Wanjia Guo

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Education

Ph.D. in Psychology (Cognitive Neuroscience) 2018–2024
University of Oregon Eugene, OR
- Advisor: *Dr.Brice Kuhl*

M.S. in Psychology; Specialization in Data Science 2018–2021
University of Oregon Eugene, OR

B.S. in Psychology and Neurobiology with Distinction 2012–2016
University of Wisconsin-Madison Madison, WI
- Senior Thesis Advisor: *Dr.Bradley Postle*

Employment

Postdoctoral Research Associate 06/2025–Present
Princeton Neuroscience Institute, Princeton University Princeton, NJ
- PI: *Dr.Ken Norman*

Applied Scientist, Amazon 09/2024–05/2025
Alexa AI-Domain Boston, MA

Research Assistant, Mormino Lab 10/2017–08/2018
Neurology Department, Stanford University Stanford, CA
- PI: *Dr.Elizabeth Mormino*

Research Assistant, Stanford Memory Lab 10/2016–08/2018
Psychology Department, Stanford University Stanford, CA
- PI: *Dr.Anthony Wagner*

Undergraduate Research Assistant, PostLab 01/2015–08/2016
Departments of Psychology and Psychiatry, UW-Madison Madison, WI
- PI: *Dr.Bradley Postle*

Awards and Honors

NIH NRSA Individual Predoctoral Fellowships (FNS126016A) 2022–2024
Remapping of episodic memories in the human hippocampus. $163,437 total direct costs awarded.

Promising Scholar Award 2016
University of Oregon. $6,000 awarded.

First Year Merit Award 2016
University of Oregon. $4,000 awarded.

Undergraduate Research Scholar Award 2016
University of Wisconsin-Madison.

Publications

1. **Guo Wanjia**, Subin Han, and Brice A Kuhl (under revision). Repulsion of CA3 / dentate gyrus representations is driven by distinct internal beliefs in the face of ambiguous sensory input.

2. Futing Zou, **Guo Wanjia**, Emily J Allen, Yihan Wu, Ian Charest, Thomas Naselaris, Kendrick Kay, Brice A Kuhl, J Benjamin Hutchinson, Sarah DuBrow (2023). Re-expression of CA1 and entorhinal activity patterns preserves temporal context memory at long timescales. *Nature communications 14.1: 4350.*

3. **Guo Wanjia**, Serra E Favila, Ghootae Kim, Robert J Molitor, and Brice A Kuhl (2021). Abrupt Hippocampal Remapping Signals Resolution of Memory Interference. *Nature Communications 12 (1): 4816.*

4. Alexandra N Trelle, Valerie A Carr, Edward N Wilson, Michelle S Swarovski, Madison P Hunt, Tyler N Toueg, Tammy T Tran, Divya Channappa, Nicole K Corso, Monica K Thieu, Manasi Jayakumar, Ayesha Nadiadwala, **Wanjia Guo**, Natalie J Tanner, Jeffrey D Bernstein, Celia P Litovsky, Scott A Guerin, Anna M Khazenzon, Marc B Harrison, Brian K Rutt, Gayle K Deutsch, Frederick T Chin, Guido A Davidzon, Jacob N Hall, J Sha Sharon, Carolyn A Fredericks, Katrin I Andreasson, Geoffrey A Kerchner, Anthony D Wagner, Elizabeth C Mormino (2021). Association of CSF biomarkers with hippocampal-dependent memory in preclinical Alzheimer disease. *Neurology, 96(10), e1470-e1481.*

5. Elizabeth C Mormino, Tyler N Toueg, Carmen Azevedo, Jessica B Castillo, **Wanjia Guo**, Ayesha Nadiadwala, Nicole K Corso, Jacob N Hall, Audrey Fan, Alexandra N Trelle, Marc B Harrison, Madison P Hunt, J Sha Sharon, Gayle Deutsch, Michelle James, Carolyn A Fredericks, Mary Ellen Koran, Michael Zeineh, Kathleen Poston, Michael D Greicius, Mehdi Khalighi, Guido A Davidzon, Bin Shen, Greg Zaharchuk, Anthony D Wagner, Frederick T Chin (2020). Tau PET imaging with 18 F-PI-2620 in aging and neurodegenerative diseases. *European Journal of Nuclear Medicine and Molecular Imaging, 1-12.*

