

# Chi Zhang

PH.D., COMPUTER SCIENCE, UNIVERSITY OF CALIFORNIA, LOS ANGELES

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## EDUCATION

**University of California - Los Angeles**, Los Angeles, U.S.

*Doctor of Philosophy*, Computer Science

Advisor: Prof. Song-Chun Zhu

**GPA: 4.00/4.00**

*Sept 17 - Aug 22*

**University of California - Los Angeles**, Los Angeles, U.S.

*Master of Science*, Computer Science

Advisor: Prof. Song-Chun Zhu

**GPA: 4.00/4.00**

*Sept. 17 - March 19*

**Zhejiang University**, Hangzhou, China

*Bachelor of Engineering*, Computer Science

**GPA: 3.93/4.00 Rank: 1/17**

*Sept. 13 - June 17*

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## RESEARCH INTERESTS

Cognitive Reasoning, Abstract Reasoning, Visual Reasoning, Concept Learning, Neural-Symbolic Methods, Learning and Search

## CONFERENCES

Shiqian Li, Yuxi Ma, Jiajun Yan, Bo Dai, Yujia Peng, **Chi Zhang**, Yixin Zhu, A simulation-heuristics dual-process model for intuitive physics, in *Proceedings of Annual Meeting of the Cognitive Science Society (CogSci)*, 2025

Yongqian Peng, Yuxi Ma, Mengmeng Wang, Yuxuan Wang, Yizhou Wang, **Chi Zhang**, Yixin Zhu, Zilong Zheng, Probing and Inducing Combinational Creativity in Vision-Language Models, in *Proceedings of Annual Meeting of the Cognitive Science Society (CogSci)*, 2025

Shiqian Li, Kewen Wu, **Chi Zhang**, Yixin Zhu, I-PHYRE: Interactive Physical Reasoning, in *Proceedings of the International Conference on Learning Representations (ICLR)*, 2024

Manjie Xu, Guangyuan Jiang, Wei Liang, **Chi Zhang**, Yixin Zhu, Active Reasoning in an Open-World Environment, in *Proceedings of Advances in Neural Information Processing Systems (NeurIPS)*, 2023

Guangyuan Jiang\*, Manjie Xu\*, Song-Chun Zhu, Wenjuan Han, **Chi Zhang**, Yixin Zhu, Evaluating and Inducing Personality in Pre-trained Language Models, in *Proceedings of Advances in Neural Information Processing Systems (NeurIPS)*, 2023

Manjie Xu\*, Guangyuan Jiang\*, Wei Liang, **Chi Zhang**, Yixin Zhu, Interactive Visual Reasoning under Uncertainty, in *Proceedings of Advances in Neural Information Processing Systems (NeurIPS)*, 2023

Bo Dai, Linge Wang, Baoxiong Jia, Zeyu Zhang, Song-Chun Zhu, **Chi Zhang**, Yixin Zhu, X-VoE: Measuring eXplanatory Violation of Expectation in Physical Events, in *Proceedings of International Conference on Computer Vision (ICCV)* (ICCV), 2023

Guangyuan Jiang, Manjie Xu, Shiji Xin, Wei Liang, Yujia Peng, **Chi Zhang**, Yixin Zhu, MEWL: Few-shot multimodal word learning with referential uncertainty, in *Proceedings of International Conference on Machine Learning (ICML)*, 2023

Shiqian Li\*, Kewen Wu\*, **Chi Zhang**, Yixin Zhu, On the Learning Mechanisms in Physical Reasoning, in *Proceedings of Advances in Neural Information Processing Systems (NeurIPS)*, 2022

**Chi Zhang**\*, Sirui Xie\*, Baoxiong Jia\*, Ying Nian Wu, Song-Chun Zhu, Yixin Zhu, Learning Algebraic Representation for Systematic Generalization in Abstract Reasoning, in *Proceedings of the European Conference on Computer Vision (ECCV)*, 2022

**Chi Zhang**, Lijuan Liu, Xiaoxue Zang, Frederick Liu, Hao Zhang, Xinying Song, Jindong Chen, DETR++: Taming Your Multi-Scale Detection Transformer, in *T4V: Transformers for Vision @ CVPR*, 2022

**Chi Zhang**, Baoxiong Jia, Mark Edmonds, Song-Chun Zhu, Yixin Zhu, ACRE: Abstract Causal Reasoning Beyond Covariation, in *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2021

**Chi Zhang**\*, Baoxiong Jia\*, Song-Chun Zhu, Yixin Zhu, Abstract Spatial-Temporal Reasoning via Probabilistic Abduction and Execution, in *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2021

Xu Xie, **Chi Zhang**, Yixin Zhu, Ying Nian Wu, Song-Chun Zhu, Congestion-aware Multi-agent Trajectory Prediction for Collision Avoidance, in *Proceedings of International Conference on Robotics and Automation (ICRA)*, 2021

