

# ZHENGHAN QI

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## EDUCATION

<b>Massachusetts Institute of Technology</b> Postdoctoral Associate in Cognitive Neuroscience	Cambridge, MA, USA	2012 – 2017
<b>University of Illinois, Urbana-Champaign</b> Ph.D. in Neuroscience	Champaign, IL, USA	2006 – 2012
<b>Shanghai Medical College, Fudan University</b> M.D. in Basic Medicine	Shanghai, China	2001 – 2006

## ACADEMIC POSITIONS

<b>Northeastern University</b>	Assistant Professor, Department of Communication Sciences and Disorders, Department of Psychology	08/2021 – Present
<b>Northeastern University</b>	Affiliated Professor, Department of Communication Sciences and Disorders	05/2021 – 08/2021
<b>University of Delaware</b>	Affiliated Faculty, Data Science Institute, Center for Bioinformatics & Computational Biology	11/2020 – 08/2021
<b>University of Delaware</b>	Assistant Professor, Department of Linguistics & Cognitive Science, Department of Brain & Psychological Sciences, Department of Communication Sciences and Disorders	08/2017 – 08/2021
<b>Massachusetts Institute of Technology</b>	Research Affiliate	07/2017 – Present
<b>Northeastern University</b>	Visiting Scientist	06/2019 – 01/2020
<b>University of Delaware</b>	Affiliated Assistant Professor, Department of Linguistics & Cognitive Science	09/2016 – 08/2017

## RESEARCH GRANTS

### *As Principal or Co-Principal Investigator*

- NIDCD Early Career Research (ECR) Award R21 (\$300,000) Role: PI
  - NIH NIDCD: 09/01/2019 – 08/31/2022
  - 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
- University of Delaware COBRE Neuroscience Pilot Grant (\$8,000) Role: Co-PI
  - University of Delaware (PI: Julie 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.

***As Faculty Sponsor for Trainees***

- NIH F31 Predoctoral Fellowship (\$106,910) Role: Co-Sponsor
  - NIH NICHD (PI: Grace 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 /Sponsor
  - NSF (PI: Julie 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: 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 Support***

- NIH R01 (\$2,482,990) Role: PI
  - NIH NIDCD: 04/01/2022 – 03/31/2027
  - Title: Predicting language and literacy growth in children with ASD using statistical learning
- NIH R01 (\$1,250,000) Role: Co-I
  - NIH NIDCD (PI: Sayako Earle Frances): 09/01/2021 – 08/31/2026
  - Title: Improving the retention of speech-perceptual learning in adults with and without language disorders

***Submission Not Funded***

- 1907 Trailblazer Award (\$120,000) Role: PI
  - 1907 Research: 1/15/2021 – 1/14/2023
  - Title: Did they pay attention: investigating the resilience factors for successful word learning in children with autism
- SFARI Summer 2020 Pilot Award (\$246,490) Role: PI
  - Simons Foundation: 11/01/2020 – 10/31/2022
  - Title: Statistical learning of speech and music in children with ASD: Combining evidence from brain connectivity and dynamics
- Unidel 2020 Grant (\$493,445) (PI: Giovanna Morini): Role: Co-PI
  - Title: Reaching the Underserved: Expanding Science during Uncertain Times

**SELECTED AWARDS**

- 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
- Graduate College Travel Award, University of Illinois 2010
- BUCLD 35 Paula Menyuk Award 2010
- Cognitive Science / Artificial Intelligence Award, University of Illinois 2010

- Neuroscience Graduate Fellowship, University of Illinois 2009
- China National Scholarship for Basic Sciences 2002 – 2005

## PUBLICATIONS

1. 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. (in press). Abnormal function in dentate nuclei precedes the onset of psychosis: a longitudinal fMRI study in high-risk individuals. *Schizophrenia Bulletin*.
2. 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
3. **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.
4. **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.
5. 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.
6. **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.
7. **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.
8. 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
9. **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.
10. 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.
11. 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. (\*: Equal Contribution)
12. **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.
13. Hu Z.L., Huang Y., Tao X.R., **Qi Z.**, Chen J.Y., & Ding Y.Q. (2012). Inducible Prx11-CreERT2 recombination activity in the somatosensory afferent pathway. *Genesis*. 50(7): 552-560.
14. **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.

15. **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)
16. **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

## MANUSCRIPTS SUBMITTED

1. Schneider J.M., Weng Y-L., Hu A., & **Qi Z.** (under review). Linking the neural basis of hierarchical prediction with statistical learning: the paradox of attention. <https://doi.org/10.31234/osf.io/8rtsc>.
2. **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.
3. Hu A., Kozloff V., Owen Van Horne A., Chugani D., & **Qi Z.** (under review). Specific weaknesses in linguistic statistical learning in children with autism spectrum disorder.
4. Schneider J.M., Arnon I., Nguyen A., Mendez K., & **Qi Z.** (under review). The relationship between statistical learning and prior language experience.
5. Earle F.S. & **Qi Z.** (in revision). Overnight changes to the representational quality of nonnative speech.
6. Zinszer B.D., Hannon J., Kouadio E., Akpé H., Tanoh F., Seri A., Hu A., **Qi Z.**, & Jasinska K. (in revision). Statistical learning in children's emergent L2 literacy: Cross-cultural insights from rural Côte d'Ivoire. doi: 10.31730/osf.io/q8k5w
7. Zinszer B.D., Hannon J., Kouadio E., Akpé H., Tanoh F., Seri A., Hu A., **Qi Z.**, & Jasinska K. (in revision). Statistical learning and second language literacy in Côte d'Ivoire.
8. 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.

