

- REFEREED JOURNAL PAPERS [3] C. Jiang*, S. Qi*, **Y. Zhu***, S. Huang*, Jenny Lin, Lap-Fai Yu, D. Terzopoulos, and S.-C. Zhu. (★ Joint first authors) Configurable 3D Scene Synthesis and 2D Image Rendering with Per-Pixel Ground Truth using Stochastic Grammars. International Journal of Computer Vision (IJCV) (2018).
- [2] Y. Hu, Y. Fang, Z. Ge, Z. Qu, **Y. Zhu**, A. Pradhana, and C. Jiang. A Moving Least Squares Material Point Method with Displacement Discontinuity and Two-Way Rigid Body Coupling. ACM Transactions on Graphics (TOG) (Proceedings of ACM SIGGRAPH) (2018).
- [1] T. Ye*, S. Qi*, J. Kubricht, **Y. Zhu**, H. Lu, and S.-C. Zhu. (★ Joint first authors) The Martian: Examining Human Physical Judgments Across Virtual Gravity Fields. Invited Talk at IEEE VR 2017 and VRLA 2017. IEEE Transactions on Visualization and Computer Graphics (TVCG) 23.4 (2017): 1399-1408.
- REFEREED CONFERENCE PAPERS [16] M. Edmonds*, J. Kubricht*, C. Summers, **Y. Zhu**, B. Rothrock, S.-C. Zhu, and H. Lu. (★ Joint first authors) Human Causal Transfer: Challenges for Deep Reinforcement Learning. Oral Presentation. 40th Annual Conference of the Cognitive Science Society (CogSci), 2018.
- [15] S. Qi, **Y. Zhu**, S. Huang, C. Jiang, and S.-C. Zhu. Human-centric Indoor Scene Synthesis using Stochastic Grammar. Poster Presentation. 31th Computer Vision and Pattern Recognition (CVPR), 2018.
- [14] H. Liu*, Y. Zhang*, W. Si, X. Xie, **Y. Zhu**, and S.-C. Zhu. (★ Joint first authors) Interactive Robot Knowledge Patching using Augmented Reality. Poster Presentation. 35th International Conference on Robotics and Automation (ICRA), 2018.
- [13] X. Xie*, H. Liu*, M. Edmonds, F. Gao, S. Qi, **Y. Zhu**, B. Rothrock, and S.-C. Zhu. (★ Joint first authors) Unsupervised Learning of Hierarchical Models for Hand-Object Interactions using Tactile Glove. Poster Presentation. 35th International Conference on Robotics and Automation (ICRA), 2018.
- [12] D. Wang*, J. Kubricht*, **Y. Zhu***, W. Liang, S.-C. Zhu, C. Jiang, and H. Lu. (★ Joint first authors) Spatially Perturbed Collision Sounds Attenuate Perceived Causality in 3D Launching Events. Oral Presentation. 25th IEEE Conference on Virtual Reality and 3D User Interfaces (IEEE VR), 2018.
- [11] W. Liang, **Y. Zhu**, and S.-C. Zhu. Tracking Occluded Objects and Recovering Incomplete Trajectories by Reasoning about Containment Relations and Human Actions. Spotlight Presentation. 32th AAAI Conference on Artificial Intelligence (AAAI), 2018.
- [10] M. Edmonds*, F. Gao*, X. Xie, H. Liu, **Y. Zhu**, B. Rothrock, and S.-C. Zhu. (★ Joint first authors) Learning Complex Functional Manipulations by Human Demonstration and Fluent Discovery. Oral Presentation. 30th International Conference on Intelligent Robots and Systems (IROS), 2017.
- [9] H. Liu*, X. Xie*, M. Millar*, M. Edmonds, F. Gao, **Y. Zhu**, V. J. Santos, B. Rothrock, and S.-C. Zhu. (★ Joint first authors) A Glove-based System for Studying Hand-Object Manipulation via Pose and Force Sensing. Oral Presentation. 30th International Conference on Intelligent Robots and Systems (IROS), 2017.
- [8] J. Kubricht*, **Y. Zhu***, C. Jiang*, D. Terzopoulos, S.-C. Zhu, and H. Lu. (★ Joint first authors) Consistent Probabilistic Simulation Underlying Human Judgment in Substance Dynamics. Oral Presentation. 39th Annual Conference of the Cognitive Science Society (CogSci), 2017.
- [7] J Lin*, **Y. Zhu***, J. Kubricht*, S.-C. Zhu, and H. Lu. (★ Joint first authors)

