric identification of listener identity from frequency following responses to speech. *Journal of Neural Engineering*, 16(5), 056004. DOI: 10.1088/1741-2552/ab1e01
- 2018 14. **Xie, Z.**, Reetzke, R., & Chandrasekaran, B. (2018). Taking attention away from the auditory modality: Context-dependent effects on early sensory encoding of speech. *Neuroscience*, 384, 64-75. DOI: 10.1016/j.neuroscience.2018.05.023
13. Reetzke, R., **Xie, Z.**, Llanos, F., & Chandrasekaran, B. (2018). Tracing the trajectory of experience-dependent auditory plasticity: From novice to native-like mastery of novel speech categories in adults. *Current Biology*, 28, 1-9. DOI:

10.1016/j.cub.2018.03.026

- 2017
12. **Xie, Z.**, Reetzke, R., & Chandrasekaran, B. (2017). Stability and plasticity in neural encoding of linguistically-relevant pitch patterns. *Journal of Neurophysiology*, *117*(3), 1407-1422. DOI: 10.1152/jn.00445.2016
 11. Yi, H., **Xie, Z.**, Reetzke, R., Dimakis, A. G., & Chandrasekaran, B. (2017). Vowel decoding from single-trial speech-evoked electrophysiological responses: A feature-based machine learning approach. *Brain and Behavior*, *7*: e00665. DOI: 10.1002/brb3.665
 10. Llanos, F., **Xie, Z.**, & Chandrasekaran, B. (2017). Hidden Markov modeling of frequency-following responses to Mandarin lexical tones. *Journal of Neuroscience Methods*, *291*, 101-112. DOI: 10.1016/j.jneumeth.2017.08.010
 9. Lam, B., **Xie, Z.**, Tessmer, R., & Chandrasekaran, B. (2017). The downside of greater lexical influences: Selectively poorer speech perception in noise. *Journal of Speech, Language, and Hearing Research*, *60*, 1662-1673. DOI: 10.1044/2017_JSLHR-H-16-0133
- 2016
8. Van Engen, K.J., **Xie, Z.**, & Chandrasekaran, B (2016). Audiovisual sentence recognition not predicted by susceptibility to the McGurk effect. *Attention, Perception, & Psychophysics*, *79*(2), 396-403. DOI: 10.3758/s13414-016-1238-9
 7. Reetzke, R., Lam, B., **Xie, Z.**, Sheng, L., & Chandrasekaran, B. (2016). Effect of simultaneous bilingualism on speech intelligibility across different masker types, modalities, and signal-to-noise ratios in children. *PLoS ONE*, *11*(12): e0168048. DOI: 10.1371/journal.pone.0168048
- 2015
6. **Xie, Z.**, Maddox, W. T., Knopik, V. S., McGeary, J. E., & Chandrasekaran, B. (2015). Dopamine receptor D4 (DRD4) gene modulates the influence of informational masking on speech recognition. *Neuropsychologia*, *67*, 121-131. DOI: 10.1016/j.neuropsychologia.2014.12.013
 5. **Xie, Z.**, Maddox, W. T., McGeary, J. E., & Chandrasekaran, B. (2015). The C957T polymorphism in the dopamine receptor D2 (DRD2) gene modulates domain-general category learning. *Journal of Neurophysiology*, *113*(9), 3281-3290. DOI: 10.1152/jn.01005.2014
 4. Kong, L., **Xie, Z.**, Lu, L., Qu, T., Wu, X., Yan, J., & Li, L. (2015). Similar impacts of the interaural delay and interaural correlation on binaural gap detection. *PLoS ONE*, *10*(6): e0126342. DOI: 10.1371/journal.pone.0126342
 3. Chandrasekaran, B., Van Engen, K., **Xie, Z.**, Beevers, C. G., & Maddox, W. T. (2015). Influence of depressive symptoms on speech perception in adverse listening conditions. *Cognition & Emotion*, *29*(5), 900-909. DOI: 10.1080/02699931.2014.944106