6. Alexandra N Trelle, Valerie A Carr, Scott A Guerin, Monica K Thieu, Manasi Jayakumar, **Wanjia Guo**, Ayesha Nadiadwala, Nicole K Corso, Madison P Hunt, Celia P Litovsky, Natalie J Tanner, Gayle K Deutsch, Jeffrey D Bernstein, Marc B Harrison, Anna M Khazenzon, Jiefeng Jiang, J Sha Sharon, Carolyn A Fredericks, Brian K Rutt, Elizabeth C Mormino, Geoffrey A Kerchner, Anthony D Wagner (2020). Hippocampal and cortical mechanisms at retrieval explain variability in episodic remembering in older adults. *Elife, 9, e55335.*

7. Jiefeng Jiang, Shao-Fang Wang, **Wanjia Guo**, Corey Fernandez, Anthony D Wagner (2020). Prefrontal reinstatement of contextual task demand is predicted by separable hippocampal patterns. *Nature Communications, 11(1), 1-12.*

Conference and External Presentations

1. **Guo, W.** (2024). Hippocampal repulsion is driven by internal beliefs. Talk at Princeton Computational Memory Lab, Princeton, NJ.

2. **Guo, W.**, Han, S., Kuhl, B. A. (2023). Activity patterns in CA3/dentate gyrus diverge when spatial routes were most similar. 2023 annual meeting of the SfN, Washington D.C.

3. **Guo, W.**, Han, S., Kuhl, B. A. (2023). Hippocampal repulsion is driven by internal beliefs. LEARNMEM 2023, Huntington Beach, CA.

4. **Guo, W.**, Han, S., Kuhl, B. A. (2022). Hippocampal repulsion is driven by internal beliefs. 2022 annual meeting of the SfN, San Diego, CA.

5. **Guo, W.** (2021). Abrupt hippocampal remapping signals resolution of memory interference. Talk at the Jiang Lab for Adaptive Behavior, Iowa City, IA

6. **Guo, W.**, Molitor, R., Favila, S. E., Kuhl, B. A. (2020). Repulsion of hippocampal representations is time-locked to resolution of memory interference. 2020 CNS virtual meeting.

7. **Guo, W.**, Kim, G., Favila, S. E., Kuhl, B. A. (2019). Repulsion of competing hippocampal representations parallels learning-related reductions in memory interference. 2019 annual meeting of the SfN, Chicago, IL.

8. Jiang, J., Wang, S. F., **Guo, W.**, Wagner, A. (2019). Prefrontal reinstatement of contexual task demand is mediated by repulsion in hippocampal activity patterns between contexts. 2019 annual meeting of the SfN, Chicago, IL.

9. Harrison, M., Carr, V.A., Corsol, N., Deutsch, G., Fredericks, C., Guerin, S., **Guo, W.**, Hunt, M., Jayakumar, M., Jiang, J., Kerchner, G., Khazenzon, A., Litovsky, C., Mormino, E. C., Nadiadwala, A., Sha, S., Tanner, N., Thieu, M., Trelle, A.N., Wagner, A. D. (2019). Individual differences in neural differentiation during episodic encoding predict associative retrieval in putatively healthy older adults. 2019 annual meeting of the SfN, Chicago, IL.

10. Harrison, M., Carr, V.A., Fredericks, C., **Guo, W.**, Jayakumar, M., Kerchner, G., Mormino, E. C., Thieu, M., Trelle, A.N., Wagner, A. D. (2019). Individual differences in neural pattern similarity during encoding relate to memory performance in putatively healthy older adults. Dallas Aging and Cognition Conference, Dallas, TX.

