Jin Wang[1]

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ACADEMIC APPOINTMENTS

2024- Tenure-track Assistant Professor of Education

School of Education and Information Studies

University of California, Los Angeles

2022-2024 Post-doctoral Scholar

Harvard Graduate School of Education

Mentor: Nadine Gaab

EDUCATION

2017-2022 Ph.D. Psychology and Human Development

Vanderbilt University

Dissertation Title: The longitudinal relation between the neural basis of phonological awareness and reading skill in developing children.

2016-2017 Communication Sciences & Disorders

The University of Texas at Austin

Mentor: James R Booth

2013-2016 MS. Institute of Psychology

Chinese Academy of Sciences, China

Mentor: Deng Yuan

2009-2013 BA. Clinical Psychology

Beijing Forestry University, China

GRANTS & FELLOWSHIPS

2020 Abby and Jon Winkelried Fellowship

This fellowship is a 1-semester-funding to award the top 2 graduate students in the department who have shown excellent research records, which covers students' tuition and health insurances.

2018 Vanderbilt Psychology and Human Development Research-Achievement Fellowship

This fellowship is a 1-year-funding to support the top 2 graduate students in the department who propose to conduct research that is independent of their mentor's grants, which covers tuition, stipend, and insurances.

HONORS & AWARDS

2022 Dissertation Award at Society of Neurobiology of Language

The Dissertation Award, a very prestigious award in the community of Neurobiology of Language, honors only

[1] Updated on 09/10/2024.

one researcher a year who completed outstanding research leading to their PhDs and holds the promise of making significant contributions to the field.

2022 Vanderbilt Hardy Culver Wilcoxon Award

Honor the best graduating student in the Department of Psychology and Human Development who presents the most distinguished doctoral dissertation in any area of psychological inquiry.

2022 Vanderbilt Graduate Leadership Anchor Award

Recognize top1 graduate student leaders on a school-wide level and have made a positive impact through their actions and leadership.

2021 Vanderbilt Psychology and Human Development Hard Working Graduate Student Award

2020 Vanderbilt Psychology and Human Development Excellence in Research Award

2019 Student Travel Award from FLUX Congress in New York

2018 Vanderbilt Kennedy Center Travel Award

2016 Graduate Fellowship at The University of Texas at Austin

2015 China National Scholarship for Graduates at Chinese Academy of Sciences

2013 Best Undergraduate Thesis at Beijing Forestry University

2012 China National Scholarship for Undergraduates at Beijing Forestry University

2009-2011 First-Class Scholarship and Best Student Cadres at Beijing Forestry University

PUBLICATIONS

1. **Wang, J.,** Turesky, T., Loh, M., Barbera, J., Hue, V., Escalantea, E., Medinaa, A., Zuk, J., Gaab, N. (2024). Left-lateralization of activation in the superior temporal gyrus during speech perception in sleeping infants was associated with subsequent language skills in kindergarten: a passive-listening task-fMRI study. *Brain and Language.* In press.
2. **Wang, J.,** Booth, J. R. (2024). Development and disorders of phonological processing in the brain. Book chapter in Encyclopedia of Human Brain – Language, edited by Binder, J. Elsevier, ISBN 9780128093245, https://doi.org/10.1016/B978-0-12-820480-1.00119-4
3. Dębska, A., **Wang, J.**, Dzięgiel-Fivet, G., Chyl, K., Wójcik, M., Jednoróg, K, Booth, J. R. (2023). The development of orthography and phonology coupling in ventral occipitotemporal cortex and its relation to reading. *Journal of Experimental Psychology: General*. *153*(2), 293–306.
4. **Wang, J.**, & Joanisse, M. F., Booth, J. R. (2023). Reading skill strengthens the functional connectivity between ventral occipitotemporal cortex and superior temporal gyrus during an auditory phonological awareness task in developing children. *Journal of Speech, Language, and Hearing Research*, 1-15.
5. **Wang, J.**, Tong, F., Joanisse, M. F., Booth, J. R. (2023). A sculpting effect of reading on later representational quality of phonology revealed by multi-voxel pattern analysis in young children. *Brain and Language, 239*, 105252.
6. **Wang, J.**, Yamasaki, B. L., Booth, J. R. (2023). Phonological and semantic specialization in 9- to 10-year-old children during auditory word processing. *Neurobiology of Language*, 1-28. (Pre-

registration at https://osf.io/5p3es/)