- Visuomotor Adaptation and Sensory Recalibration in Reversed Hand Movement Task.
Poster Presentation.
39th Annual Conference of the Cognitive Science Society (CogSci), 2017.
- [6] J. Lin*, X. Guo*, J. Shao*, C. Jiang, **Y. Zhu**, and S.-C. Zhu. (* Joint first authors)
A Virtual Reality Platform for Dynamic Human-Scene Interaction.
Oral Presentation.
ACM SIGGRAPH Asia 2016, Workshop on Virtual Reality meets Physical Reality
- [5] W. Liang, Y. Zhao, **Y. Zhu**, and S.-C. Zhu.
What is Where: Inferring Containment Relations from Videos.
Oral Presentation.
25th International Joint Conference on Artificial Intelligence (IJCAI), 2016.
- [4] J. Kubricht*, C. Jiang*, **Y. Zhu***, S.-C. Zhu, D. Terzopoulos, and H. Lu. (* Joint first authors)
Probabilistic Simulation Predicts Human Performance on Viscous Fluid-Pouring Problem.
Oral Presentation.
38th Annual Conference of the Cognitive Science Society (CogSci), 2016.
- [3] **Y. Zhu***, C. Jiang*, Y. Zhao, D. Terzopoulos, and S.-C. Zhu. (* Joint first authors)
Inferring Forces and Learning Human Utilities From Videos.
Oral Presentation.
29th Computer Vision and Pattern Recognition (CVPR), 2016.
- [2] W. Liang, Y. Zhao, **Y. Zhu**, and S.-C. Zhu.
Evaluating Human Cognition of Containing Relations with Physical Simulation.
Oral Presentation.
37th Annual Conference of the Cognitive Science Society (CogSci), 2015.
- [1] **Y. Zhu***, Y. Zhao*, and S.-C. Zhu. (* Joint first authors)
Understanding Tools: Task-Oriented Object Modeling, Learning and Recognition.
Poster Presentation.
28th Computer Vision and Pattern Recognition (CVPR), 2015.

TECHNICAL
REPORTS

J. Jeon, K. Micinski, J. Vaughan, N. Reddy, **Y. Zhu**, J. Foster, and T. Millstein.
Dr. Android and Mr. Hide: Fine-grained security policies on unmodified Android.
Technical Reports of the Computer Science Department, University of Maryland, 2015

PROFESSIONAL
SERVICES

Conference Organization

Webmaster, Computer Vision and Pattern Recognition (CVPR) 2019

Co-chair, Computer Vision and Pattern Recognition (CVPR) 2018 Workshop on
Vision meets Cognition: Functionality, Physics, Intentionality and Causality

Co-chair, Computer Vision and Pattern Recognition (CVPR) 2017 Workshop on
Vision meets Cognition: Functionality, Physics, Intentionality and Causality

Co-chair, SIGGRAPH Asia 2016 Workshop on
Virtual Reality meets Physical Reality: Modelling and Simulating Virtual Humans and Environments

Co-chair, CogSci 2016 Workshop on
Physical and Social Scene Understanding

Student Organizer, MURI Annual Review Meeting, UCLA, 2017.
Student Organizer, MURI Annual Review Meeting, Lake Arrowhead, 2015.

Peer-reviewed Journals and Conferences

Reviewer, Computer Vision and Pattern Recognition (CVPR), 2015-2018
Reviewer, International Journal of Computer Vision (IJCV), 2015-2016
Reviewer, International Conference on Computer Vision (ICCV), 2015-2017
Reviewer, European Conference on Computer Vision (ECCV), 2018

Reviewer, Annual Conference of the Cognitive Science Society (CogSci), 2015-2018
Reviewer, British Machine Vision Conference (BMVC), 2017-2018
Reviewer, IEEE Conference on Virtual Reality and 3D User Interfaces (IEEE VR), 2018
Reviewer, ACM User Interface Software and Technology Symposium (UIST), 2018

