

Yifan Zhu

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ACADEMIC APPOINTMENTS **Yale University, CT**
Postdoctoral Research Scholar at The Yale GRAB Lab Aug 2023 -

EDUCATION **University of Illinois at Urbana-Champaign, Urbana-Champaign, IL**
Ph.D. in Computer Science Aug 2023

Duke University, Durham, NC
Ph.D. in Electrical and Computer Engineering(transferred) Aug. 2017-Aug. 2019

Vanderbilt University, Nashville, TN
Bachelor of Engineering May 2017
Major: Mechanical Engineering
Minors: Mathematics and Computer Science

INDUSTRY EXPERIENCE **Baidu Robotics & Autonomous-driving Lab, Sunnyvale, CA**
Research Intern May - Dec. 2021

REFEREED CONFERENCE AND JOURNAL PUBLICATION J. Marques*, P. Naughton*, J. C. Peng*, **Y. Zhu***, J. S. Nam, Q. Kong, X. Zhang, A. Penmetcha, R. Ji, N. Fu, V. Ravibaskar, R. Yan, N. Malhotra, and K. Hauser, "Immersive Commodity Telepresence with the TRINA Robot Avatar," *International Journal of Social Robots*, 2024.

P. Thangeda, As. Goel, E. L. Tevere, **Y. Zhu**, E. Kramer, A. Daca, H. D. Nayar, K. Hauser, M. Ornik, "Learning and Autonomy for Extraterrestrial Terrain Sampling: An Experience Report from OWLAT Deployment," *AIAA SCITECH 2024 Forum*, 2024.

Y. Zhu*, P. Thangeda*, M. Ornik, and K. Hauser. "Few-shot Adaptation for Manipulating Granular Materials Under Domain Shift," *Robotics: Science and Systems (RSS)* 2023.

Y. Zhu, L. Wang, and L. Zhang. "Excavation of Fragmented Rocks with Multi-modal Model-based Reinforcement Learning," *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)* 2022.

Y. Zhu, A. Smith, and K. Hauser. "Automated Heart and Lung Auscultation in Robotic Physical Examinations," *IEEE Robotics and Automation Letters (RA-L)* with ICRA 2022 option.

Q. Lu*, **Y. Zhu***, and L. Zhang. "Excavation Reinforcement Learning Using Geometric Representation," *IEEE Robotics and Automation Letters (RA-L)* with ICRA

2022 option.

Y. Zhu, Z. Pan, and K. Hauser. "Contact-Implicit Trajectory Optimization With Learned Deformable Contacts Using Bilevel Optimization," *IEEE International Conference on Robotics and Automation (ICRA)* 2021.

G. Ma, S. Oca, **Y. Zhu**, P. J. Codd., and D. Buckland. "A Novel Robotic System for Ultrasound-guided Peripheral Vascular Localization," *IEEE International Conference on Robotics and Automation (ICRA)* 2021.

Y. Zhu, K. Lu, and K. Hauser. "Semi-Empirical Simulation of Learned Force Response Models for Heterogeneous Elastic Objects," *IEEE International Conference on Robotics and Automation (ICRA)* 2020.

Y. Zhu, L. Abdulmajeid, and K. Hauser. "A Data-driven Approach for Fast Simulation of Robot Locomotion on Granular Media," *IEEE International Conference on Robotics and Automation (ICRA)* 2019.

Y. Zhu, P. J. Swaney, I. S. Godage, R. Lathrop, and R. J. Webster. "A Disposable Robot for Intracerebral Hemorrhage Removal," *Journal of Medical Devices*, 2016; 10(2), 020952.

REFEREED WORKSHOP PAPERS

P. Naughton, S. Nam, J. Marques, J. Peng, **Y. Zhu**, Q. Kong, and K. Hauser. "Pan-Tilt-Roll Televisualization With Adjustable Baseline Stereo," *ICRA Workshop: 2nd Workshop Toward Robot Avatars*, 2023.

J. Marques, J. Peng, P. Naughton, **Y. Zhu**, and K. Hauser. "Commodity Telepresence with the AvaTRINA Nursebot in the ANA Avatar XPRIZE Finals," *ICRA Workshop: 2nd Workshop Toward Robot Avatars*, 2023.

J. Marques*, P. Naughton*, **Y. Zhu***, N. Malhotra, and K. Hauser. "Commodity Telepresence with the AvaTRINA Nursebot in the ANA Avatar XPRIZE Semifinals," *RSS Workshop: Toward Robot Avatars: Perspectives on the ANA Avatar XPRIZE Competition*, 2022.

Y. Zhu, A. Smith, and K. Hauser. "Informative path planning for automatic robotic auscultation," *ICRA Workshop on Impact of COVID-19 on Medical Robotics and Wearables Research*, 2021.

EXPERIENCE

ANA Avatar XPRIZE

Sept. 2019 - Nov. 2022

- One of the team leads on team AVATRINA that scored 4th in the ANA Avatar XPRIZE final, one of the only 4 teams that finished all 10 tasks.

TEACHING(TA)

Intelligent Robotics (UIUC)

Spring 2020

Intro to Robotics and Automation (Duke University)

Fall 2018

Intro to Robotics (Vanderbilt University)

Fall 2015 and Fall 2016

PROFESSIONAL ACTIVITIES

Reviewer for: *IEEE International Conference on Robotics and Automation (ICRA)*; *IEEE International Conference on Intelligent Robots and Systems (IROS)*; *IEEE Robotics and Automation Letters (RA-L)*; *IEEE Transactions on Robotics (T-RO)*;

IEEE International Conference on Advanced Robotics (ICAR); IEEE Robotics & Automation Magazine (RAM)

LINKS

AVATAR XPRIZE team website: <https://avatarxprize.web.illinois.edu/>