7. **Wang, J.**, Lytle, M.N., & Booth, J.R. (2022). A longitudinal neuroimaging dataset on language processing in children median ages 6, 7.5, and 9 years old. *Scientific Data, 9*(1), 1-13.
8. **Wang, J.**, Wagley, N., Rice, M. L., & Booth, J. R. (2021). Semantic and syntactic specialization during auditory sentence processing in 7-8-year-old children. *Cortex*, 145, 169-186. (Registered Report at https://osf.io/8jqc7/)
9. **Wang, J.**, Yamasaki, B. L., Weiss, Y., & Booth, J. R. (2021). Both frontal and temporal cortex exhibit phonological and semantic specialization during spoken language processing in 7- to 8-year-old children. *Human Brain Mapping,42* (11), 3534-3546.
10. **Wang, J.,** Pines, J., Joanisse, M., & Booth, J. R. (2021). Reciprocal relations between reading skill and the neural basis of phonological awareness in 7-to 9-year-old children. *NeuroImage, 236*, 118083.
11. **Wang, J.**, Joanisse, M. F., & Booth, J. R. (2021). Letter fluency in 7-8-year-old children is related to the anterior, but not posterior, ventral occipito-temporal cortex during a phonological awareness task. *Developmental Cognitive Neuroscience, 47*, 100898.
12. **Wang, J.**, Joanisse, M. F., & Booth, J. R. (2020). Neural representations of phonology in temporal cortex scaffold longitudinal reading gains in 5-to 7-year-old children. *NeuroImage, 207*, 116359.
13. **Wang, J.**, Rice, M. L., & Booth, J. R. (2020). Syntactic and semantic specialization and integration in 5-to 6-year-old children during auditory sentence processing. *Journal of Cognitive Neuroscience, 32*(1), 36-49.
14. **Wang J.**, Deng Y., & Booth, J. R. (2019). Automatic semantic influence on early visual word recognition in the ventral occipito-temporal cortex. *Neuropsychologia, 133*, 107188.
15. **Wang, J.**, Joanisse, M. F., & Booth, J. R. (2018). Reading skill related to left ventral occipitotemporal cortex during a phonological awareness task in 5- to 6-year old children. *Developmental Cognitive Neuroscience*, *30*, 116-122.
16. Cao, F., Yan, X., Wang, Z., Liu, Y., **Wang, J.**, Spray, G. J., & Deng, Y. (2017). Neural signatures of phonological deficits in Chinese developmental dyslexia. *NeuroImage, 146*: 301-311.
17. Deng, Y., Wu, Q., **Wang, J.**, Feng, L., & Xiao, Q. (2016). Event-related potentials revealed an early and independent activation of grammatical information. *Neuroscience Letters, 631*: 19-23.
18. **Wang, J.**, Tang, H., & Deng, Y. (2016). Novel symbol learning-induced Stroop effect: evidence for a strategy-based, utility learning model. *Journal of Psycholinguistic Research, 45*(5), 1161-1171.
19. **Wang J.**, & Deng Y. (2014). The effect of language system on different numerical systems in human cognition. *Progress in Psychological Science, 22*(6): 926-933. (In Chinese)

PAPER IN PREPARATION

1. **Wang, J.**, Gaab, N. The longitudinal relationship between brain lateralization for white matter tracts at infancy and subsequent language outcome at kindergarten age. (In progress)

2. **Wang, J.**, Hu, E., Ansari, D., Gaab, N. The neural basis of numerical processing in kindergarteners and its relation to familial risk status. (Pre-registration https://osf.io/wm4kn/)
3. **Wang, J.,** Wagley, N., Rice, M., Booth, J. R. Semantic and syntactic specialization in 9- to 10-year-old children during auditory sentence processing. (Scientific Report, Revision under Review, pre-registration https://osf.io/gm9uj/).
4. Yamasaki, B. L., **Wang, J.**, Weiss, Y., McGregor, K. K., Booth, J. R. Phonological and semantic neural specialization predicting reading comprehension skill. (Pre-registration https://osf.io/kznjh/).
5. Banaszkiewicz, A., Compton, A. B., **Wang, J.**, Booth, J. R. The relation of home literacy environment to brain specialization for phonological and semantic processing. (In progress, re-registration https://osf.io/prhbg/).
6. Mathur, A., **Wang, J.**, and Booth, J. R., Does connectivity between frontotemporal areas at age 7 predict specialization for phonological and semantic processing at age 9? (In progress, pre-registration https://osf.io/zae62/).