Department and University Services

Faculty Leader, Peer Seminars in Math/Stat, UCLA-CSST, 2016
Student Reviewer, UCLA Computer Science Graduate Admission, 2015-2018
Student Reviewer, UCLA-CSST Program Admission, 2016-2018
PhD Student Ambassadors, UCLA Computer Science Department, 2016-2018

INVITED TALKS	Guest Lecture: Tools and Functionality <i>at</i> UCLA Statistics 232C: Cognitive Artificial Intelligence	May 2018
	Guest Lecture: How to Build a Cognitive Robot <i>at</i> UCLA Communication Study 155: Artificial Intelligence and New Media	May 2017
	To Feel and Dream: Data for Intelligent Machine Beyond Images and Texts <i>at</i> Teddy Talk in plenary session at CRESSTCON 2016	September 2016
	Understanding Functionality and Affordance of Objects and Scenes <i>at</i> Beijing Institute of Technology	May 2016
	Functionality and Affordance of Objects and Scenes <i>at</i> Princeton Vision Group	February 2016
	Understanding Objects as Tools, Containers and Chairs <i>at</i> UCLA Computational Vision and Learning Lab and UCLA Human Perception Lab	November 2015
	Learning from Human Demonstration: Understanding Objects as Tools <i>at</i> ONR MURI Annual Review Meeting	September 2015
	Understanding Tool Use: a Task-oriented Vision Problem <i>at</i> ONR MURI Annual Review Meeting	December 2014
IN THE PRESS	What is a Tool? Going beyond what is where <i>at</i> DARPA MSEE Annual Review Meeting	September 2014
	Our work on Scene Understanding was featured in UCLA Statistics Moments.	June 2016
	UCLA Daily Bruin Prime issued a special interview on our work. Title: "Give a Robot a Flesh"	May 2016
	Our work on "Understanding Tools" was featured in Statistics Department News.	June 2015
COLLABORATORS	– Prof. Chenfanfu Jiang <i>at</i> Computer Graphics Group, UPenn	
	– Prof. Demetri Terzopoulos <i>at</i> Computer Graphics & Vision Laboratory, UCLA	
	– Dr. Brandon Rothrock <i>at</i> Jet Propulsion Laboratory, Caltech	
	– James Kubricht and Prof. Hongjing Lu <i>at</i> Computational Vision and Learning Lab, UCLA	
	– Prof. Ying Nian Wu	

at Department of Statistics, UCLA

- Prof. Tao Gao
at Department of Statistics and Communication Studies, UCLA
- Prof. Wei Liang
at Media Computing and Intelligent Systems Lab, Beijing Institute of Technology
- Dr. Yibiao Zhao
at iSee.ai
- Prof. Elias Bareinboim
at Department of Computer Science and Statistics, Purdue University
- Prof. Lap-Fai (Craig) Yu
at Graphics and Virtual Environments Lab, UMass Boston
- Jiajun Wu
at CASIL, MIT
- Prof. Tianfu Wu
at NC State University (NC SU)
- Dr. Sara Spotorno, Dr. Tian Xu and Prof. Philippe Schyns
at Centre for Cognitive Neuroimaging, University of Glasgow
- Eric Peltola and Prof. Veronica Santos
at Biomechatronics Lab, UCLA
- Michael Walton and Andrew Fuchs
at SPAWAR, San Diego

STUDENTS
MENTORED

- Shu Wang, PhD in Statistics, UCLA, 2018 Fall
- Wenwen Si, Master in Computer Vision, CMU, 2018 Fall
- Hangxin Liu, PhD in Computer Science, UCLA, 2018 Spring
- Jenny Lin, PhD in Computer Science, CMU, 2017 Fall
- Mark Edmonds, PhD in Computer Science, UCLA, 2017 Fall
- Tian Ye, Master in Robotics, CMU, 2017 Fall
- Feng Gao, Master in Statistics, UCLA, 2017 Fall
- Xu Xie, Master in Statistics, UCLA, 2017 Fall
- Xingwen Guo, Master in Computer Science, Yale, 2017 Fall
- Chi Zhang, Master in Computer Science, UCLA, 2017 Fall
- Jingyu Shao, Master in Statistics, UCLA, 2016 Winter
- Yutong Zhang, Master in Computer Science, UCLA, 2015 Fall