## EXPERIMENT WEBSITE PLATFORM

**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>

## TECHNICAL REPORT

**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. "Learning Language" UDaily, May 6, 2019. <https://www.udel.edu/udaily/2019/may/foreign-language-learning-research-zhengan-qi/>
2. "Some People's Brains Are Wired for Language" Scientific American, Jan. 1, 2017. <https://www.scientificamerican.com/article/some-people-s-brains-are-wired-for-languages/>

3. “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/>

## INVITED TALKS

- Northeastern University, Center for Cognitive and Brain Health, 04/2021
- The Haskins Laboratories, Staff Talk Series, 12/2020
- Vanderbilt University, Cognitive Science of Learning and Development Speaker Series, 12/2020
- Northeastern University, Precision medicine/Early detection/Novel intervention Laboratory, 01/2020
- Massachusetts Institute of Technology, Gabrieli Laboratory, 12/2019
- New York University, Communication Sciences and Disorders Colloquium, 10/2019
- Northeastern University, Music Imaging and Neural Dynamics Laboratory, 06/2019
- Villanova University, Cognitive Science Brown Bag, 09/2018
- Children’s Hospital of Philadelphia, Center for Autism Research Science Meeting, 05/2018
- University of Delaware, Bilingualism Guest Lecture, 04/2018
- University of Pennsylvania, Common Ground Colloquium, 04/2018
- University of Delaware, Social Cognition Guest Lecture, 03/2018
- East China University of Science and Technology, Biological Sciences Colloquium, 12/2017
- University of Delaware, SCAN Seminar Series, 11/2017
- University of Delaware, Interdisciplinary Science and Engineering Lab Talk, 10/2017
- Nemours/Alfred I. duPont Hospital for Children, 09/2017
- Boston University, Communication Neuroscience Research Laboratory, 03/2017
- Boston University, Developmental Science Colloquium Series, 10/2016
- Pennsylvania State University, Center for Brain, Behavioral, & Cognition Colloquium, 10/2016
- Tufts University, NeuroCognition Laboratory, 06/2016
- Moss Rehabilitation Research Institute, 01/2016
- Brigham and Women’s Hospital, Center for Brain/Mind Medicine Seminar Series, 12/2015
- Massachusetts Institute of Technology, Cognitive Science Seminar Series, 11/2015
- University of Illinois, Urbana-Champaign, Beckman Institute, 10/2015
- Boston University, Center for Autism Research Excellence, 09/2015
- University of Washington, Institute for Learning and Brain Sciences, 08/2015
- Harvard University, Language and Cognition Seminar Series, 03/2015
- Shanghai Mental Health Center, 11/2014
- Tufts University, NeuroCognition Lab, 03/2014
- Harvard University, Language and Cognition Seminar Series, 07/2013
- University of Illinois, Urbana-Champaign, Beckman Institute, 05/2012
- University of Illinois, Urbana-Champaign, Developmental Psychology Seminar Series, 10/2011

## CONFERENCE TALKS (\* Student/Mentee Presentation)

- **Qi Z.**<sup>†</sup>, 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 of characterizing and predicting the language profiles in children with autism through rich datasets. *International Association for the Study of Child Language*, Philadelphia, PA. (<sup>†</sup>Symposium Speaker and Organizer)

- \*Hu A., Kozloff V., & **Qi Z.** (2021) Multimodal statistical learning in children with autism spectrum disorders. Talk at the *Meeting on Language in Autism*, Durham, NC.
- **Qi Z.**, Saratsli D., & Papafragou A. (2021) The Role of social cognition in word learning: meaning retention and pragmatic inferences. Talk at *the Annual Meeting of Linguistic Society of America*, San Francisco, CA.
- \*Schneider J., Weng Y., Kozloff V., & **Qi Z.** (2019) Neural sensitivity to speech distributional information: a mechanism underlying auditory statistical learning. Talk at *New England Research for Dyslexia Society Meeting*, Boston, MA.
- **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. Talk at *New England Research on Dyslexia Society*, Storrs, CT.
- **Qi Z.**, Whitfield-Gabrieli S. (2017). How does the restless brain inform us about the risks for psychosis? Talk at *Shanghai Forum of Early Phase of Psychosis Identification and Intervention*, Shanghai, China.
- Ryskin R., **Qi Z.**, Duff M., & Brown-Schmidt S. (2017). Syntactic variability between and within speakers: When to adapt, when to generalize? Talk at *CUNY Conference on Human Sentence Processing*, Cambridge, MA.
- **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. Talk at the *International Meeting for Autism Research*, Shanghai, China
- **Qi Z.**, & Fisher C.L. (2013). Learning new linguistic information about familiar verbs in 5-year-olds and adults. Talk at *Society for Research in Child Development*, Seattle, WA
- **Qi Z.** & Garnsey S.M. (2012). Neurocognitive plasticity in verb bias learning: an ERP study. Talk at *Cognitive Neuroscience Society*, Chicago, IL.
- **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. Talk at *Architectures and Mechanisms for Language Processing*, Paris, France.
- **Qi Z.**, Yuan S., & Fisher C. L. (2010). Where does verb bias come from: Experience with particular verbs affects online sentence processing. Talk at *Boston University Conference on Language Development*, Boston, MA.

