ZHENGHAN QI, MD/PhD

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EDUCATION

2001 – 2006 M.D. Basic Medicine
Shanghai Medical College, Fudan University
Thesis: The roles of Lmx1b and Rnx in the development of central nervous system

2006 – 2012 Ph.D. Neuroscience
University of Illinois, Urbana-Champaign
Dissertation: Neurocognitive plasticity of verb bias learning in children and adults

2012 – 2017 Postdoctoral Associate, Cognitive Neuroscience
McGovern Institute for Brain Research, Massachusetts Institute of Technology
Center for Autism Research Excellence, Boston University

EMPLOYMENT HISTORY

2016 – 2017 Affiliated Assistant Professor, Department of Linguistics and Cognitive Science
University of Delaware

2017 – Present Research Affiliate, McGovern Institute for Brain Research
Massachusetts Institute of Technology

2017 – 2021 Assistant Professor
Department of Linguistics & Cognitive Science
University of Delaware

2019 – 2020 Visiting Scientist, Center for Cognitive and Brain Health
Northeastern University

2020 – 2021 Affiliated Faculty, Data Science Institute
University of Delaware

2021 – Present Affiliated Assistant Professor, Department of Linguistics and Cognitive Science
University of Delaware

2021 – Present Assistant Professor
Department of Communication Sciences and Disorders
Department of Psychology
Northeastern University

RESEARCH/SCHOLARHIP/CREATIVE ACTIVITY

(*: co-authored with students/trainees; †: equal contribution):

Peer-Reviewed Journal Articles

1. †Ozernov-Palchik O., †**Qi Z.**, Beach S.D., & Gabrieli J.D.E. (Accepted). Intact Procedural Memory and Impaired Auditory Statistical Learning in Adults with Dyslexia. *Neuropsychologia.* https://doi.org/10.31234/osf.io/e9ctv..
2. *Zinszer, B. D., Hannon, J., Kouadio, É., Akpé, H., Tanoh, F., Hu, A., **Qi, Z.**†, & Jasińska, K.† (2023). Does non-linguistic segmentation still predict literacy in an L2 education? Statistical learning in Ivorian primary schools. *Language Learning*. DOI: 10.1111/lang.12603.

3. *Hu A., Kozloff V., Owen Van Horne A., Chugani D., & **Qi Z.** (2023). Dissociation between linguistic and nonlinguistic statistical learning in children with autism. *Journal of Autism and Developmental Disorders*. DOI: 10.1007/s10803-023-05902-1.
4. *O'Brien A.M., Perrachione T.K., Wisman Weil L., Sanchez Araujo Y., Halverson K., Harris A., Ostrovskaya I., Kjelgaard M., Wexler K., Tager-Flusberg H., Gabrieli J.D.E, & **Qi Z.** (2023). Altered engagement of the speech motor network is associated with reduced phonological working memory in autism. *NeuroImage: Clinical*. 37:103299. DOI: 10.1016/j.nicl.2022.103299.
5. *McIlvain G., Schneider J.M., Matyi M.A., McGarry M.D.J., **Qi Z.,** Spielberg J., & Johnson C.L. (2022). Mapping brain mechanical property maturation from childhood to adulthood. *NeuroImage*. 263(August):119590. DOI: 10.1016/j.neuroimage.2022.119590
6. *Schneider J.M., Weng Y-L., Hu A., & **Qi Z.** (2022). Linking the neural basis of distributional statistical learning with transitional statistical learning: the paradox of attention. *Neuropsychologia.* 172: 108284 DOI: 10.1016/j.neuropsychologia.2022.108284
7. Earle F.S. & **Qi Z.** (2022). Overnight changes to dual-memory processes reflected in speech-perceptual performance. *Attention, Perception, & Psychophysics.* 84: 231-243.
8. Anteraper S.A., Guell X., Collin G., **Qi Z.,** Ren J., Nair A., Seidman L., Keshavan M., Zhang T., Tang Y., Li H., McCarley R.W., Niznikiewicz M., Shenton M.E., Stone W., Wang J., & Whitfield-Gabrieli S. (2021). Abnormal function in dentate nuclei precedes the onset of psychosis: a longitudinal fMRI study in high-risk individuals. *Schizophrenia Bulletin*. 47(5):1421-1430.
9. *Schneider J.M., Hu A., Legault J., & **Qi Z.** (2020). Measuring statistical learning across modalities and domains in school-aged children via an online platform and neuroimaging techniques. *Journal of Visualized Experiments*. e61474: 1-21. DOI: 10.3791/61474
10. **Qi Z.,** Love J., Fisher C.L., & Brown-Schmidt S. (2020). Referential context and executive functioning influence children's resolution of syntactic ambiguity. *Journal of Experimental Psychology: Learning, Memory, & Cognition*. 46(10): 1922-1947.
11. Collin G., Seidman J.L., Keshavan M.S., Stone W.S., **Qi Z.,** Zhang T., Tang Y., Li H., Anteraper S.A., Niznikiewicz M.A., McCarley R.W., Shenton M.E., Wang J., & Whitfield-Gabrieli S. (2020). Functional connectome organization predicts conversion to psychosis in clinical high-risk youth from the SHARP Program. *Molecular Psychiatry*. 25(10): 2431-2440.
12. **Qi Z.,** Han M., Wang Y., de los Angeles C., Liu Q., Garel K., Chen E., Whitfield-Gabrieli S., Gabrieli J.D.E., & Perrachione T.K. (2019). Speech processing and plasticity in the right hemisphere predict real-world foreign language learning in adults. *NeuroImage*. 192: 76-87.
13. **Qi Z.,** Sanchez Araujo Y., Georgan W.C., Gabrieli J.D.E., & Arciuli J. (2019). Hearing matters more than seeing: A cross-modality study of statistical learning and reading ability. *Scientific Studies of Reading.* 23(1): 101-115.
14. Ryskin R.A., **Qi Z.,** Convinton N., Duff M., & Brown-Schmidt S. (2018) Knowledge and learning of verb biases in amnesia. *Brain and Language.*180-182: 62-83
15. †**Qi Z.,** †Beach S.D., Finn A.S., Minas J., Goetz C., Chan B., & Gabrieli J.D.E. (2017). Native-language N400 and P600 predict dissociable language-learning abilities in adults. *Neuropsychologia*. 98: 177-191.
16. Ryskin R. A., **Qi Z.,** Duff M. C., & Brown-Schmidt S. (2017). Verb biases are shaped through lifelong learning. *Journal of Experimental Psychology: Learning, Memory & Cognition*. 43(5): 781-794.
17. †Lu C., †**Qi Z.,** Harris A., Wisman Weil L., Han M., Halverson K., Perrachione T.K., Kjelgaard M., Wexler K., Tager-Flusberg H., & Gabrieli J.D.E. (2016). Shared neuroanatomical substrates for impaired phonological working memory across reading disability and autism. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*. 1(2): 169-177.

