Liang Zhang

psychelzh@outlook.com

EDUCATION

Doctor of Philosophy – Cognitive Neuroscience
Beijing Normal University Sept 2019 — Present

- Dissertation title: “The Structure of General Cognitive Ability and Its Neural Basis”
- Expected submission date: June 2024

Master of Science – Cognitive Neuroscience
Beijing Normal University Sept 2014 — June 2017

- Thesis title: “The Structure and Development Trajectory of Children’s Executive Function”
- Graduated as an outstanding graduate of Beijing

Bachelor of Science – Statistics
Beijing Normal University Sept 2009 — June 2013

- Graduated as top 5% of the class
- GPA: 3.7/4.0

RESEARCH EXPERIENCE

Doctoral Researcher
Beijing Normal University Sept 2019 — Present

- Collect a large number of behavioral paradigms in cognitive neuroscience and design game-like tasks to measure cognitive abilities
- Use structural equation modeling to explore the structure of general cognitive ability
- Use connectome-based predictive modeling method to predict cognitive ability from brain imaging data

Research Assistant
Beijing Normal University Sept 2017 — June 2019

- Collected and analyzed data from a large-scale longitudinal study of children’s cognitive development
- Used structural equation modeling to explore the structure of children’s cognitive abilities

PUBLICATIONS

Zhang, L., Feng, J., Liu, C., Hu, H., Zhou, Y., Yang, G., Peng, X., Li, T., Chen, C., & Xue, G. (2024). Improved estimation of general cognitive ability and its neural correlates with a large battery of cognitive tasks. Cerebral Cortex, 34(2), bhad510. https://doi.org/10.1093/cercor/bhad510

Sheng, J., Wang, S., **Zhang, L.**, Liu, C., Shi, L., Zhou, Y., Hu, H., Chen, C., & Xue, G. (2023). Intersubject similarity in neural representations underlies shared episodic memory content. Proceedings of the National Academy of Sciences, 120(35), e2308951120. https://doi.org/10.1073/pnas.2308951120

Feng, J., **Zhang, L.**, Chen, C., Sheng, J., Ye, Z., Feng, K., Liu, J., Cai, Y., Zhu, B., Yu, Z., Chen, C., Dong, Q., & Xue, G. (2022). A cognitive neurogenetic approach to uncovering the structure of executive functions. Nature Communications, 13(1), 4588. https://doi.org/10.1038/s41467-022-32383-0

Sheng, J., **Zhang, L.**, Liu, C., Liu, J., Feng, J., Zhou, Y., Hu, H., & Xue, G. (2022). Higher-dimensional neural representations predict better episodic memory. Science Advances, 8(16), eabm3829. https://doi.org/10.1126/sciadv.abm3829

CONFERENCE PRESENTATIONS

Zhang, L., Xue, G. The neural substrates of general cognitive ability based on multiple cognitive tasks. Poster presented at the Annual Meeting of the Society for Neuroscience, November 2023, Washington, DC. USA.