

Ze Fu

Beijing Key Laboratory of Brain Imaging and Connectomics
Beijing Normal University
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Education & Professional Experience

09/2019 – now

Ph.D., Psychology (Cognitive Neuroscience; Advisor: Dr. Yanchao Bi)

State Key Laboratory of Cognitive Neuroscience and Learning & IDG/McGovern Institute for Brain Research, Beijing Normal University, Beijing, China

08/2016 – 01/2017

Visiting Student, Psychology

Department of Psychology, University of California, Berkeley

09/2014 – 06/2019

B.S., Psychology (Computer Science minor)

School of Psychology, Central China Normal University, China

Research Interests

Knowledge representation, historical psychology, social/group dynamics of communications, collective memory, beliefs.

Publication & Manuscript

Ze Fu, Yuxi Chu, Tangxiaoxue Zhang, Yawen Li, Xiaosha Wang, Yanchao Bi (Under Review). Semantics across the globe: A universal neurocognitive semantic structure adaptive to climate.

Ze Fu*, Huimin Chen*, Zhan Liu, Maosun Song, Zhiyuan Liu, Yanchao Bi (Under Review). Pathogen stress heightens sensorimotor dimensions in the human collective semantic space.

Ze Fu, Xiaosha Wang, Xiaoying Wang, Huichao Yang, Jiahuan Wang, Tao Wei, Xuhong Liao, Zhiyuan Liu, Huimin Chen, Yanchao Bi (2023). Different computational relations in language are captured by distinct brain systems. *Cerebral Cortex*, 33(4).

Xiaohui You, **Ze Fu**, Yue Liu, Yanchao Bi, Xi Yu (In Preparation). Word learning patterns in toddlerhood reflect semantic categorical organization representation: converging evidence from 21 languages.

Shuang Tian*, Lingjuan Chen*, Xiaoying Wang, Guochao Li, **Ze Fu**, Yufeng Ji, Jiahui Lu, Xiaosha Wang, Shiguang Shan, Yanchao Bi (2024). Vision matters for shape representation: Evidence from sculpturing and drawing in the blind. *Cortex*, 174, 241-255.

Shuang Tian, Yuankun Chen, **Ze Fu**, Xiaoying Wang, Yanchao Bi (2023). Simple shape feature computation across modalities: convergence and divergence between the ventral and dorsal visual streams. *Cerebral Cortex*, 33(15).

Talks & Conference Presentations

07/2024 *Representing historical cognition in large language models*. Journal Club: AI for psychology, Tsinghua University, Beijing, China (Oral Presentation)

06/2024 *Application of language models to semantic cognition research*. Lab meeting invited by Dr. Nai Ding, Zhejiang University, Hangzhou, China (Oral Presentation)

05/2024 *Semantics across the globe: A universal neurocognitive semantic structure adaptive to climate*. The Rovereto Workshop on Concepts, Actions, and Object, Rovereto, Italy (Poster Presentation)

12/2023 *The ecological drivers of cross-cultural semantic structures*. The Conceptual Brains and Cultural Evolution Workshop, Beijing Normal University at Zhuhai, Zhuhai, China (Oral Presentation)

10/2023 *Pathogen stress heightens sensorimotor dimensions in the human collective semantic space*. Society for the Neurobiology of Language, Marseille, France (Poster Presentation)

10/2021 *Graph and not vector-embedding models: Computational mechanisms for neural representation of words*. Society for the Neurobiology of Language (Online, Slide Slam Presentation)

Ad Hoc Review

(*: co-review with mentor)

Imaging Neuroscience, Nature Human Behaviour*

Honors & Awards

10/2023 Award for Research and Innovation, Beijing Normal University

10/2020 – 10/2023 Graduate Academic Award, Beijing Normal University

Research Training

07/2018 – 08/2018

Research Internship (Advisor: Dr. Xiaoying Wang, Dr. Yanchao Bi)

State Key Laboratory of Cognitive Neuroscience and Learning & IDG/McGovern Institute for Brain Research, Beijing Normal University, Beijing, China

Mentorship Experience

06/2023 – 03/2024

Undergraduate for College Students' Innovative Entrepreneurial Training Plan Program

Technical Skills

R; Python; MATLAB (fMRI processing)