11. Trelle, A.N., Carr, V.A., Fredericks, C., **Guo, W.**, Jayakumar, M., Harrison, M., Kerchner, G., Mormino, E. C., Thieu, M., Wagner, A. D. (2019). Cortical differentiation, hippocampal integrity, and amzyloid burden are linked to individual differences in episodic memory decline with age. Dallas Aging and Cognition Conference, Dallas, TX.

12. Mormino, E.C., **Guo, W.**, Nadiadwala, A., Hall, J., Trelle, A. N., Sha, S., Fredericks, C. A., Greicius, M. D., Srinivas, S. M., James, M. L., Zaharchuk, G., Wagner, A. D., Chin, F. T. (2018). Tau PET imaging with PI2620 in aging and Alzheimer's disease. 2018 annual meeting of the SfN, San Diego, CA.

13. Jiang, J., Wang, S. F., **Guo, W.**, Wagner, A. (2018). Context-cued Predictions of Task Demands Facilitate Perceptual Decisions in Virtual Environments. 2018 annual meeting of the SfN, San Diego, CA.

14. Mormino, E.C., Nadiadwala, A., Azevedo, C., **Guo, W.**, Hall, J., Trelle, A. N., Sha, S., Fredericks, C. A., Greicius, M. D., Srinivas, S. M., James, M. L., Zaharchuk, G., Wagner, A. D., Chin, F. T. (2018). Tau PET imaging with PI2620 in aging and Alzheimer's disease. AAIC 2018, Chicago, IL.

15. Trelle, A.N., Bernstein, J., Harrison, M., Carr, V.A., Fredericks, C., Guerin, S., **Guo, W.**, Jayakumar, M., Jiang, J., Kerchner, G., Khazenzon, A., Litovsky, C., Mormino, E. C., Nadiadwala, A., Sha, S., Tanner, N., Thieu, M., Wagner, A. D. (2018). The Contribution of Early Alzheimer's Disease Markers to Individual Differences in Episodic Memory in Cognitively Normal Older Adults. AAIC 2018, Chicago, IL.

16. Trelle, A., Carr, V. A., Guerin, S., **Guo, W.**, Harrison, M. B., Jayakumar, M., Jiang, J., Kerchner, G., Momino, E. C., Tanner, N., Thieu, M., Wagner, A.D. (2018). Parietal and occipitotemporal cortical reinstatement differentially predict successful associative memory retrieval in older adults. Annual Meeting of the Cognitive Neuroscience Society, Boston, MA.

17. Trelle, A.N., Bernstein, J., Carr, V.A., Fredericks, C., Guerin, S., **Guo, W.**, Jayakumar, M., Jiang, J., Kerchner, G., Khazenzon, A., Litovsky, C., Sha, S., Thieu, M., Wagner, A. D. (2018). Cortical representations during memory encoding and retrieval predict successful associative memory retrieval in healthy older adults. International Conference on Learning & Memory at UC Irvine, Huntington Beach, CA.

18. Trelle, A.N., Bernstein, J., Carr, V.A., Fredericks, C., Guerin, S., **Guo, W.**, Jayakumar, M., Jiang, J., Kerchner, G., Khazenzon, A., Litovsky, C., Sha, S., Thieu, M., Wagner, A. D. (2017). Cortical and hippocampal predictors of individual differences in episodic memory in putatively healthy older adults. 2017 annual meeting of the SfN, Washington DC.

Teaching

- **Lab instructor** at the University of Oregon — Winter 2022
  Graduate Data Analysis II (PSY612)
- **Teaching Assistant** at the University of Oregon — Fall 2020
  Learning and Memory (PSY433)
- **Teaching Assistant** at Neuromatch Academy Summer School — Summer 2020
  Online School for Computational Neuroscience
- **Lab instructor** at the University of Oregon — Winter 2019
  Statistical Methods (PSY302)