18. **Qi Z.,** Han M., Garel K., Chen E.S., & Gabrieli J.D.E. (2015). White-matter structure in the right hemisphere predicts Mandarin Chinese learning success. *Journal of Neurolinguistics*, 33: 14-28.
19. Hu Z.L, Huang Y., Tao X.R., **Qi Z.,** Chen J.Y., & Ding Y.Q. (2012). Inducible Prrxl1-CreERT2 recombination activity in the somatosensory afferent pathway. *Genesis*. 50(7): 552-560.
20. **Qi Z.,** Yuan S., Fisher C.L. (2011). Where does verb bias come from: Experience with particular verbs affects online sentence processing, In N. Danis, K. Mesh, & H. Sung (Eds.), *Proceedings of 35th Boston University Conference on Language Development*. 500-512. Somerville, MA: Cascadilla Press.
21. **Qi Z.,** Gold P.E. (2009) Intrahippocampal infusions of anisomycin produce amnesia: contribution of increased release of norepinephrine, dopamine and acetylcholine. *Learning & Memory*. 16(5): 308-314. (Featured article)
22. **Qi Z.,** Jiang W., Fang C., (2006). Neurogenesis in substantia nigra of adult brain: retrospect and prospect. *Chinese Journal of Clinical Neurosciences*. 14 (1): 97-101

Peer-reviewed Conference Proceedings

1. *Hu A., **Qi Z.,** & Franich K. (To appear) Accommodation to vocal pitch in children with autism. *Proceedings of the 20th International Congress of Phonetic Sciences,* Prague, Czech Republic, 2023

Non-Reviewed Articles

1. ***Qi Z.** & Legault J. (2020). Neural hemispheric organization in successful adult language learning: is left always right? *Psychology of Learning and Motivation*. 72: 119-163.

Currently Under-review

1. *Schneider J.M., Scott T.L., Legault J., & **Qi Z.** (2022, December 5) The heterogeneous engagement of the language network during auditory statistical learning: an fMRI study. https://psyarxiv.com/3jsqt.
2. Tang W., Christiansen M.H., & **Qi Z.** (2022): Human statistical learning dynamically shapes the hippocampal processing of temporal associations. *bioRxiv* 2022.04.04.487009.
3. **Qi Z.,** Anteraper S.A., Collin G., Nieto-Castnon A., Pasternak O., Seidman L., McCarley R.W., Li H., Zhang T., Tang Y., Xu L., Keshavan M.S., Niznikiewicz M., Stone W.S., Wang J., Shenton M.E., & Whitfield-Gabrieli S. (in revision). Resting-state connectivity analysis reveals markers of resilience to psychosis in a study on clinical high-risk youth in Shanghai.
4. *Zinszer B.D., Hannon J., Kouadio E., Akpé H., Tanoh F., Seri A., Hu A., **Qi Z.,**† & Jasinska K.† (2021) Statistical learning in children's emergent L2 literacy in rural Côte d'Ivoire. †: co-senior authors. https://doi.org/10.31730/osf.io/q8k5w
5. Collin G., Golderberg J.E., Chang X., **Qi Z.,** Whitfield-Gabrieli S., Cahn W., Wang J., Keshavan M.S., Stone W.S., & Shenton M.E. (under review). Brain markers of resilience to psychosis in high-risk individuals: a systematic review and meta-analysis of MRI studies.

Abstracts (Conference Talks)

1. *Trice K., DiNardo A., & **Qi Z.** (2023). Word encoding and retrieval in children with autism: a web-based eye-tracking study. *American Speech Hearing Association (ASHA) Convention*, Boston, MA.
2. Prahl A., Meier E., Pratt A., **Qi Z.,** & Smith S. (2023). How to land your first independent grant: perspectives of early career researchers. *American Speech Hearing Association (ASHA) Convention*, Boston, MA.