CONFERENCE PRESENTATIONS

1. Compton, A. B., Banaszkiewicz, A., **Wang J.**, Booth J. R. (Nov. 2024) The relation of home literacy environment to brain specialization for phonological and semantic processing for children 5-8 years old. **Stage (talk) presentation** at the 49th Boston University Conference on Language Development. Boston, Massachusetts. USA.
2. **Wang, J.** (Oct. 2024) Left-lateralization of activation in the superior temporal gyrus during speech perception in sleeping infants was associated with subsequent language skills in kindergarten: a passive-listening task-fMRI study. **Invited Symposium Speaker** presented at Society of Neuroscience, Chicago, USA.
3. **Wang, J.**, Hu, E., Ansari, D., Gaab, N. (Sept. 2024) The neural basis of numerical processing in kindergarteners and its relation to familial risk status. Poster presented at FLUX Congress, Baltimore, USA.
4. **Wang, J.** (Sept. 2024). Grant Writing Panel **Organizer and Moderator** at FLUX Congress, pre-conference, Baltimore, USA.
5. **Wang, J.,** Turesky, T., Loh, M., Barbera, J., Hue, V., Escalante, E., Medinaa, A., Gaab, N., (Sept. 2023) Left-lateralization of the superior temporal gyrus during speech processing in sleeping infants predicts language skills in kindergarten: a task-based fMRI study. **Flash talk** presented at FLUX Congress and Fit'NG: Santa Rosa, USA.
6. Banaszkiewicz, A., Compton, A. B., **Wang, J.**, Booth, J. R. (Aug. 2023) The relation of home literacy environment to brain specialization for phonological and semantic processing. Poster presentation at the 29th AMLaP conference, Architectures and Mechanisms for Language Processing, San Sebastian, Spain.
7. **Wang, J.,** Booth, J. R., Gaab, N. (Jul. 2023) The longitudinal relationship between the neural basis

of phonological awareness and reading development in children from infancy to kindergarten to elementary school. **Invited Symposium Speaker** for the accepted symposium "Oral language – neural correlates and implications for typical and divergent reading development" at the Society of Scientific Study of Reading, Port Douglas, Australia (canceled due to international visa issue).

8. Yamasaki, B. L., **Wang, J.,** Booth, J. R. (Jul. 2023) The role of earlier neural specialization in predicting later reading development. Symposium speaker at the Society of Scientific Study of Reading, Port Douglas, Australia.
9. **Wang, J.,** (Oct. 2022) How does the neural mechanism of language processing develop in children? **Symposium Oral Presentation** at the Society of Neurobiology of Language at Philadelphia, PA. USA. (Served as a **Symposium Organizer and Speaker** and invited other speakers such as Alexis N. Bosseler, Sheri Choi, & Janet Werker, Alexander Enge, Julie M. Schneider, Saloni Krishnan, only 3 symposiums were accepted for the whole conference).
10. **Wang, J.,** (Oct. 2022) The longitudinal relation between the neural basis of phonological awareness and reading skill in developing children. **Invited Dissertation Award Talk** at the Society of Neurobiology of Language at Philadelphia, PA. USA (only 1 award winner each year).
11. **Wang, J.**, Yamasaki, B. L., Booth, J. R. (Sept. 2022) Phonological and semantic specialization in 9- to 10-year-old children during auditory word processing. Poster presentation at FLUX Congress: Online.
12. **Wang, J.**, & Joanisse, M. F., Booth, J. R. (Apr. 2022) Reciprocal relation between reading skill and automatic orthographic processing during an auditory phonological awareness task in developing children. Poster presentation at Society of Cognitive Neuroscience: San Francisco, CA. USA.
13. **Wang, J.,** Wagley, N., Rice, M. L., & Booth, J. R. (Oct. 2021) Semantic and syntactic specialization during auditory sentence processing in 7-8-year-old children. Slide Slam at Society of Neurobiology for Language: Online.
14. **Wang, J.,** Pines, J., Joanisse, M., & Booth, J. R. (Sept. 2021). Reciprocal relations between reading skill and the neural basis of phonological awareness in 7-to 9-year-old children. Poster presentation at FLUX Congress: Online.
15. **Wang, J.**, Joanisse, M. F., & Booth, J. R. (Oct. 2020) *Reading acquisition refines phonological processing in the inferior frontal cortex in children from 7 to 9 years old.* Poster presentation at Society of Neurobiology for Language: Philadelphia, USA.
16. **Wang, J.**, Joanisse, M. F., & Booth, J. R. (Sept. 2020) *Reading skill in 7-8-year-old children is related to the anterior, but not posterior, ventral occipito-temporal cortex during a phonological awareness task*. Poster presentation at Association of Reading Writing in Asia: Beijing, China.
17. **Wang J.**, Joanisse, M. F., & Booth, J. R. (Sep. 2019). *Neural representations of phonology in temporal cortex scaffold reading gains in 5- to 7- year-old children.* **Oral presentation** at Vanderbilt Kennedy Center Science Day: Vanderbilt University. *Only top 3 presentations at the university level were selected as oral presentation.*

