

# Xucong Hu

MSc IN PSYCHOLOGY · ZHEJIANG UNIVERSITY

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## Education

### Zhejiang University (ZJU)

M.S. IN PSYCHOLOGY

Hangzhou, China

Sep. 2024 - Jun. 2027 (Expected)

- **GPA:** 4.0/4.0 (1/60)
- **Advisor:** Jifan Zhou, Mowei Shen
- **Award:**
  - National Scholarship (2024-2025, National, Top 1 student in college)
  - First-Class Academic Scholarship (2024-2025, University, Top 50%)

### Southwest University (SWU)

B.S. IN PSYCHOLOGY

Chongqing, China

Sep. 2020 - Jun. 2024

- **GPA:** 4.13/5.0 (2/103)
- **Award:**
  - First-Class Academic Scholarship (2020-2021, 2021-2022, 2022-2023, University, Top 3%)
  - Excellent Undergraduate Thesis Award (2024, University, Top 10%)
  - Challenge Cup Bronze Award (2023, Provincial, Top 30%)
  - Provincial Undergraduate Training Program for Innovation and Entrepreneurship, (2023, University, Top 10%)

## Publication

### PUBLISHED

#### Journal Article

- **Hu, X.**, Xu, H., Chen, H., Shen, M., & Zhou, J. (2025). Good to see you R2-D2: Inducing spontaneous perspective-taking towards non-human agents through human-like gaze and reach. *Cognition*, 259, 106101. 📄
- Zhao, Y., **Hu, X.**, Zhou, J., Shen, M., & Xu, H. (2025). Enhancement of joint flanker effect in intergroup competition. *PsyCh Journal*, 14(1), 94–102. 📄
- **Hu, X.**, & Tong, S. (2023). Effects of robot animacy and emotional expressions on perspective-taking abilities: a comparative study across age groups. *Behavioral Sciences*, 13(9), 728. 📄
- Zhu, J., Yang, Z., Ma, R., Yin, L., & **Hu, X.** (2022). Face beauty or soul beauty? The influence of facial attractiveness and moral judgment on pain empathy. *Frontiers in Psychology*, 13, 990637. 📄

#### Conference Article

- **Hu, X.**, Hu, Q., Yu, T., Shen, M., & Zhou, J. (2026, Mar). RoSIP: A Scale for Measuring Appearance-Based Social Interaction Potential in Robots. In *Companion of the 2026 ACM/IEEE International Conference on Human-Robot Interaction (HRI)*. 📍 **Edinburgh, UK.**
- **Hu, X.**, Zhou, J., & Shen, M. (2024, Dec). Spontaneous perspective-taking toward multi-view robots: Evidence supporting the social agent model. In *Proceedings of the 2024 Conference on Industrial Psychology and New Productivity*. 🗣️ **Oral 📍 Shanghai, China.**
- **Hu, X.** (2022, May). The uncanny valley effect and induced compensatory consumption behavior in language conditions. *Lecture Notes in Education Psychology and Public Media*, 4, 426–436. 📄 🗣️ **Oral 📍 Online**

### UNDER REVIEW

- **Hu, X.**, Xu, H., Chen, H., Shen, M., & Zhou, J. (2025). Seeing through Janus' Eyes: How Humans Spontaneously Adopt Multiple Perspectives of Robot Avatars. (under revision at *International Journal of Social Robotics*)
- **Hu, X.**, Xu, E., Xu, H., Shen, M., & Zhou, J. (2025). Causal Relationship Between Robot Perception and Behavior: A User-Centered Explainability Approach. (under revision at *International Journal of Human-Computer Interaction*)
- **Hu, X.**, Zheng, Y., Hu, Q., Chen, H., Shen, M., & Zhou, J. (2025). I'll Believe It Unless It's Too Absurd: Spontaneous Visual Perspective-Taking as Prior-Based Heuristic Inference. (under revision at *Cognition*)
- **Hu, X.**, & Zhu, J. Q. (2026). Simulated annealing enhances theory-of-mind reasoning in autoregressive language models. (under review). 📄 arXiv.
- Hu, Q., Fei, X., Li, Z., **Hu, X.**, Zhang, M., Shen, M., & Zhou, J. (2026). Beyond Human-like Responses: Evaluating the Implicit Personality Alignment of Large Language Models. (under review)