3. *Hu A., **Qi Z.,** & Franich K. (2023). Accommodation to vocal pitch in children with autism. *International Congress of Phonetic Sciences*, Prague, Czech Republic.
4. *****Hu A. & **Qi Z.** (2023). Selective attention facilitates linguistic statistical learning in autistic children. *Annual Symposium on Research in Child Language Disorders*, Madison, WI.
5. *Hu A., Trice K., Kozloff V., Owen Van Horne A., Chugani D., & **Qi Z.** (2023). Multimodal statistical learning in children with Autism Spectrum Disorder. *Meetings of Language in Autism*, Durham, NC.
6. *****Hu A. & **Qi Z.** (2023) Social learning in school-aged children: the effect of social contexts on word learning and retention. *Society for Research in Child Development 2023 Biennial Meeting*, Salt Lake City, UT. (Part of the Symposium: Observing, conforming, and internalizing: how does social learning occur across different contexts and cultures?)
7. ***Qi Z.,** Hu A., & Weng Y-L. (2023) The changing role of attention in statistical learning over development. *American Educational Research Association Annual Meeting*. Virtual Meeting. (Part of the Roundtable Session: Learning How the Brain Acquires Statistical Regularities: Implications for Education).
8. ***Qi Z.**, Hu A., Trice K., & Weng Y-L. (2023) The neurobiology of auditory statistical learning is more domain-specific early in life. *Cognitive Neuroscience Society*, San Francisco, CA. (Part of the Symposium: Can't stop won't stop: Statistical learning persists through development, brain damage, and competing demands).
9. *****[†]Hu A., Trice K., Weng Y-L., & **Qi Z.** (2022) Greater plasticity in the language network in children than adults during statistical learning. *Boston University Conference on Language Development,* Boston, MA. ([†] Society for Language Development Student Awardee)
10. *Hu A., & **Qi Z.** (2022) Dissociated learning processes in the development of statistical learning. *Interdisciplinary Advances in Statistical Learning*. San Sebastian, Spain
11. *Weng Y., Owen Van Horne A., & **Qi Z.** (2022) Prediction in verb bias learning: an individual differences approach. *Annual Conference on Human Sentence Processing*, Santa Barbara, CA.
12. Tang W. & **Qi Z.** (2021) Autocorrelated activity in the human hippocampus encodes transition patterns during visual statistical learning. *Annual Context and Episodic Memory Symposium*, Philadelphia, PA.
13. *Trice K., Saratsli D., Papafragou A., & **Qi Z.** (2021) Pragmatic inference and social cognition in acquiring (and remembering) word meanings. *Boston University Conference on Language Development*, Boston, MA. (Paula Menyuk Awardee as one of the top 35 abstracts first-authored by a student)
14. **Qi Z.,** Legault J., Weng Y-L., Hu, A., Schneider J., Kozloff V., & Robbins P. (2021) Multimodal investigation of neural correlates of auditory statistical learning in children with ASD. Symposium: "Characterizing and predicting the language profiles in children with autism through rich datasets". *International Association for the Study of Child Language*, Philadelphia, PA. (Symposium Speaker and Organizer)
15. **Qi Z.,** Saratsli D., & Papafragou A. (2021) The Role of social cognition in word learning: meaning retention and pragmatic inferences. *Annual Meeting of Linguistic Society of America*, San Francisco, CA.
16. *****Schneider J., Weng Y., Kozloff V., & **Qi Z.** (2019) Neural sensitivity to speech distributional information: a mechanism underlying auditory statistical learning. *New England Research for Dyslexia Society Meeting*, Boston, MA.
17. **Qi Z.,** Sanchez Araujo Y., Georgan W.C., Gabrieli J.D.E., & Arciuli J., (2017). Hearing matters more than seeing: A cross-modality study of statistical learning and reading ability. *New England Research on Dyslexia Society*, Storrs, CT.
18. **Qi Z.,** Whitfield-Gabrieli S. (2017). How does the restless brain inform us about the risks for psychosis? *Shanghai Forum of Early Phase of Psychosis Identification and Intervention*, Shanghai, China.
19. Ryskin R., **Qi Z.,** Duff M., & Brown-Schmidt S. (2017). Syntactic variability between and within speakers: When to adapt, when to generalize? *CUNY Conference on Human Sentence Processing*, Cambridge, MA.

20. **Qi Z.,** Pantazis D., de los Angeles C., Perrachione T.K., & Gabrieli J.D.E. (2015). Sensitivity to speech distributional information in children with autism: a MEG study. *International Meeting for Autism Research*, Shanghai, China
21. **Qi Z.,** & Fisher C.L. (2013). Learning new linguistic information about familiar verbs in 5-year-olds and adults. *Society for Research in Child Development*, Seattle, WA
22. **Qi Z.** & Garnsey S.M. (2012). Neurocognitive plasticity in verb bias learning: an ERP study. *Cognitive Neuroscience Society*, Chicago, IL.
23. **Qi Z.,** Fisher C.L., & Brown-Schmidt S. (2011). On recovering from 'kindergarten path' errors: referential context and executive functioning influence children's online ambiguity resolution. *Architectures and Mechanisms for Language Processing*, Paris, France.
24. **Qi Z.,** Yuan S., & Fisher C. L. (2010). Where does verb bias come from: Experience with particular verbs affects online sentence processing. *Boston University Conference on Language Development*, Boston, MA.

Abstracts (Conference Posters)

1. *Hu A., **Qi Z.,** Redmond S., & Franich K. (2023). Accommodation to Vocal Pitch in Children with Autism. *Annual Symposium on Research in Child Language Disorders*, Madison, WI.
2. *Schneider J.M., Fan T., Golinkoff R.M., & **Qi Z.** (2023). Input or uptake: statistical learning moderates the relationship between language input and vocabulary size. *Cognitive Neuroscience Society Annual Meeting*, San Francisco, CA.
3. Ovans Z., Ayala A., Asmah R., Hu A., Montoute M., Van Horne A., **Qi Z.,** Morini G., & Huang Y.T. (2023). The feasibility of online (virtual-world) eye-tracking with young children. *Annual Human Sentence Processing Conference*, Pittsburgh, PA.
4. *Hu A. & **Qi Z.** (2023). Word learning and retention from overhearing as a resilience factor for vocabulary acquisition in autistic children. *Meetings of Language in Autism*, Durham, NC.
5. *Trice K., Papafragou A., & **Qi Z.** (2023). No advantage of pragmatic inference for vocabulary retention in children with autism. *Meetings of Language in Autism*, Durham, NC.
6. *Schneider J.M., Scott T.L., Legault J., & **Qi Z.** (2022). The heterogeneous engagement of the language brain regions during auditory statistical learning: an fMRI study. *Society for Neurobiology of Language*, Philadelphia, PA.
7. *Hu A., Trice K., & **Qi Z.** (2022). Greater plasticity in language network in children than adults during statistical learning. *Society for Neurobiology of Language*, Philadelphia, PA.
8. Tak K., Henderson J., Torre G-A. A., Kapadia A.M., **Qi Z.,** Gabrieli J.D.E., Tager-Flusberg H., & Perrachione T.K. (2022). Morphology of the posterior superior temporal plane and language abilities in autism. *Society for Neurobiology of Language*, Philadelphia, PA.
9. *O'Brien A., Perrachione T.K., Tager-Flusberg H., Gabrieli J.D.E., & **Qi Z.** (2022). Reduced phonological working memory in autism is associated with altered speech-motor engagement. *Society for Neurobiology of Language*, Philadelphia, PA.
10. *Hu A., Kozloff V., Owen Van Horne A., Chugani D., & **Qi Z.** (2022) Atypicality in statistical learning is not domain-general for children with autism. *Interdisciplinary Advances in Statistical Learning*. San Sebastian, Spain
11. Tang W., Christiansen M. & **Qi Z.** (2022). Human statistical learning dynamically shapes the hippocampal processing of temporal associations. *Interdisciplinary Advances in Statistical Learning*. San Sebastian, Spain
12. *Schneider J., Scott T., Legault J., & **Qi Z.** (2022). The heterogeneous engagement of language network during statistical learning. *Interdisciplinary Advances in Statistical Learning*. San Sebastian, Spain

