周思远 (Zhou Siyuan)

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Personal Profile and Research Interests

I am an Assistant Researcher at the Institute of Brain and Psychological Sciences, Sichuan Normal University. I earned my Ph.D. from the National Key Laboratory of Cognitive Neuroscience and Learning, Faculty of Psychology, Beijing Normal University, under the supervision of Professor Chunming Lu. My research focuses on educational neuroscience, by combining advanced methodologies such as large-scale group hyperscanning, naturalistic stimuli paradigms, natural language processing, and cognitive computational modeling, I aim to uncover the dynamics of representation and synchronization in social interactions.

Appointments and Education

2023.09 – Now	Assistant Researcher, Institute of Brain and Psychological Sciences, Sichuan Normal University
2017.9 - 2023.6	Ph.D., National Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University Supervisor: Professor Chunming Lu
2013.9 - 2017.6	Bachelor's Degree, School of Psychology, Central China Normal University Supervisor: Professor Qingbai Zhao

Publications

- Aili, R., **Zhou, S.#**, Xu, X., He, X., & Lu, C. (2025). The cortical architecture representing the linguistic hierarchy of the conversational speech. *NeuroImage*, 121180.
- Chen, T., Mei, Y., **Zhou, S.**, Dou, H., & Lei, Y. (2024). Trait self-compassion enhances activation in the medial prefrontal cortex during fear extinction: An fNIRS study. *International Journal of Clinical and Health Psychology*, 24(4), 100516.
- Zhang, T.#, **Zhou, S.#**, Bai, X.#, Zhou, F., Zhai, Y., Long, Y., & Lu, C. (2023). Neurocomputations on dual-brain signals underlie interpersonal prediction during a natural conversation. *NeuroImage*, 282, 120400.
- **Zhou S**, Xu X, He X, Zhou F, Zhai Y, Chen J, ... & Lu C. (2023). Biasing the neurocognitive processing of videos with the presence of a real cultural other. *Cerebral Cortex*, *33*(4), 1090-1103.
- Liang Z#, Li S#, **Zhou S#**, Chen S, Li Y, Chen Y, ... & Zhou Z. (2022). Increased or decreased? Interpersonal neural synchronization in group creation. *NeuroImage*, *260*, 119448.
- **Zhou S**, Chen S, Wang S, Zhao Q, Zhou Z, & Lu C. (2018). Temporal and spatial patterns of neural activity associated with information selection in open-ended creativity. *Neuroscience*, *371*, 268-276.
- **Zhou S**, Long Y, & Lu C. (2021). Measurement of the Directional Information Flow in fNIRS-Hyperscanning Data using the Partial Wavelet Transform Coherence Method. *Journal of Visualized Experiments*, (175), e62927
- Long Y, Chen C, Wu K, **Zhou S**, Zhou F, Zheng L, ... & Lu C. (2022). Interpersonal conflict increases interpersonal neural synchronization in romantic couples. *Cerebral Cortex*, *32*(15), 3254-3268.
- Long Y, Zheng L, Zhao H, **Zhou S**, Zhai Y, & Lu C. (2021). Interpersonal neural synchronization during interpersonal touch underlies affiliative pair bonding

between romantic couples. *Cerebral Cortex*, *31*(3), 1647-1659.

- Zheng L, Liu W, Long Y, Zhai Y, Zhao H, Bai X, **Zhou S**, ... & Lu C. (2020). Affiliative bonding between teachers and students through interpersonal synchronisation in brain activity. *Social Cognitive and Affective Neuroscience*, *15*(1), 97-109.
- Liu W, Branigan P, Zheng L, Long Y, Bai X, Li K, **Zhou S**, ... & Lu C. (2019). Shared neural representations of syntax during online dyadic communication. *NeuroImage*, *198*, 63-72.

Talks

- Central China Normal University fNIRS Hyperscanning Research Workshop (Invited Talk), Wuhan, China, 2019
- 28th fNIRS Journal Club Lecture (Invited Talk), Online, 2022
- The 11th Annual Meeting of the Society for the Neurobiology of Language (Poster), Helsinki, Finland, 2019
- 7th Conference on Emotion and Health Psychology, fNIRS Workshop (Invited Talk), Xiamen, 2023
- The 31st Annual Meeting of the Cognitive Neuroscience Society (Poster), Toronto, Canada, 2024
- The 30th Annual Meeting of the Organization of Human Brain Mapping (Oral), Seoul, South Korea, 2024
- 2024 Academic Annual Conference of the Learning Science Branch, China Association of Higher Education (Invited Talk), Shanghai, 2024
- 2024 Annual Conference of the Network Psychology Division, Chinese Psychological Society, and the 11th Symposium on Frontiers of Psychology and Behavior Research in the Internet Era (Symposium Talk), Chengdu, 2024

Teaching

2023-now	Advances in Psychological Science (Co-lecture)
	Sichuan Normal University
2021-2022	Brain Functional Diffuse Optical Imaging (AP)
	Beijing Normal University

Skill

- **Neuroimaging and Behavioral Experimental Techniques**
  - Proficient in designing and conducting experiments using Near-Infrared Spectroscopy (fNIRS) and Electroencephalography (EEG).
  - Skilled in eye-tracking experiment design and equipment operation.
  - Experienced in using experimental software such as E-prime and Psychopy, as well as online platforms like Brain Island, Qualtrics, and Empirica.
  - Familiar with functional Magnetic Resonance Imaging (fMRI) experiment design and equipment operation.
- **Behavioral Data Analysis**
  - Proficient in common linear models, including multiple regression, general linear models, and mixed-effects models.
  - Experienced with natural language processing pre-trained models (e.g., Word2Vec, BERT, GPT2).
  - Skilled in dimensionality reduction techniques (e.g., PCA, factor analysis, clustering, t-SNE).
  - Proficient in machine learning methods (e.g., LDA, SVM, logistic regression).
  - Skilled in path analysis, including mediation and moderation analysis.
  - Familiar with cognitive computational modeling (e.g., reinforcement learning, hierarchical Bayesian models, hidden Markov models) and structural equation modeling.

- **Neural Data Analysis**
  - Proficient in hyperscanning data analysis methods (e.g., WTC, PLV).
  - Skilled in analyzing naturalistic stimulus data (e.g., ISC, ISFC, IS-RSA).
  - Experienced in neural decoding techniques for fNIRS and fMRI (e.g., MVPA, RSA).
  - Proficient in time-frequency analysis methods for EEG data.
- **Programming**
  - Proficient in Python, MATLAB, and R, with extensive experience developing general analysis scripts.
  - Skilled in configuring and maintaining Linux environments.
  - Familiar with JavaScript for developing custom experimental platforms.