

Michael Zhu

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website: coming in a few days

"I am a slow walker, but I never walk backwards"

Education:

University of California Berkeley

Berkeley, CA, United States

BGA extension (visiting student)

Aug 2023 – would be Dec 2023

Beijing Normal University

Beijing, China

Bachelor in Psychology

Sep 2020 – Present

- **GPA:** 3.93/4.0
- **Rank:** 1/135
- **Core Curriculum:** Experimental psychology, Brain imaging data modeling, MATLAB, Social cognitive neuroscience, Experimental psychology experimental design, Psychometric, Psychological statistics, Social psychology

Major in Chemistry

Sep 2019 – Jun 2020

Research interest:

- 1) *Uncertainty* (especially in the social domain). How does uncertainty profoundly take place in human decision-making and learning process, as the uncertainty aversion can serve as an explanation for many phenomena.
- 2) *The "imperfection" of humankind* — factors that deviate human performance from predictions of the standard models in AI, statistics and economics. Mainly from two perspectives: Social preference and limited cognitive resources.
- 3) Social Cognition. Especially in mechanisms of group perception: Why and how do we intrinsically treat people as different groups? I regard this process as a generalization and structure learning process.
- 4) Other topics like neural synchrony, common currency, and stereotype.

Honors and Awards

- National Scholarship 2021 & 2022
(Highest award in China. Top 0.7%, awarded to those with outstanding performance in general)
- First Prize Scholarship of Beijing Normal University 2020 – 2022
(Top 15%, awarded to those with outstanding academic performance)
- Outstanding Student Award 2021 & 2022
- Social Work Award 2021
- 500px Contracted Photographer 2021
- International Photography Awards (IPA) Honorable Mention 2022
- Championship in University Tai Chi Competition 2023

Research Experience

Parent-child neural synchronization and emotion regulation

Researcher, Advised by Professor Rachel Han & Professor Qiandong Wang Jul 2021 – Jul 2022
Beijing Normal University Beijing, China

- Complete fNIRs training for over 150 hours: Collection of adults and children fNIRs data; fNIRs data pre-processing and analysis (*functional connectivity, Granger causality analysis, in MATLAB*).
- Acquired several techniques during practice (data collection and analysis), including fNIRs, eye movements, behavioral coding, fMRI, physiological measurement.
- Participated in paper writing and the development of mindfulness curriculum.

Think twice before you rate: A novel Likert-like metric opens the window of attitude measurement

Researcher, Advised by Professor Yueqin Hu Oct 2021 – Present
Beijing Normal University Beijing, China

- Designed a novel measurement format to investigate public attitude towards people with disease; Utilized techniques such as behavioral modeling to reveal the cognitive processes during questionnaire responding.
- Full experience in psychology research, leading this independent research project: literature review, experimental design, questionnaire design and construction, data collection, cleaning and statistical analysis (*Exploratory analysis, ANOVA, Regression, Cross-classification Model, a variant of Linear Mixed Model*), visualization, behavioral modeling (*Drift Diffusion Model, DDM*). In main charge of paper writing. Analysis and modeling are done in R and Python.
- Developed schedule management skills and improved communication abilities through interactions with participants and advisors.

From mutual damage to Win-win: Inter-group and within-group contributors to strategy switch during group conflict

Researcher, Advised by Professor Yina Ma Mar 2023 – Present
Beijing Normal University Beijing, China

- Worked on a collection of behavioral data of a group conflict paradigm (IADC game) to investigate the underpins of strategy switch, as well as the external and internal influence factors during intergroup conflict.
- Performed statistical analysis (*ANOVA, Correlation, Multiple Linear Regression, Linear Mixed Model LMM*), visualization and machine learning (*Hidden Markov Modelling HMM, Hierarchical and K-Means Clustering, Time Series analysis: Dynamic Time Warping DTW, Bag of Patterns BoP, and other algorithms for time series data classification and clustering*). Done in R and Python.
- Gained valuable methodological insights and acquired conceptual inspiration from reviewing relevant papers in psychology and economics, as well as books in sociology like *The Crowd: A Study of the Popular Mind*.
- Paper writing in the near future.

PUBLICATIONS

Liu, S., Han, Z. R.*, Xu, J., Wang, Q., Gao, M. M., Weng, X., **Zhu, Y.**, Qin, S., & Rubin, K. H. Parenting links to parent-child neural synchrony: A real-time fNIRS hyper-scanning study. (Under review)

Xu, J., Zhang, Y., Wang, H., Peng, M., **Zhu, Y.**, Wang, X., Yi, Z., Chen, Lu., Han, Z. R.* A Context-Dependent Perspective to Understand the Relation between Parent-Child Physiological Synchrony and Child Socioemotional Adjustment. (Under review)

Zhu, Y., Hu, Y. * Think twice before you rate: A novel Likert-like metric opens the window of self-reported attitude (In preparation)

Skills

Programing, Statistics & Tools

- R (competent), Python (competent), MATLAB (competent), SPSS, Web design, JsPsych, Mplus, Qualtrics, E-Prime, Psychopy, Java, C, VBA
- Previous relative experiences: Behavioral modelling (DDM, GMM, HMM) in R and Python; Capable for producing all kinds of high-quality graphs in R; Semantic data and time series data analysis in Python; Image edge-detection processing, drawing a vivid Christmas tree and making a simple (not that simple) version of the game Angry Birds in MATLAB.

Professional in using graphic design software like Photoshop

- Designed and created the cover for the faculty website, as well as my own personal website (in preparation).
- Contracted and certified photographer. Have created several innovative composite artworks, featured in international competitions and university-level exhibitions.

Language: English (IELTS 7.0), Chinese (Native Speaker)

Interests & Social work

Interests

- Photography Enthusiast, capturing the fleeting moments of coincidence and beauty with my camera.
- Passionate about Chinese traditional culture, especially the philosophy of Tai Chi.
- Hiking, camping and sports (gym and ball sports).

Social work

- Editor at the New Media Center, Beijing Normal University Sep 2021 – Present
- Head of Academic Affairs Department, Psychology Student Union, Beijing Normal University Jul 2021 – Sep 2022
- Flag bearer at the Beijing Normal University Choir Competition. Dec 2019