

# Liang Zhang

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## 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.