18. **Wang J.**, Joanisse, M. F., & Booth, J. R. (Aug. 2019). *Neural representations of phonology in temporal cortex scaffold reading gains in 5- to 7- year-old children.* **Flash talk** presented at FLUX Congress: New York City, USA.
19. **Wang J.**, & Booth J. R. (Aug. 2018). *Syntactic and semantic specialization in 5-6-year-old children during auditory sentence processing*. Poster presented at Society for Neurobiology of Language: Quebec City, Canada.
20. **Wang, J.**, Joanisse, M. F., & Booth, J. R. (Apr. 2018). *Reading skill related to left ventral occipitotemporal cortex during a phonological awareness task in 5–6-year-old children*. **Invited Symposium Speaker** at American Educational Research Association: New York City, USA.
21. **Wang J.**, Joanisse M & Booth J.R. (Jan. 2018). *Reading skill affects the specialization of left ventral occipitotemporal cortex during phonological awareness task in 5-6-year-old children*. Poster presented at Vanderbilt Kennedy Center Science Day: Nashville, TN.
22. **Wang J.**, & Deng Y. (Oct. 2015). *The top-down semantic influence on ventral occipitotemporal cortex in the early stages of Chinese reading.* Poster presented at Society of Neurobiology for Language: Chicago, USA.

INVITED TALKS

1. **Wang, J.**, (Feb. 16th, 2024) The neural basis of phonological awareness and its relationship to reading skill from infancy to kindergarten to elementary school. Invited by the "Reading and the Brain" conference at University of South Carolina Institute for Mind and Brain, Columbia, SC. USA.
2. **Wang, J.,** (Apr. 3rd, 2023) The neural basis of phonological awareness and its relationship to reading skill from infancy to kindergarten to elementary school. Invited by the Language & Cognition Talk Series, organized by the Psychology Department at Harvard University, Cambridge, MA. USA.
3. **Wang, J.,** (Jan. 24th, 2023) The impact of different written language systems on children's reading development in terms of grain sizes. Invited by Bilingual and Multilingual Development Talk Series, organized by the Bilingual and Multilingual Development Lab (PI: Monika Molnar) at University of Toronto, Toronto, Canada.
4. **Wang, J.,** (Nov. 9th, 2022) The neural development of phonological, semantic, and syntactic processing in typically developing children. Invited by the ALBA language neurobiology lab (PI: Marilu Gorno Tempini) at University of San Francisco, San Francisco, USA.
5. **Wang, J.,** (Oct. 25th, 2022) The longitudinal relation between the neural basis of phonological awareness and reading skill in developing children. Invited by the Rowe Lab (PI: Meredith Rowe) at Harvard Graduate School of Education, Cambridge, USA.
6. **Wang, J.,** (Oct. 20th, 2022) The development of language and reading neural networks in typically developing children from kindergarten to elementary years. Invited by the Cui's Lab (PI: Zaixu Cui) at Chinese institute for Brain Research, Beijing, China.