Wenhe Zhang, **Chi Zhang**, Yixin Zhu, Song-Chun Zhu, Machine Number Sense: A Dataset of Visual Arithmetic Problems for Abstract and Relational Reasoning, in *Proceedings of AAAI Conference on Artificial Intelligence (AAAI)*, 2020 (**Oral**)

**Chi Zhang**\*, Baoxiong Jia\*, Feng Gao, Yixin Zhu, Hongjing Lu, Song-Chun Zhu, Learning Perceptual Inference by Contrasting, in *Proceedings of Advances in Neural Information Processing Systems (NeurIPS)*, 2019 (**Spotlight**)

Xu Xie\*, Changyang Li\*, **Chi Zhang**, Yixin Zhu, Song-Chun Zhu, Learning Virtual Grasp with Failed Demonstrations via Bayesian Inverse Reinforcement Learning, in *Proceedings of International Conference on Intelligent Robots and Systems (IROS)*, 2019

**Chi Zhang**\*, Feng Gao\*, Baoxiong Jia, Yixin Zhu, Song-Chun Zhu, RAVEN: A Dataset for Relational and Analogical Visual reasoning, in *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019

**Chi Zhang**, Yixin Zhu, Song-Chun Zhu, MetaStyle: Three-Way Trade-Off Among Speed, Flexibility, and Quality in Neural Style Transfer, in *Proceedings of AAAI Conference on Artificial Intelligence (AAAI)*, 2019

Hangxin Liu, **Chi Zhang**, Yixin Zhu, Chenfanfu Jiang, Song-Chun Zhu, Mirroring without Overimitation: Learning Functionally Equivalent Manipulation Actions, in *Proceedings of AAAI Conference on Artificial Intelligence (AAAI)*, 2019

Siyi Li, Tianbo Liu, **Chi Zhang**, Dit-Yan Yeung, Shaojie Shen, Learning Unmanned Aerial Vehicle Control for Autonomous Target Following, in *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, 2018.

## JOURNALS

**Chi Zhang**, Jiajun Song, Siyu Li, Yitao Liang, Yuxi Ma, Wei Wang, Yixin Zhu, Song-Chun Zhu, Proposing and solving olympiad geometry with guided tree search. Under review.

**Chi Zhang**, Baoxiong Jia, Yixin Zhu, Song-Chun Zhu, Human-level few-shot concept induction through minimax entropy learning, *Science Advances* 10.16 (2024): eadg2488.

Yixin Zhu, Tao Gao, Lifeng Fan, Siyuan Huang, Mark Edmonds, Hangxin Liu, Feng Gao, **Chi Zhang**, Siyuan Qi, Ying Nian Wu, Joshua B. Tenenbaum, Song-Chun Zhu, Dark, Beyond Deep: A Paradigm Shift to Cognitive AI with Humanlike Common Sense, *Engineering*, Volume 6, Issue 3, Pages 310-345

Zheqian Chen, **Chi Zhang**, Zhou Zhao, Deng Cai, Question Retrieval for Community-based Question Answering via Heterogeneous Social Influential Network, *Neurocomputing*, Volume 285, Pages 117-124

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PATENTS

Xiangdong Li, Shihong Lv, Yikun Wang, Xiaowo Sun, **Chi Zhang**, A Method of Exact 3D Modeling Based on Natural Gestures via Data Gloves. Publication number: CN104778746 A.

SERVICE

I review for CVPR, ICCV, ECCV, AAAI, NeurIPS, ICLR, ICML, TIP, TNNLS and Psychology Review.

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PROFESSIONAL  
EXPERIENCE

**Large Language Model Research Scientist**  
*ByteDance Seed*

*Feb. 24, 2025 - Now*

**Research Scientist**  
*Beijing Institute for General Artificial Intelligence*

*Oct. 1, 2022 - Feb. 21, 2025*

**Research Intern**  
*Google Research*

*June 21, 2021 - Sept. 17, 2021*

**Applied Research Scientist Intern**  
*Amazon*

*March 22, 2021 - June 11, 2021*

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HONORS &  
SCHOLARSHIPS

**Travel Award**, NeurIPS, 2019  
**First-class Academic Excellence Scholarship**, Zhejiang University, 2013 - 2016  
**First-class Research and Innovation Scholarship**, Zhejiang University, 2015  
**Chinese Talent Scholarship**, Asahi Kasei, 2016  
**Outstanding University Student Scholarship**, Baosteel Group, 2016  
**Meritorious Winner of Mathematical Contest in Modeling**, 2015

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SELECTED  
PROJECTS

**MXNet**  
*Hong Kong University of Science and Technology*

*Sept. 16, 2016 - April 17, 2017*

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