- 2014 2. **Xie, Z.**, Yi, H., & Chandrasekaran, B. (2014). Nonnative audiovisual speech perception in noise: Dissociable effects of the speaker and listener. *PLoS ONE*, 9(12): e114439. DOI: 10.1371/journal.pone.0114439
- 2012 1. Kong, L., **Xie, Z.**, Lu, L., Wu, X., & Li, L. (2012). Sensitivity to a break in interaural correlation is co-modulated by intensity level and interaural delay. *Journal of the Acoustical Society of America*, 132, EL114-EL118. DOI: 10.1121/1.4734241

Manuscripts in preparation

2. **Xie, Z.**, Goupell, M. J., & Anderson, S. Effects of aging, spectral resolution, and sentence context on the processing of temporal cues in word segments.
1. **Xie, Z.**, Brodbeck, C. & Chandrasekaran, B. Cortical tracking of acoustic and linguistic features of continuous speech under focused and divided attention.

Book Chapters

- 2020 3. Lau, J. C., **Xie, Z.**, Chandrasekaran, B., & Wong, P. C. (2020). Chapter 35. Cortical and subcortical processing of linguistic pitch patterns. *The Oxford Handbook of Language Prosody*. Edited by Carlos Gussenhoven and Aojun Chen. Oxford University Press.
- 2017 2. Reetzke, R., **Xie, Z.**, & Chandrasekaran, B. (2017). Chapter 11. Neurobiology of literacy and its disorders. *The Frequency-following Response: A Window into Human Communication*. Springer Handbook of Auditory Research.
- 2016 1. Chandrasekaran, B., **Xie, Z.**, & Reetzke, R. (2016). Chapter 6. Music training and the neural processing of speech: A critical review of the literature. *Essays in Speech Processes: Language Production and Perception*. Edited by Augustine Agwuele and Andrew Lotto. Equinox Publishing.

Conference Oral Presentation

- 2022 4. Goupell, M. J., **Xie, Z.**, Gaskins, C. R., Anderson, S., Gordon-Salant, S. (May 2022). Assessing age-related temporal processing deficits with single word contrasts in cochlear-implant users. *182nd Meeting of the Acoustical Society of America*, Dever, CO.
- 2020 3. **Xie, Z.**, & Chandrasekaran, B. (January 2020). Taking Attention Away from the Auditory Modality: Behavioral and Electrophysiological Effects on Continuous Speech Processing. *Association for Research in Otolaryngology 43rd MidWinter Meeting*, San Jose, CA.
- 2017 2. Reetzke, R., **Xie, Z.**, & Chandrasekaran, B. (February 2017). Effects of language experience and long-term training on the neural weighting and categorical perception of pitch dimensions. *Association for Research in Otolaryngology 40th MidWinter*

Meeting, Baltimore, MD.

- 2015 1. **Xie, Z.**, & Chandrasekaran, B. (May 2015). Intra-subject variability in frequency-following responses and cortical event-related responses to Mandarin tones. *169th Meeting of the Acoustical Society of America*, Pittsburgh, PA.

Conference Poster Presentation (* denotes students)