13. *McIlvain G., Schneider J., Matyi M.A., DiFabio M.S., Delgorio P.L., McGarry M.D.J., Spielberg JM., **Qi Z.**, Johnson CL. (2021). Regional brain mechanical properties throughout maturation from childhood to adulthood. *International Society of Magnetic Resonance in Medicine Conference.*
14. *McIlvain G., Schneider J., Matyi M.A., McGarry M.D.J., Spielberg J.M., **Qi Z.,** Johnson C.L. (2021). Dimorphic sex differences in brain viscoelastic properties from childhood to adulthood. *OHBM 2021 Annual Meeting.*
15. *O'Brien A., **Qi Z.**, Tager-Flusberg H., & Gabrieli J.D.E. (2021). Atypical neural representation of phonological working memory in children with autism. *20th International Society for Autism Research Annual Meeting.*
16. *Hu A., Kozloff V., & **Qi Z.** (2021) Relationship between linguistic statistical learning and grammar development in children with autism spectrum disorder. *SRCD Virtual Biennial Meeting*.
17. *Trice K., Hernandez M., Saratsli D., Heisler D., & **Qi Z.** (2021) Pragmatic inference facilitates word retention in school-aged children. *CUNY Virtual Conference on Human Sentence Processing*.
18. *Trice K., Hernandez M., Saratsli D., Heisler D., & **Qi Z.** (2021) Pragmatic complexity and the development of social cognition in children's word learning and retention. *SRCD Virtual Biennial Meeting*.
19. Tang W., & **Qi Z.** (2021) Temporal dynamics of visual statistical learning in the human hippocampus. *Computational and Systems Neuroscience Virtual Meeting*.
20. *Weng Y-L, Ryskin R., & **Qi Z.** (2020) Neural representation of syntactic prediction: A simultaneous eye-tracking and EEG study. *Society for Neurobiology of Language*, Philadelphia, USA.
21. *Saratsli D., & Papafragou A., & **Qi Z.** (2020) Social cognition and pragmatic inference in word learning. *Boston University Conference on Language Development*, Boston, USA.
22. *Weng Y-L., Schneider J., & **Qi Z.** (2020) Neural sensitivity to local and global distributional information in speech changes as a function of development. *Boston University Conference on Language Development*, Boston, USA.
23. *Schneider J., Legault J., & **Qi Z.** (2020) Brain activation during auditory statistical learning predicts adults' vocabulary. *2020 OHBM Annual Meeting*, Montreal, Canada.
24. *Weng Y-L., Ryskin R., & **Qi Z.** (2020) Stronger prediction leads to greater processing cost during sentence ambiguity resolution: A simultaneous eye-tracking and EEG study. *CUNY Conference on Human Sentence Processing*, Amherst, USA.
25. *Hu A., Kozloff V., and **Qi Z.** (2019) Relationship between statistical learning and grammaticality judgment in children with autism spectrum disorders. *Boston University Conference on Language Development*, Boston, USA.
26. *Schneider J., Arnon I., Nguyen A., Mendez K., and **Qi Z.,** (2019) Does prior language experience hinder statistical learning? *Boston University Conference on Language Development*, Boston, USA.
27. *****Schneider J., Weng Y., Kozloff V., and **Qi Z.** (2019) Neural sensitivity to speech distributional information underlies statistical learning. *Neurobiology of Language Conference*, Helsinki, Finland.
28. **Qi Z.,** Nguyen A., Ozernov-Palchik O., Beach S., May S., Arciuli J., & Gabrieli J.D.E. (2018). Statistical learning in reading development and reading impairment. *Boston University Conference on Language Development*, Boston, USA.
29. *Nguyen A., Sanchez Araujo Y., Georgan W., Arciuli J., & **Qi Z.** (2018). Re-examine the reliability of statistical learning tasks across domains and modalities. *Psychonomic Society Annual Meeting*, New Orleans, USA.
30. *****Kozloff V., Nguyen A., Arciuli J., & **Qi Z.** (2018). Statistical learning in a noisy environment is associated with vocabulary. *Boston University Conference on Language Development*, Boston, USA.
31. **Qi Z.,** Tang Y., Zhang T., Cui H., Woodberry K.A., McCarley R.W., Shenton M.E., Li H., Stone W., Keshavan M., Wang J., Seidman L.J., & Whitfield-Gabrieli S. (2018). Atypical development of dorsal-posterior insula

network in clinical high-risk patients of schizophrenia in Shanghai. *Organization for Human Brain Mapping*, Singapore.