### CONFERENCE PRESENTATIONS (\* Student/Mentee Presentation)

- McIlvain G., Schneider J., Matyi MA., DiFabio MS., Delgorio PL., McGarry MDJ., 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*.
- McIlvain G., Schneider J., Matyi MA., McGarry MDJ., Spielberg JM ., **Qi Z.**, Johnson CL. (2021) . Dimorphic sex differences in brain viscoelastic properties from childhood to adulthood. *OHBM 2021 Annual Meeting*.
- \*O'Brien A., **Qi Z.**, Tager-Flusberg H., & Gabrieli JDE. (2021). Atypical neural representation of phonological working memory in children with autism. *20th International Society for Autism Research Annual Meeting*.
- \*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*.
- \*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*.
- Wei T., & **Qi Z.** (2021) Temporal dynamics of visual statistical learning in the human hippocampus. *Computational and Systems Neuroscience Virtual Meeting*.
- \*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.

- \*Saratsli D., & Papafragou A., & **Qi Z.** (2020) Social cognition and pragmatic inference in word learning. *Boston University Conference on Language Development*, Boston, USA.
- \*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.
- \*Schneider J., Legault J., & **Qi Z.** (2020) Brain activation during auditory statistical learning predicts adults' vocabulary. *2020 OHBM Annual Meeting*, Montreal, Canada.
- \*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.
- \*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.
- \*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.
- \*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.
- **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.
- \*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.
- \*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.
- **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.
- **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.
- 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.
- **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.
- 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.
- **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.
- \*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.

- **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.
- **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.
- \*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
- 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.
- **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.
- **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.
- **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.
- **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.
- Ryskin R., **Qi Z.**, & Brown-Schmidt S. (2015). Rapid learning of a verb bias. *Psychonomic Society Annual Meeting*, Chicago, USA.
- \*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.
- **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.
- **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.
- **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.
- \*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.
- 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.
- **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.



- **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.
- **Qi Z.**, & Garnsey S.M. (2012). Individual difference in verb bias learning: an ERP study. the *CUNY Sentence Processing Conference*, New York, USA.
- **Qi Z.**, & Garnsey S.M. (2011). Learning structural biases of novel verbs: an ERP study. *Society for Neurobiology of Language*, Annapolis, USA.
- **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.

## **TEACHING EXPERIENCES**

### **University of Delaware**

- LING444/644, First Language Development, Fall 2017, 2018
- CGSC890/LING890, Current Topics in Brain and Language, Spring 2018
- Research Method Workshops on eye-tracking, EEG and statistical analyses for Departments of Communication Sciences & Disorders and Linguistics & Cognitive Science, Spring 2018
- Brain Imaging and Language lecture and lab for the Annual UD Summer Undergraduate Workshop in Cognitive and Brain Sciences, Summer 2018 and 2019.
- CGSC890/LING890, Current Topics in Cognitive Neuroscience of Language Development, Spring 2020, 2021
- CGSC697, Experimental Linguistics, Fall 2020

### **University of Illinois, Urbana-Champaign**

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

## **CURRICULUM DEVELOPMENT**

- LING444/644 (First Language Development)
- CGSC890/LING890 (Current Topics in Brain and Language)
- CGSC890/LING890 (Current Topics in Cognitive Neuroscience of Language Development)
- CGSC697 (Experimental Linguistics)
- Research Method Workshops on eye-tracking, EEG and statistics for Departments of Communication Sciences & Disorders and Linguistics & Cognitive Science
- Brain Imaging and Language lecture and lab

## **Mentees**

### **University of Delaware**

- Post-doctoral Mentees: Julie Schneider (NSF SPRF Awardee, current faculty member at Louisiana State University), Jennifer Legault (current faculty member at the University of Delaware)

- 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
- 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).

### **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 (current graduate student at Harvard University)

### **PROFESSIONAL SERVICES**

- 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)
- 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; Language Learning & Development; Neurobiology of Learning & Memory; Neuroimage: Clinical; Psychological Science; 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)

## **DEPARTMENTAL AND UNIVERSITY SERVICES**

### **University of Delaware**

- Committee member for Department Graduate Studies: 2017 - Present
- 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 - Present
- Reviewer for Annual Graduate Cognitive Science Conference: 2017 - Present
- Executive committee member for Center for Biological and Brain Imaging: 2017 - Present

## **BRAIN AWARENESS ACTIVITY**

- 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

## **LANGUAGES AND SKILLS**

- Mandarin Chinese, Shanghainese, English
- Programming skills: Python, R, Shell, MATLAB