# Shanshan Zhu

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## EDUCATION

**M.Sc. in Psychology, School of Psychology, Nanjing Normal University** Since 9/2023

**University ranking: Top 4/155 normal universities in China**

Core Courses: Experimental Psychology, Cognitive Psychology, R Programming in Psychology, Advanced Research Methods

**B.A. in Health Services and Management, Public health College, Hangzhou Normal University.** 2019 – 2023

**University ranking: Top 12/155 normal universities in China**

Core Courses: Medical Statistics, Epidemiology, Clinical Medicine, Advanced Mathematics C1

## ACADEMIC EXPERIENCE

**Master thesis: Self-Reference Modulates Stimulus Representations in Visual Cortex** Since 12/2024

**Role: Project leader;** **Advisors:** Prof. Hu Chuan-Peng and Asso. Prof. Yan Chu-Yao

My work focuses on designing a behavioral and neuroimaging study to examine how self-related information influences memory representations and retrieval accessibility in early visual perception. I collect behavioral and magnetic resonance imaging (MRI) data from participants, perform data processing and behavioral analysis using R, and analyze functional MRI data using Python.

**A Cognitive Ontological Neuroimaging Meta Database for Self-Referential Processing** Since 11/2023

**Role: Project leader;** **Advisor:** Prof. Hu Chuan-Peng

My contributions are a structured database summarizing how self-referential encoding affects memory processes across studies, including both encoding phase and retrieval phase. Responsibilities included developing a codebook, reviewing scientific papers, extracting key information, and organizing all materials for public sharing. Maintained documentation to ensure the dataset can be reused by other researchers.

**Neuroimaging Meta-Analysis of Self-Referential Processing Across Psychiatric Disorders** 2024.02 – 2026.01

**Role: Project leader;** **Advisor:** Prof. Hu Chuan-Peng

Conducted a coordinate-based fMRI meta-analysis to identify altered neural responses to self-referential judgments in psychiatric disorders, including literature screening, data extraction, and Python-based analysis.

**The Impact of Legal Professional Education on Moral and Legal Reasoning** Since 5/2024

**Role: major contributor;** **Advisor:** Prof. Hu Chuan-Peng

Analyzed behavioral and brain-imaging data to understand how legal training influences decision-making. Conducted data cleaning, statistical modeling, and interpretation of results. Contributed to writing the research manuscript.

**Chinese Child Brain Development Project** Since 11/2024

**Role: MRI Operator;** **Advisor:** Prof. Hu Chuan-Peng

Operated MRI scans for children aged 6–8, including pre-scan familiarization to reduce anxiety, monitoring head motion, ensuring proper alignment, and acquiring resting-state fMRI, structural MRI, and diffusion-weighted imaging (DWI) data.

## PUBLICATIONS

Chen, Y., Zhou, Y., Li, M., Hong, Y., Chen, H., **Zhu, S.**, Zhou, Y., Yang, S., Wu, X., & Wang, D. (2023). Social capital and loneliness among older adults in community dwellings and nursing homes in Zhejiang Province of China. *Frontiers in Public Health*, *11*. https://doi.org/10.3389/fpubh.2023.1150310

Cheng, H., Yang, Q., Wang, R., Luo, R., **Zhu, S.**, Li, M., Li, W., Chen, C., Zou, Y., Huang, Z., Xie, T., Wang, S., Zhang, H., & Tian, Q. (2022). Emerging Advances of Detection Strategies for Tumor-Derived Exosomes. *International Journal of Molecular Sciences*, *23*(2), 868. https://doi.org/10.3390/ijms23020868

Meng, F., Ye, M., Si, J., Chen, W., Hong, Y., Liu, S., Chen, Y., Shen, X., **Zhu, S.**, Zhao, C., Guo, M., Feng, X., & Wang, D. (2022). Status of traditional Chinese medicine healthcare services in nursing homes across China. *Geriatric Nursing*, *45*, 93–99. https://doi.org/10.1016/j.gerinurse.2022.02.025

**Zhu, S.**, and Hu, C. (2026). Shared brain basis for altered self-referential processing across psychiatric disorders? A systematic review and meta-analysis of neuroimaging studies. (under review)

## SELECTED CONFERENCE PRESENTATIONS

**Poster Presentation: MRI together 2025** Online 12/2025

**Zhu, S.**, Wu, S., Zhu, X., Fan, Z., & Hu, C. (2025). An open neuroimaging meta-database of the self-referential encoding tasks and its application in understanding altered activations in psychiatric disorders. (Selected as one of only eight contestants for the poster competition; Focus on Open Science and Reproducible Research).

**Oral talk: Jiangsu Psychological Society** Nanjing, China 11/2025

**Zhu, S.**, Wu, S., Zhu, X., Fan, Z., & Hu, C. (2025). A neuroimaging meta-database of self-referential encoding paradigms and its applications in psychological research. (Basic Psychology category)

**Oral talk: 25th National Congress of Psychology** Chengdu, China 10/2023

**Zhu, S.**, Wu, J., Sun, S., Xiao, J., & Hu, C. (2023). Abnormal brain activity in self-referential processing among psychiatric patients: Evidence from an ALE meta-analysis. In Proceedings of the 25th National Congress of Psychology (pp. 486–488). (Published abstract; Basic Psychology category. This is the highest-profile and largest academic platform for psychological research in China)

## TEACHING EXPERIENCE

**Bayesian Statistics in Psychology** **Teaching Assistant** 2024.09 – 2025.01

**Instructor:** Prof. Hu Chuan-Peng, Nanjing Normal University.

Prepared Python-based teaching materials and interactive exercises, and provided technical support to graduate students in data analysis and programming.

## PROFESSIONAL TRAININGS

**Research training, FMRIB Software Library (FSL) neuroimaging analysis**, Institute of Psychology, Chinese Academy of Sciences, Beijing, China, 7/2024

Gained hands-on experience in using FSL software for neuroimaging data analysis, including preprocessing, statistical modeling, and visualization techniques.

**Programming Training, Natural Language Processing**, NetEase Intelligence, Hangzhou, China, 2023.05 – 2023.08

Engaged in NLP techniques for text analysis, including annotating and semantic processing using Python.

**Research internship**, Sir Run Run Shaw hospital, Hangzhou, China, 2022.07 – 2022.11

Assisted in the submission of grant proposals, including document preparation, proofreading, and coordination of

required institutional approvals.

## AWARDS & ACHIEVEMENTS

12/2023 First-Class Scholarship for Master's Students, Nanjing Normal University (¥12,000)

06/2023 Outstanding Graduate Award, Hangzhou Normal University

03/2023 Hailiang Scholarship, Hangzhou Normal University (¥5,000)

06/2022 Third Prize, 2022 China Undergraduate Computer Design Competition (National-level)

05/2022 Silver Medal (Provincial-level), "Challenge Cup" College Student Entrepreneurship Plan Competition

05/2022 Bronze Medal (Provincial-level), 8th China "Internet+" Innovation and Entrepreneurship Competition

02/2022 Third Prize, Mathematical Contest in Modeling (MCM/ICM), USA (online)

## SKILLS

**Languages:** Chinese (native); English (fluent)

**Programming:** Python; MATLAB; R

**Neuroimaging:** Analyzing MRI data based on task; specialized neuroimaging software (e.g., FMRIB Software Library); designing and implementing psychological experiments in MRI

**Tools:** GitHub (software environment management); Docker (software environment management), Jupyter notebook, LaTeX (scientific writing)