32. **Qi Z.,** Campbell U., & Whitfield-Gabrieli S. (2018). Modulation of resting-state connectivity and working memory in adults with high schizotypal characteristics. *Organization for Human Brain Mapping*, Singapore.
33. Perrachione T.K., Babcock S., Han M., Salvatore J., Minas J., Finn A.S., Gabrieli J.D.E., & **Qi, Z.** (2018). Neural responses during procedural memory tasks are related to foreign language learning outcomes. *Annual Meeting of the Cognitive Neuroscience Society*, Boston, USA.
34. **Qi Z.,** Han M., Wang Y., de los Angeles C., Liu Q., Garel K., Chen E., Whitfield-Gabrieli S., Gabrieli J.D.E., & Perrachione T.K., (2017). Speech processing and plasticity in the right Hemisphere predict real-world foreign language learning in adults. *Society for Neurobiology of Language*, Baltimore, USA.
35. Ryskin R., **Qi Z.,** Covinton N., Duff M., & Brown-Schmidt S. (2017). Knowledge and Learning of Verb Biases in Amnesia. *CUNY Conference on Human Sentence Processing*, Cambridge, USA.
36. **Qi Z.,** Han M., Minas J., Finn A. S., Gabrieli J.D.E. (2017). Cortical plasticity of sentence processing after classroom-based language training experience. *Cognitive Neuroscience Society Annual Meeting*, San Francisco, USA.
37. *Sanchez Araujo Y., Georgan W. C., **Qi Z.**, Arciuli J., & Gabrieli J.D.E. (2016). Developing sensitive measures of statistical learning for school-age children. *Psychonomic Annual Meeting*, Boston, USA.
38. **Qi Z.**, Whitfield-Gabrieli S., Tang Y., Zhang T., Cui H., McCarley R., Shenton M., Li H., Wang J., Seidman L. (2016). Association between language functional network and attenuated psychotic symptoms in clinical high-risk psychosis patients in Shanghai. *Society for Neurobiology of Language*, London, UK.
39. **Qi Z.**, Sanchez Y., de los Angeles C., Harris A., Wisman Weil L., Halverson K., Goetz C., Han M., Perrachione T.K., Kjelgaard M., Wexler K., Tager-Flusberg H., Gabrieli J.D.E. (2016). Neural development of phonological working memory: interplay between language and memory systems. *Society for Neurobiology of Language*, London, UK.
40. *Han M., **Qi Z.,** Thompson T., Garel K., Chen ES., Yendiki A., Gabrieli J.D.E. (2016). White-matter plasticity of adult language learning. *Cognitive Neuroscience Society*, New York, USA
41. Ryskin R., **Qi Z.**, Duff M., & Brown-Schmidt S. (2016). Constraints on adaptation to syntactic variability between and within speakers. *CUNY Sentence Processing Conference*, Gainesville, USA.
42. **Qi Z.,** Lu C., Harris A., Weil L. W., Han M., Halverson K., Perrachione T.K., Kjelgaard M., Wexler K., Tager-Flusberg T, & Gabrieli J.D.E. (2015). Transdiagnostic neural basis for impaired phonological working memory across reading disability and autism. *Society for Neurobiology of Language*, Chicago, USA.
43. **Qi Z.,** Pantazis D., de los Angeles C., Perrachione T.K., & Gabrieli J.D.E. (2015). Sensitivity to speech distributional information in children with autism: a MEG study. *Society for Neurobiology of Language*, Chicago, USA.
44. **Qi Z.,** Pantazis D., de los Angeles C., Perrachione T.K., & Gabrieli J.D.E. (2015). Sensitivity to speech distributional information in children with autism. *Boston University Conference on Language Development*, Boston, USA.
45. **Qi Z.,** Lu C., Harris A., Weil L. W., Han M., Halverson K., Perrachione T.K., Kjelgaard M., Wexler K., Tager-Flusberg T, & Gabrieli J.D.E. (2015). Transdiagnostic neural basis for impaired phonological working memory across reading disability and autism spectrum disorder, *Society for Neuroscience*, Chicago, USA.
46. Ryskin R., **Qi Z.,** & Brown-Schmidt S. (2015). Rapid learning of a verb bias. *Psychonomic Society Annual Meeting*, Chicago, USA.
47. *Han M., **Qi Z.,** Lu C., Halverson K., Weil L. W., Kjelgaard M., Tager-Flusberg T., Wexler K., & Gabrieli J.D.E. (2015). Structural bases of language-impairment in children with autism. *Cognitive Neuroscience Society*, San Francisco, USA.

48. **Qi Z.,** Wang Y., Liu Q., de los Angeles C., Whitfield-Gabrieli S., & Gabrieli J.D.E. (2014). Foreign language learning experience enhances inter-hemispheric functional connectivity. *Biennial Conference on Resting State / Brain Connectivity*. Boston, USA.
49. **Qi Z.,** Finn A., Ghosh S., Minas J., Chan B., & Gabrieli J.D.E. (2014). Temporal dynamics of EEG topographic similarity during successful language learning. *Society for Neurobiology of Language*, Amsterdam, Netherlands.
50. **Qi Z.,** Perrachione T.K., Han M., Garel K., Chen E., Finn A., & Gabrieli J.D.E. (2014). Functional brain imaging predicts foreign language learning success in the classroom. *Cognitive Neuroscience Society*, Boston, USA.
51. *Han M., **Qi Z.,** Murtagh J., Garel K., Chen E., & Gabrieli J.D.E. (2014). White matter integrity predicts adult second language learning outcomes. *Cognitive Neuroscience Society*, Boston, USA.
52. Brown-Schmidt S., **Qi Z.,** & Duff M. (2014). Contributions of hippocampal-dependent declarative memory to on-line processing of global syntactic ambiguity. *CUNY Sentence Processing Conference*, Columbus, USA.
53. **Qi Z.,** Perrachione T.K., Harris A., Ostrovskaya I., Beach S., Halverson K., Cyr A., Sher K., Kjelgaard M., Gabrieli J.D.E., Wexler K., & Tager-Flusberg T. (2013). Neural signatures of phonological working memory and grammatical processing in autism spectrum disorders. *Society for Neuroscience*, San Diego, USA.
54. **Qi Z.,** Perrachione T. K., Harris A., Ostrovskaya I., Beach S., Halverson K., Cyr A., Sher K., Kjelgaard M., Gabrieli J.D.E., Wexler K., & Tager-Flusberg T. (2013). Neural signatures of phonological working memory and grammatical processing in autism spectrum disorders. *Society for Neurobiology of Language*, San Diego, USA.
55. **Qi Z.,** & Garnsey S.M. (2012). Individual difference in verb bias learning: an ERP study. the *CUNY Sentence Processing Conference*, New York, USA.
56. **Qi Z.,** & Garnsey S.M. (2011). Learning structural biases of novel verbs: an ERP study. *Society for Neurobiology of Language*, Annapolis, USA.
57. **Qi Z.,** Jackson S.R., & Garnsey S.M. (2010). The left hemisphere knows more about verbs (in most people), *Society for Neuroscience*, San Diego, USA.

Other

1. **Qi, Z.,** Sanchez Araujo, Y., Nguyen A., Hu A., Georgan W., Kozloff V., & Robbins P. (2020, May 17). An online platform for visual and auditory statistical learning for school-aged children (Version 1.0.0). Zenodo. http://doi.org/10.5281/zenodo.3820620

2. **Qi Z.,** & Whitfield-Gabrieli S. Neuropharmacological modulation of resting-state connectivity in adults with high schizotypal characteristics. Sunovion Inc. Marlborough, MA, Working Paper, Nov. 2018.