TEACHING TRAINING AND EXPERIENCE

Teaching Training and Certificate

An Introduction to Evidence-based Undergraduate STEM Teaching Course, taught by the Center for the Integration of Research, Teaching, and Learning, MOOC. (Jun. to Aug. 2023)

College Teaching in Special Education, taught by Dr. Diane P Bryant, The University of Texas at Austin. (Spring, 2017).

Guest Lecturer

Language and the Brain (CSD 350, Spring, 2017)

Teaching Assistant

Cognitive Psychology (PSY2200, Fall, 2018)

Language and the Brain (CSD 350, Spring, 2017)

Language and the Brain (CSD 350, Fall, 2016)

Introduction to Communication Science and Disorders (CSD 306K, Fall, 2016)

SERVICES

Reviewer

Child Development

Journal of Child Psychology and Psychiatry

Developmental Science

Imaging Neuroscience

NeuroImage

Journal of Learning Disabilities

Developmental Cognitive Neuroscience

Reading and Writing

Scientific Study of Reading

Mind Brain, and Education

Frontiers in Neurosciences

Language Development Research

OUTREACH

2022 Harvard Undergraduate Research Opportunities in Science Fair, Cambridge, MA.

2022 Brain Blast held by Brain Institute, Nashville Public Library.

2019 DeafNation Expo & Conference, Nashville.

2019 Camp Vandy (Sheep Brain activity) held by Brain Institute, Vanderbilt University, Nashville.

2019 WellFest held by Bridges for Deaf and Hard of Hearing, Nashville.

2019 Brain Blast held by Brain Institute, Nashville Public Library.

2018 Brain Blast held by Brain Institute, Vanderbilt Health One Hundred Oaks, Nashville.

2018 School Speech-Language Pathology Conference, Vanderbilt University, Nashville.

2011-2012 Hosted National College Students' Innovation and Entrepreneurship Project, Beijing, China

MENTORSHIP

2023 Colby Weiss, Harvard Neuroscience Student Honors thesis.

2022 Victoria Hue, Adrian Medina, JaKala Barber, BabyBOLD infant data organization and analysis.

2022 Elizabeth Escalante, CALC project BIDS organization, task design.

2021 Helen Yang, Soon Woo Kwon, 3- to 4-year-olds recruitment, standardized testing, data collection.

2021 Audrey Scudder. Literature review, coding, and neuroimaging basics.

2020 Minji Kim. Literature review, fMRI data analysis, and manuscript writing.

2020 Abigail Snow, Lilah Given, Tyjah Johnson. Brain Imaging Data Structure (BIDS) organization.

2019 Julia Pines. Literature review, fMRI data analysis, and manuscript writing.

2019 Casey J Hamilton. Literature review, fMRI data analysis.

2018 Nicholas L Powell. Diffusion weighted imaging quality check.

MANAGED PROJECTS

2022- ***Project:*** CALC project examining the neural mechanism of reading and math development

Role: Hypothesis formation, task design, data organization, and analyses, manuscript writing.

2022- ***Project:*** BabyBOLD project examining longitudinal brain changes from infancy

Role: Hypothesis formation, data organization, and analyses, manuscript writing.

2021-2022 ***Project:*** Late Talker project

Role: Lead in task design, pilot testing, MRI data collection on 3-4-year-olds, and data analyses.

2016-2020 ***Project:*** Early Language project

Role: MRI data collection on 5-10-year-olds, lead in data sharing organization, code maintenance and data descriptor write up.

2013-2016 ***Project:*** Functional magnetic neuroimaging study on Chinese character recognition in adults

Role: Lead in research idea formation, task design and revision, MRI data collection in adults, data analysis, and manuscript writing.

Project: The neural mechanism of Chinese developmental dyslexia during phonological tasks.

Role: Facilitator for recruitment, MRI data collection on 10-12-year-olds.

Project: The relation between language and math skills in Chinese and American children

Role: Translation of standardized testing to Chinese, behavioral data collection on 4-year-olds.