- 2022 23. Song, V.*, Brown, H.*, Low, M.*, **Xie, Z.** (May 2022). Perception of temporal cues in word segments under bimodal divided attention in simulated cochlear implant listening. *182nd Meeting of the Acoustical Society of America*, Dever, CO.
22. Brown, H.*, Song, V.*, Low, M.*, **Xie, Z.** (May 2022). Perception of temporal cues in word segments as a function of spectral resolution and stimulus context. *182nd Meeting of the Acoustical Society of America*, Dever, CO.
21. Gnanateja, G. N., **Xie, Z.**, & Chandrasekaran, B. (February 2022). Attention Effects on Neural Encoding of Temporal Envelope and Periodicity in Continuous Speech. *Association for Research in Otolaryngology 45th MidWinter Meeting*. (Virtual)
- 2021 20. **Xie, Z.**, Johnson, K.C., Shader, M. J., Mayo, P., Gibbs, B.E., & Goupell, M. J. (July 2021). Effect of chronological age on pulse rate discrimination in adult cochlear-implant users. *Conference in Implantable Auditory Prostheses*. (Virtual; **Featured Recorded Talk**)
- 2020 19. **Xie, Z.**, Anderson, S., Gordon-Salant, S., & Goupell, M. J. (January 2020). Age-related Temporal Processing Deficits for Word Segments in Adult Cochlear-Implant Users: Perceptual and Electrophysiological Evidence. *Association for Research in Otolaryngology 43rd MidWinter Meeting*, San Jose, CA.
- 2019 18. **Xie, Z.**, Anderson, S., Gordon-Salant, S., & Goupell, M. J. (November 2019). Processing temporal cues for word identification in adult cochlear-implant users: Effects of aging and context. *8th Annual Aging & Speech Communication Conference*, Tampa, FL.
17. **Xie, Z.**, Stakhovskaya, O. A., Goupell, M. J., & Anderson, S. (July 2019). Age-related deficits in auditory cortical processing in cochlear-implant users. *Conference in Implantable Auditory Prostheses*, Lake Tahoe, CA.
16. **Xie, Z.**, Stakhovskaya, O. A., Goupell, M. J., & Anderson, S. (February 2019). Aging effects on the auditory evoked cortical potentials in cochlear-implant users: The role of stimulus presentation rate. *Association for Research in Otolaryngology 42nd MidWinter Meeting*, Baltimore, MD.
- 2018 15. Tessmer, R., **Xie, Z.**, & Chandrasekaran, B. (November 2018). Pupil dilation as an index of non-native speech category learning. *59th Psychonomic Society Annual Meeting*, New Orleans, LA.
14. Llanos, F., Reetzke, R., **Xie, Z.**, Hamilton, L., & Chandrasekaran, B. (August 2018). Using machine learning to model effects of attention and language-experience on

neural phonemic constancy. *10th Annual Meeting of the Society for the Neurobiology of Language*, Québec City, Québec, Canada.

- 2017
13. **Xie, Z.**, & Chandrasekaran, B. (June 2018). Dividing attention to the visual modality impairs the processing of continuous speech. *24th Annual Meeting of the Organization for Human Brain Mapping*, Singapore.
 12. Reetzke, R., **Xie, Z.**, & Chandrasekaran, B. (September 2017). Effects of selective attention and language experience on cortical entrainment to continuous speech. *6th International Conference on Auditory Cortex*, Banff, Alberta, Canada.
 11. Llanos, F., **Xie, Z.**, & Chandrasekaran, B. (June 2017). Decoding linguistically-relevant pitch patterns from frequency-following responses using hidden Markov models. *173rd Meeting of the Acoustical Society of America*, Boston, MA.
 10. **Xie, Z.**, & Chandrasekaran, B. (February 2017). Taking attention away from the auditory modality: Subcortical representation of speech signals during inattentive deafness. *Association for Research in Otolaryngology 40th MidWinter Meeting*, Baltimore, MD.
- 2016
9. **Xie, Z.**, & Chandrasekaran, B. (November 2016). Subcortical encoding of sound: Interaction between attentional demand and stimulus regularity. *15th Annual Auditory Perception, Cognition and Action Meeting*, Boston, MA.
 8. Chandrasekaran, B., Reetzke, R., Yi, H. G., Roeder, J., **Xie, Z.**, & Maddox, W. T. (May 2016). Experience-dependent plasticity in the neural weighting of pitch dimensions: A machine learning approach. *171st Meeting of the Acoustical Society of America*, Salt Lake City, UT.
 7. Chen, J., Yang, H., **Xie, Z.**, Li, L., & Wu, X. (May 2016). Difference between Mandarin Chinese and English speech masking caused by signal-driven processes. *171st Meeting of the Acoustical Society of America*, Salt Lake City, UT.
 6. **Xie, Z.**, Reetzke, R., Yi, H., Maddox, W. T., Dimakis, A. G., & Chandrasekaran, B. (February 2016). Subcortical decoding of stimulus, group experience, and individuality. *Association for Research in Otolaryngology 39th MidWinter Meeting*, San Diego, CA.
 5. Reetzke, R., **Xie, Z.**, Yi, H., Maddox, W. T., Dimakis, A. G., & Chandrasekaran, B. (February 2016). Dynamics of short-term experience-dependent plasticity in human subcortical auditory function. *Association for Research in Otolaryngology 39th MidWinter Meeting*, San Diego, CA.
 4. Chandrasekaran, B., **Xie, Z.**, Yi, H., & Reetzke, R. (February 2016). Midbrain-based decoding of vowel and speaker information in humans. *Association for Research in Otolaryngology 39th MidWinter Meeting*, San Diego, CA.
- 2015
3. **Xie, Z.**, Maddox, W. T., & Chandrasekaran, B. (May 2015). Elevated depressive symptoms associate with an emotion-general deficit in speech perception at a cocktail