Media Coverage

1. "How Bouvé College leaders are building relationships and making a global impact", April 7, 2023.
https://bouve.northeastern.edu/2023/04/07/how-bouve-college-leaders-are-building-relationships-and-making-an-impact-globally/
2. "Your brain wires itself to match your native language", March 29, 2023.
https://www.sciencenews.org/article/brain-wires-native-language-neurons
3. "Community Newsletter: Confounding head motion; monkey moves; motor speech in autism", January 8, 2023.
https://www.spectrumnews.org/news/community-newsletter-confounding-head-motion-monkey-moves-motor-speech-in-autism/

4. "Are differences in learning patterns related to language development? Northeastern researchers are cracking the code", June 30, 2022.
https://bouve.northeastern.edu/2022/06/30/are-differences-in-learning-patterns-related-to-language-development-northeastern-researchers-are-cracking-the-code/
5. "Learning Language" UDaily, May 6, 2019.
https://www.udel.edu/udaily/2019/may/foreign-language-learning-research-zhenghan-qi/
6. "Some People's Brains Are Wired for Language" Scientific American, Jan. 1, 2017.
https://www.scientificamerican.com/article/some-people-rsquo-s-brains-are-wired-for-languages/
7. "Language areas of brain activate differently in autism" Spectrum, Nov. 13, 2013.
https://www.spectrumnews.org/news/language-areas-of-the-brain-activate-differently-in-autism/

Presentations (Invited Talks)

1. Massachusetts Institute of Technology, Gabrieli Laboratory, 06/2023
2. Boston University, Hearing Research Center Seminar Series, 02/2023
3. City University of New York Graduate Center, Speech-Language-Hearing Sciences Colloquium, 11/2022
4. Cornell University, Department of Psychology Colloquium, 11/2022
5. Bucknell University, Neuroscience Program Seminar Series, 10/2022
6. University of Pittsburgh, Cognitive Talk Series, 03/2022
7. University of Pennsylvania, MindCORE Seminar Series, 02/2022
8. Harvard University, Language and Cognition Seminar Series, 11/2021
9. Boston University, Center for Autism Research Excellence, 10/2021
10. Northeastern University, Center for Cognitive and Brain Health, 04/2021
11. The Haskins Laboratories, Staff Talk Series, 12/2020
12. Vanderbilt University, Cognitive Science of Learning and Development Speaker Series, 12/2020
13. Northeastern University, Precision medicine/Early detection/Novel intervention Laboratory, 01/2020
14. Massachusetts Institute of Technology, Gabrieli Laboratory, 12/2019
15. New York University, Communication Sciences and Disorders Colloquium, 10/2019
16. Northeastern University, Music Imaging and Neural Dynamics Laboratory, 06/2019
17. Villanova University, Cognitive Science Brown Bag, 09/2018
18. Children's Hospital of Philadelphia, Center for Autism Research Science Meeting, 05/2018
19. University of Delaware, Bilingualism Guest Lecture, 04/2018
20. University of Pennsylvania, Common Ground Colloquium, 04/2018
21. University of Delaware, Social Cognition Guest Lecture, 03/2018
22. East China University of Science and Technology, Biological Sciences Colloquium, 12/2017
23. University of Delaware, SCAN Seminar Series, 11/2017
24. University of Delaware, Interdisciplinary Science and Engineering Lab Talk, 10/2017
25. Nemours/Alfred I. duPont Hospital for Children, 09/2017
26. Boston University, Communication Neuroscience Research Laboratory, 03/2017
27. Boston University, Developmental Science Colloquium Series, 10/2016
28. Pennsylvania State University, Center for Brain, Behavioral, & Cognition Colloquium, 10/2016
29. Tufts University, NeuroCognition Laboratory, 06/2016
30. Moss Rehabilitation Research Institute, 01/2016
31. Brigham and Women's Hospital, Center for Brain/Mind Medicine Seminar Series, 12/2015
32. Massachusetts Institute of Technology, Cognitive Science Seminar Series, 11/2015
33. University of Illinois, Urbana-Champaign, Beckman Institute, 10/2015

34. Boston University, Center for Autism Research Excellence, 09/2015
35. University of Washington, Institute for Learning and Brain Sciences, 08/2015
36. Harvard University, Language and Cognition Seminar Series, 03/2015
37. Shanghai Mental Health Center, 11/2014
38. Tufts University, NeuroCognition Lab, 03/2014
39. Harvard University, Language and Cognition Seminar Series, 07/2013
40. University of Illinois, Urbana-Champaign, Beckman Institute, 05/2012
41. University of Illinois, Urbana-Champaign, Developmental Psychology Seminar Series, 10/2011

GRANTS

External

Funded

- NIH R56DC020208 ($675,750) Role: PI
  - NIH NIDCD: 09/01/2023 – 08/31/2024
  - Percent effort: 22.5%
  - Title: Predicting language and literacy growth in children with ASD using statistical learning
- NIH R01DC019901 ($2,069,739) Role: Co-I (Consortium site PI)
  - NIH NIDCD (PI: Earle): 08/10/2022 – 07/31/2027
  - Percent effort: 21.7%
  - Title*:* Improving the Retention of Speech-Perceptual Learning in Adults with and without Language Disorder
- Research supplements to promote diversity in health-related research ($85,793) Role: PI
  - NIH NIDCD: 09/01/2021 – 08/31/2023
  - Research supplements to promote diversity in the research workforce of language development and autism
- NIDCD Early Career Research (ECR) Award R21 ($461,634) Role: PI
  - NIH NIDCD: 09/01/2019 – 08/31/2023
  - Percent effort: 25%
  - Title: The role of statistical learning in the atypical language development in ASD
- NARSAD Young Investigator Grant ($70,000) Role: PI
  - Brain & Behavior Research Foundation: 01/15/2017 – 01/15/2020
  - Title: Neural bases of atypical language learning in children with ASD: a combined fMRI/MEG study
- NIH F31 Predoctoral Fellowship ($115,604) Role: Co-Sponsor
  - NIH NICHD (PI: McIlvain): 07/01/2020 – 06/30/2022
  - Title: Accelerated magnetic resonance elastography for brain stiffness analysis in children with classic autistic disorder
- NSF SBE Postdoctoral Research Fellowship (SPRF) ($138,000) Role: Co-PI
  - NSF (PI: Schneider): 08/15/2019 – 08/14/2021
  - Title: What matters the most? Investigating the contribution of maternal language input and statistical learning to low SES children's brain and vocabulary development
- Gorilla Research Grant 2019 (200 tokens) Role: Faculty Sponsor
  - Gorilla™ Experiment Builder: 02/01/2020 – 01/31/2021
  - Project 1: Word learning through direct and indirect storytelling in children (Student Awardee: Anqi Hu)
  - Project 2: Social cognition and pragmatic word learning (Student Awardee: Dionysia Saratsli)

