

✉ sye10@jh.edu
🏠 [homepage](#)
🔍 [google scholar](#)
🐦 [x.com/suyu_ye](#)
🌐 [linkedin.com/in/suyu-ye](#)

Department of Computer Science
Johns Hopkins University
Baltimore, MD
United States

Research Overview

My research is in embodied AI and robot learning: building agents that perceive, reason about, and act in the physical world, and that learn to collaborate with people. Topics I worked on in the past include:

- **Long-horizon, physically grounded agents.**
- **Human-robot collaboration**, including inferring human intent and grounding natural language into executable, physically grounded plans.
- **Multimodal theory of mind and social reasoning** in multi-agent settings.
- **Generative world models** for embodied belief inference, planning, and perception under occlusion.

Education

Ph.D. CS 2026-2031 (exp.)	Johns Hopkins University Advisors: Tianmin Shu, Homanga Bharadwaj Incoming
B.S. CS & AMS 2023-2026	Johns Hopkins University Advisor: Tianmin Shu GPA: 3.94/4.0; Graduated with Honors

Experience

Research Intern May 2026-Present	Honda Research Institute
Undergraduate Researcher 2024-2026	Johns Hopkins University Social Cognitive AI Lab (SCAI) PI: Tianmin Shu
Course Assistant 2025	Johns Hopkins University Theory of Computation
Military Service 2021-2023	Singapore Armed Forces

Honors and Awards

CRA Outstanding Undergraduate Researcher Award, Honorable Mention	2026
Outstanding Senior Award, Johns Hopkins University	2026
National Merit Scholarship	2023

Selected Publications

The * sign denotes equal contribution.

Peer-Reviewed Papers

C3 Jieneng Chen*, Tiezheng Zhang*, Xiwei Xuan, Ju He, Yifan Yin, Haojun Shi, Suyu Ye, Xinyi Li, Ruisheng Yuan, Tianmin Shu, and Alan Yuille. [Fast Generative DeOcclusion for Vision and Robotics](#). In *Computer Vision and Pattern Recognition (CVPR) Findings*. 2026.

C2 Suyu Ye*, Haojun Shi*, Darren Shih, Hyokun Yun, Tanya Roosta, and Tianmin Shu. [RealWebAssist: A Benchmark for Long-Horizon Web Assistance with Real-World Users](#). In *Association for the Advancement of Artificial Intelligence (AAAI)*. 2026.

C1 Haojun Shi*, Suyu Ye*, Xinyu Fang, Chuanyang Jin, Leyla Isik, Yen-Ling Kuo, and Tianmin Shu. [MuMA-ToM: Multi-modal Multi-Agent Theory of Mind](#). In *Association for the Advancement of Artificial Intelligence (AAAI) Oral*. 2025.

J1 Philip J. Freda, Suyu Ye, Robert Zhang, Jason H. Moore, and Ryan J. Urbanowicz. [Assessing the Limitations of Relief-Based Algorithms in Detecting Higher-Order Interactions](#). In *BioData Mining*. 2024.

Preprints

P2 Yifan Yin*, Zehao Wen*, Suyu Ye, Jieneng Chen, Zehan Zheng, Nanru Dai, Haojun Shi, Aydan Huang, Zheyuan Zhang, Alan Yuille, Jianwen Xie, Ayush Tewari, and Tianmin Shu. [3D-Belief: Embodied Belief Inference via Generative 3D World Modeling](#). In *arXiv Preprint*. 2026.

P1 Haojun Shi*, Suyu Ye*, Katherine M. Guerrerio, Jianzhi Shen, Yifan Yin, Daniel Khashabi, Chien-Ming Huang, and Tianmin Shu. [Safe and Interpretable Multimodal Path Planning for Multi-Agent Cooperation](#). In *arXiv Preprint*. 2026.

Workshop Presentations

RealWebAssist	NeurIPS Workshop on Multi-Turn Interactions in LLMs	2025
RealWebAssist	NeurIPS Workshop on Bridging Language, Agent and World Models (Spotlight)	2025
RealWebAssist	NeurIPS Workshop on Scaling Environments for Agents	2025
MuMA-ToM	NeurIPS Workshop on Video-Language Models (Poster)	2024
MuMA-ToM	NeurIPS Workshop on Behavioral ML (Poster)	2024

Professional Service

Conference and Journal Refereeing

Association for the Advancement of Artificial Intelligence (AAAI)	2026
Neural Information Processing Systems (NeurIPS)	2026
International Conference on Machine Learning (ICML)	2026
IEEE Robotics and Automation Letters (RA-L)	2026