party. *169th Meeting of the Acoustical Society of America*, Pittsburgh, PA.

- 2014
2. **Xie, Z.**, Maddox, W. T., Knopik, V. S., McGeary, J. E., & Chandrasekaran, B. (October 2014). Individual differences in speech perception in noise: A neurocognitive genetic study. *168th Meeting of the Acoustical Society of America*, Indianapolis, IN.
 1. Reetzke, R., Lam, B., **Xie, Z.**, Sheng, L., & Chandrasekaran, B. (October 2014). Developmental and linguistic factors of audiovisual speech perception across different masker types. *168th Meeting of the Acoustical Society of America*, Indianapolis, IN.

Grants

Intramural

Completed

2021-2022 University of Kansas Medical Center PI: Zilong Xie
Age-related temporal processing deficits on cortical representation in cochlear-implant users
Role: Principle Investigator
Total costs. \$32,010

Teaching

University of Kansas Medical Center (2020-2022)

AUD 829 Hearing and Vestibular Mechanisms (Graduate)

AUD 851 Auditory Evoked Potentials (Graduate)

University of Maryland, College Park (2019)

HESP 600 Instrumentation in Hearing and Speech Sciences (Graduate)

Advising

University of Kansas Medical Center

Michelle Low (Au.D.) 2021-2022

Administration/Service

School

University of Kansas Medical Center

08/2021 Hiring Committee Member for Dean's Office Business office assistant

Department

Florida State University

2022- Member, Admissions

2022- Member, Scholarships, Awards, & Honors Committee

University of Kansas Medical Center

2020-2022 Member, Audiology (Au.D.) Curriculum Committee

Journal Reviewer

American Journal of Audiology

Frontiers in Public Health

Frontiers in Neuroscience

Frontiers in Aging Neuroscience

Human Brain Mapping

International Journal of Audiology

Journal of Speech, Language, and Hearing Research

Journal of the Acoustical Society of America

Neurobiology of Aging

Neuroscience Letters

SAGE Open

Speech Communication

Fellowships and Awards

Fellowships

2013-2014 **University of Texas at Austin, USA**

Graduate School Recruitment Fellowship (\$27,432)

2010-2013 **Peking University, China**

National Academic Scholarship for Graduate Studies (Covering tuition and stipend)

2007-2008 **Chinese Ministry of Education, China**

National Scholarship

Travel awards

2019 **Aging & Speech Communication Conference** (\$500)

2017 **Association for Research in Otolaryngology** (\$500)

2016 **University of Texas at Austin, USA**

Graduate Student Professional Development Award (\$500)

2015 **University of Texas at Austin, USA**

Department of Communication Sciences and Disorders (\$266)

2014 **University of Texas at Austin, USA**

Department of Communication Sciences and Disorders (\$600)

Other

2009 **Outstanding University Graduate in Chongqing Municipality, China**

Professional Membership

Association for Research in Otolaryngology