Pending

- Research Supplements for tackling acquisition of language in kids initiative ($286,193) Role: Co-I

  - NIH: NIDCD (PI: Zimmerman): 07/01/2023 – 06/30/2024
  - Percent effort: 12.5%
  - Title: Examining the Oromotor and Vocalization Underpinnings of Late Talking
- SFARI Human Cognitive and Behavioral Science ($499,678) Role: Co-PI
  - Simons Foundation (PI: Satpute): 12/01/2023- 11/30/2025
  - Percent effort: 16.7%
  - Title: A computational approach to agent-dependent action perception in Autistic individuals
- NIH R01DC021470 ($4,053,488) Role: PI
  - NIH NIDCD: 09/01/2023 – 08/31/2028
  - Percent effort: 25%
  - Title: Predicting language and literacy growth in children with ASD using statistical learning

Internal

Funded

- 2024 TIER 1 Award ($43,177) Role: Co-PI
  - Northeastern University (Co-PI: Julia Hofweber): 07/01/2023 – 09/30/2024
  - Title: How modality-specific are the learning processes involved in second language acquisition: the case of sign language
- Northeastern MathWorks Microgrant Award ($25,000) Role: PI
  - MathWorks: 09/01/2023 – 08/31/2024
    (one of the 5 awardees among 35 proposals)
  - Title: HyperCONNecT: A MATLAB toolbox for modeling inter-personal interaction via time-series neural data
- AJC Merit Research Scholar Award ($26,250) Role: Faculty Sponsor
  - Northeastern University (Student Awardee: Lauren Voso): 01/09/2023 – 06/30/2023
    (one of the 15 awardees among 457 applications)
  - Title: The optimal sleep/training schedule for non-native speech sound learning.
- PEAK Experience Ascend Award ($3,000) Role: Faculty Sponsor
  - Northeastern University (Student Awardee: Emily Cohen): 09/01/2022 – 04/30/2023
  - Title: Effects of social cognition on vocabulary development in children with autism spectrum disorder.
- NU London - University of Kent PhD Project Proposal Role: Secondary Supervisor
  - Northeastern University (Primary Supervisor: Julia Hofweber): 01/01/2024 – 12/31/2026
  - Title: Multilingualism and literacy skills in autism spectrum conditions and in the deaf-and-hard-of-hearing – a global investigation
- University of Delaware COBRE Neuroscience Pilot Grant ($8,000) Role: Co-PI
  - University of Delaware (PI: Schneider): 09/01/2019 – 08/31/2021
  - Title: Microstructural brain integrity in a low income, at-risk group of school-aged children
- University of Delaware Research Foundation Strategic Initiatives Grant ($45,000) Role: PI
  - University of Delaware Research Foundation: 12/01/2017 – 05/31/2019
  - Title: Investigating statistical learning in children with ASD across linguistic and non-linguistic domains.

TEACHING AND ADVISING

Courses (*: developed new curriculum)

Northeastern University:

- *SLPA 1102, Language Development, Spring 2022 (12 students), Spring 2023 (13 students)

University of Delaware:

- *LING 444/644, First Language Development, Fall 2017 (39 students), Fall 2018 (20 students)
- *CGSC890/LING890, Current Topics in Brain and Language, Spring 2018 (18 students)
- *CGSC890/LING890, Current Topics in Cognitive Neuroscience of Language Development, Spring 2021 (8 students), Spring 2022 (7 students)
- *CGSC697, Psycholinguistics, Fall 2020 (11 students)

University of Illinois, Urbana-Champaign

- PSYC311, Techniques for Biological Psychology, Fall 2008
- PSYC100, Introduction to Psychology, Spring 2009, Fall 2009

Invited Lectures

- Development of Language Learning Mechanisms (3 hours), Fall 2022, McGill University, for *Learning and memory across the lifespan* (Instructor: Dr. Xiaoqian Chai).
- Neural Decoding for Psycholinguistic Research (5 hours), Winter 2022, for Linguistics Data Science Stream, National Taiwan University Graduate Institute of Linguistics.
- Brain Imaging and Language Lecture and Lab (3 hours) for the Annual University of Delaware Summer Undergraduate Workshop in Cognitive and Brain Sciences, Summer 2018 and 2019.

Advising Activities

Northeastern University

- Postdoctoral Associate: Pradyumna Lanka
- Graduate Research Advisees: Katherine Trice (PhD in Psychology); Anna Ciriello (PhD in Psychology); Emma Van Beveren (Master in Communication Sciences and Disorders); Angelina DiNardo (Master in Communication Sciences and Disorders)
- Master Thesis Committees: Emma Van Beveren (CSD); Angelina DiNardo (CSD)
- Undergraduate Honor Thesis Committee: Emma Tusuzian (Psychology)
- Post-bachelorette Research Advisees: Monique Montoute, Brynn Siles
- Undergraduate Research Advisees: Ellie Bilsel, Lauren Voso (AJC Merit Research Scholar), Emily Cohen (PEAK Experience Ascend Awardee Fall 2022, Spring 2023), Jasmin Patel, Kate Mehta, Nikoletta Kennedy, Veronica Foster (Co-op student), Jonathan Chen, Kelly Chan (Visiting Student from Cornell University), Sarah Gracia (Co-op student), Tess Latham (Co-op student).