## Research Experience

## Research Assistant | Social Cognition underlying Human-Robot Interaction

Hangzhou, China

SUPERVISED BY PROF. JIFAN ZHOU & PROF. MOWEI SHEN, ZHEJIANG UNIVERSITY

Jun. 2023 - Current

- Designed and implemented online cognitive psychology experiments using JavaScript and HTML, collecting behavioral data (reaction times, accuracy) from 3,000+ participants.
- Conducted statistical analyses in R (ANOVA, t-test, logistic regression, GLMM) on behavioral datasets.
- Performed exploratory and confirmatory factor analyses and reliability/validity testing on questionnaire data from 750 participants using R.
- Built predictive models of user ratings on robots with Python (scikit-learn, XGBoost), applying SHAP for interpretable machine learning.
- Created publication-quality visualizations using R (ggplot2) and Python (matplotlib).
- Collected eye-tracking data with Tobii, integrated participants' verbal reports with video-based behavioral coding, and applied Hidden Markov Models (HMMs) in PyMC for cognitive process modeling (ongoing).
- Produced 6+ peer-reviewed manuscripts in psychology, robotics, and computer science, with publications in leading journals such as Cognition.

## Research Assistant | Test-time Optimization for Theory-of-Mind Reasoning in LLMs

Hong Kong, China

SUPERVISED BY PROF. JIANQIAO ZHU, THE UNIVERSITY OF HONG KONG

Oct. 2025 - Present

- Developed a test-time optimization method based on simulated annealing and sequence-level MCMC power sampling to elicit Theory-of-Mind reasoning in autoregressive language models without retraining.
- Applied the method to small language models (e.g. **Phi3.5-mini-Instruct**) on the BigToM benchmark, enabling coherent belief attribution in backward false-belief inference and revealing key failure modes in standard decoding.

## Research Assistant | Cognitive Load in Command Decision-Making

Beijing, China

SUPERVISED BY PROF. JINGYU ZHANG, CHINESE ACADEMY OF SCIENCES, INSTITUTE OF PSYCHOLOGY

Apr. 2023 - Aug. 2023

- Simulated multitasking decision-making tasks using the strategy game Command: Modern Operations.
- Conducted semi-structured expert interviews with professional commanders.
- Collected eye-tracking data with Tobii and physiological measures (heart rate, skin conductance) with BIOPAC.
- Analyzed behavioral data with R (ANOVA, t-test) and created visualizations with ggplot2.

## Research Assistant | Perspective-Taking toward Robots in Older Adults

Beijing, China

SUPERVISED BY DR. SONG TONG, TSINGHUA UNIVERSITY

Sep. 2022 - Aug. 2023

- Created human-like face stimuli with varying anthropomorphism using FantaMorph.
- Programmed experimental tasks with PsychoPy (Python).
- Recruited and assisted older adult participants from community settings in completing tests and questionnaires.
- Analyzed behavioral data in SPSS using ANOVA and t-tests.

## Skill

### CODING

- **Statistics:** R, Python (statsmodels, scipy, PyMC), SPSS, Mplus, Bayesian Modeling, Factor Analysis, Structural Equation Modeling
- **Machine Learning:** Python (scikit-learn, XGBoost, PyTorch, SHAP), Reinforcement Learning (Q-learning)
- **Frontend:** HTML, CSS, JavaScript, React, NEXT.js
- **Backend:** Node.js
- **Software Design:** Photoshop, Figma, Unity, Blender

### LANGUAGE

- **English:** GRE (159+169+4.0), IELTS (7.0)
- **Chinese:** Native

## Reviewer

- **Behavioral Sciences** (SSCI Q2)
- **ACM/IEEE International Conference on Human-Robot Interaction (HRI' 26)** Late Breaking Reports.

## References

### Jifan Zhou, Mowei Shen

PROFESSOR

- Department of Psychology and Behavioral Sciences, Zhejiang University
- [jifanzhou@zju.edu.cn](mailto:jifanzhou@zju.edu.cn), [mwshen@zju.edu.cn](mailto:mwshen@zju.edu.cn)

### Jianqiao Zhu

ASSISTANT PROFESSOR

- Department of Psychology, The University of Hong Kong
- [zhujq@hku.hk](mailto:zhujq@hku.hk)