Fu, Ze

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Haidian District, Beijing, P.R.China.
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Education & Professional Experience

09/2019 – 06/2025 (expected)
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; Cultural Evolution; Group Dynamics; Historical Psychology

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. [PDF]

Ze Fu*, Huimin Chen*, Zhan Liu, Maosun Song, Zhiyuan Liu, Yanchao Bi (In Press). Pathogen stress heightens sensorimotor dimensions in the human collective semantic space. *Nature Communications Psychology* [PDF]

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). [PDF]

Xiaohui You, **Ze Fu,** Yue Liu, Yanchao Bi, Xi Yu (Under Review). 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 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

Imaging Neuroscience

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

Programming: R; Python; MATLAB
Statistical Analysis: Network analysis; Multilevel modeling; Time-series analysis
Research Method: Functional-MRI; Large-scale language text analyses; Online behavioral experiments