University of Delaware

- Postdoctoral Mentees: Julie Schneider (NSF SPRF Awardee, current tenure-track faculty member at Louisiana State University), Jennifer Wittmeyer-Legault (current tenure-track faculty member at Elizabethtown College)
- Graduate Advisees: Anqi Hu (Unidel Distinguished Graduate Scholar Awardee), Yi-Lun Weng (University Doctoral Fellowship Awardee), Katherine Trice (University Graduate Scholar Awardee), & Brady Robinson (Unidel Distinguished Graduate Scholar Awardee)
- Graduate Research Mentees: Dionysia Saratsli, Stefan Bartell, Hassan Baker (ECE), & Grace McIlvain (Biomedical Engineering)
- PhD Prospectus and Dissertation Committees: Ryan Rhodes, Enes Avcu, Megan Warren, Chao Han, Grace Mcilvain, Dionysia Saratsli, and Myung-Hye Yoo
- Post-bachelorette Research Advisees: An Nguyen (current graduate student at Johns Hopkins University), Violet Kozloff (current graduate student at Northwestern University), & Parker Robbins (current graduate student at the University of Chicago)
- Undergraduate Research Advisees: Abigail Dejohn, Diana Rios (UD Summer Research Scholar 2019), Krystal Mendez (INBRE Summer Research Scholar 2018 and 2019), Nicolo Bautista, Hannah Stetson (INBRE

Summer Research Scholar 2019 and Summer Research Performance Award Winner), Andrew Luu (Unidel Summer Research Scholar 2019), Marina Hernandez (INBRE Summer Research Scholar 2020), Katherine Ridoux (UD Summer Research Scholar 2012), & Grace Buckalew (INBRE Summer Research Scholar 2021)

Massachusetts Institute of Technology

- Post-bachelorette Research Advisees: Michelle Han (current pediatric resident at Children's Hospital of Philadelphia), Yoel Sanchez Araujo (current graduate student at Princeton University), & Calvin Goetz
- Undergraduate Research Advisees: Katalina Sher, Sylvia Atsaves, Valkyrie Felso, & Wendy Georgan

SERVICE AND PROFESSIONAL DEVELOPMENT

Service to the Institution

Northeastern University

- Department of Communication Sciences and Disorders:
    - Chair for Diversity, Equity, & Inclusion: Fall 2022 – Present
    - Committee member for Diversity, Equity, & Inclusion: Fall 2021 – Spring 2022
- School of Clinical and Rehabilitation Sciences
    - Committee member for Student Award: Fall 2022 - Present
    - Committee member for Research Task Force: Fall 2021
- Bouvé College of Health Sciences:
    - Committee member for Space Task Force: Fall 2021 – Spring 2022
- University:
    - Faculty mentor for the Inaugural AJC Merit Scholar Program: gave one one-hour presentation to the cohort on mentorship in May 2023
    - Graduate Awards Committee: Spring 2022

University of Delaware

- Committee member for Department Graduate Studies: 2017 - 2021
- Committee member for Department Undergraduate Studies: 2018 – 2019
- Committee member for Department Committee of Diversity, Equity, & Inclusion: 2020
- Committee chair for Department Research Ramp-up: Summer 2020
- Organizer for Syntax, Neurolinguistics, and Phonology (SNaP) Talk Series: June 2020 – May 2021
- Reviewer for Annual Graduate Cognitive Science Conference: 2017 - 2021
- Executive committee member for Center for Biological and Brain Imaging: 2017 – 2021

Service to the Discipline/Profession

- Editorial Service:
    - Special Content Editor: *Brain and Language* (2023-2024)
    - Board Member: *Journal of Experimental Psychology: General* (2023 – 2024); *Journal of Speech, Hearing, and Language Research* (2023- 2024)
- Reviewer for 2023 Tufts CTSI Small Grants to Advance Translational Science (G-GATS) Program
- Pop-Up Mentoring Program at the BU Conference on Language Development 2021
- PROGENY faculty-researcher partner at ASHA Convention 2021
- Member of the SPARK Society, a society aiming to empowering scientists of color in cognitive science (2020-present).
- Faculty member of Reviewer Zero Network, an initiative aiming to provide constructive feedback for underrepresented minoritized early career researchers prior to submission of their work (2021-present).

- Member of the Simons Foundation Autism Research Initiative (SFARI) review panel (Human Cognitive and Behavioral Science) 07/2021
- NIH Early Career Reviewer: Child Psychopathology and Developmental Disabilities (CPDD) 06/2021
- Scientific grant ad hoc reviewer: Swiss National Science Foundation; National Science Foundation (NSF); Simons Foundation Autism Research Initiative (SFARI)
- Participant access committee: Simons Foundation Powering Autism Research for Knowledge (2020-2021).
- Conference program committee: Society for Psychophysiological Research (2016); Experiments in Linguistic Meaning (2020)
- Journal ad hoc reviewer: *American Journal of Neuroradiology; Brain and Cognition; Brain and Language; Brain Connectivity; Bilingualism: Language and Cognition; Cerebral Cortex; Cognition; Cognitive Psychology; Cortex; Developmental Psychology; Developmental Science; Experimental Psychology: Learning, Memory, and Cognition; Frontier in Human Neuroscience; Human Brain Mapping; Journal of Experimental Psychology: Learning, Memory, & Cognition; Journal of Learning Disabilities; Journal of Neurodevelopmental Disorders; Journal of Neurolinguistics; Language Learning; Journal of Memory and Language; Journal of Neuroscience; Language Learning & Development; Neurobiology of Learning & Memory; Neuroimage: Clinical; Psychological Science;*
- Member: *Society for Neuroscience; Society for Neurobiology of Language; Cognitive Neuroscience Society; International Society for Autism Research; Society for Psychophysiological Research; Psychonomic Society; Linguistic Society of America*
- Research Consultant:
  - *Cortical development and neuroanatomical anomalies in developmental dyslexia* (R03HD096098; PI: Perrachione; Boston University)
  - *A psychobiological follow-up study of transition from prodrome to early psychosis* (R01MH111448; PI: Whitfield-Gabrieli; Northeastern University)
  - *Resting-state connectivity analysis for clinical trial of SEP856* (Sunovion-Northeastern collaboration grant; PI: Whitfield-Gabrieli; Northeastern University)

Professional Development

- Inaugural Bouvé GROW Fellow, Northeastern University 2023
- Women in Cognitive Science (WiCS) Networking Award 2020
- Selected Attendee for NIH Proposal Academy, University of Delaware 2020
- Selected Attendee for ASHA Lessons for Success Program 2017
- MIT IMPACT Fellow 2016
- MIT Postdoctoral Association Travel Award 2016
- Graduate Student Award, Cognitive Neuroscience Society 2012

Service to the Community / Public

- Hosted Brain and Cognitive Science Field Trip for fifth graders, Newark, DE, May, 2019 (Featured on UDaily: https://www.udel.edu/udaily/2019/may/outreach-k12-event-brain-cognitive-science/)
- Led MIT "Brain Scan" tour of Learning & the Brain Conference, Boston, MA, Nov, 2015
- Invited Talk at the Education Cooperative Summer Science Institute, Dedham, MA, July, 2014