

# Zipeng Fu

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## Education & Experience

**Stanford University** 09/2022 –

PhD in Computer Science

- Advised by Prof. Chelsea Finn. GPA: 4.0 / 4.0
- Pierre and Christine Lamond Fellow (Stanford Graduate Fellowship: top 7 in Computer Science Department)
- Working on robot mobile manipulation

**Google DeepMind** 06/2023 – 12/2023

Student Researcher

- Worked on large foundation models for robot navigation. Advised by Jie Tan.

**Carnegie Mellon University (CMU)** 08/2020 – 06/2022

Master of Science in Machine Learning

Graduate Student Researcher at the Robotics Institute

- Advised by Prof. Deepak Pathak and Prof. Jitendra Malik. GPA: 3.93 / 4.00
- Worked on legged locomotion using machine learning

**University of California, Los Angeles (UCLA)** 09/2016 – 06/2020

Bachelor of Science in Computer Science and Engineering

Bachelor of Science in Applied Mathematics

- Advised by Prof. Song-Chun Zhu, Prof. Mathieu Bauchy, and Prof. Weinan Zhang. GPA: 3.801 / 4.000

**Publications** (available at [zipengfu.github.io](https://zipengfu.github.io) | research interests: Robotics, Machine Learning, Computer Vision)

**Mobile ALOHA: Learning Bimanual Mobile Manipulation with Low-Cost Whole-Body Teleoperation** 2024

Z. Fu\*, T.Z. Zhao\*, C. Finn

*media coverage*: MIT Tech Review, VentureBeat, TechXplore, CGTN, Stanford Daily, South China Morning Post, The Beijing News, The Economic Times (India), Analytics India Magazine, The Chosun Daily (Korea), LevTech (Japan), Sanlian Life Weekly, InceptiveMind, 36Kr (China), TMTPos, The Paper (China), Securities Times (China)

*in-person live demo for*: Samsung Research, Toyota Research Institute, Unitree Robotics, XPeng, Dobot Robotics, Ambarella Semiconductor

**Robot Parkour Learning** CoRL 2023

Z. Zhuang\*, Z. Fu\*, J. Wang, C. Atkeson, S. Schwertfeger, C. Finn, H. Zhao

Best System Finalist

**Deep Whole-Body Control: Learning a Unified Policy for Manipulation and Locomotion** CoRL 2022

Z. Fu\*, X. Chen\*, D. Pathak

Best System Finalist

**Coupling Vision and Proprioception for Navigation of Legged Robots** CVPR 2022

Z. Fu\*, A. Kumar\*, A. Agarwal, H. Qi, J. Malik, D. Pathak

Best Paper at Multimodal Learning Workshop

**Minimizing Energy Consumption Leads to the Emergence of Gaits in Legged Robots** CoRL 2021

Z. Fu, A. Kumar, J. Malik, D. Pathak

**RMA: Rapid Motor Adaptation for Legged Robots** RSS 2021

A. Kumar, Z. Fu, D. Pathak, J. Malik

*media coverage*: National Geographic (June 2022), Washington Post, Wall Street Journal, TechCrunch, CBS TV, Forbes, Meta AI, CNET, TechXplore, L'ADN (France), Digitech News (Italy), CNBeta (China), Synced Review (China), Observador (Portugal), Beretakini (Malaysia), 3DNews (Russia), 15Min (Lithuania), GeekTime (Israel)

## Emergence of Theory of Mind Collaboration in Multi-Agent Systems

L. Yuan, Z. Fu, L. Zhou, K. Yang, SC. Zhu

NeurIPS 2019 Workshop

## Emergence of Pragmatics from Referential Game between Theory of Mind Agents

L. Yuan, Z. Fu, J. Shen, L. Xu, J. Shen, SC. Zhu

NeurIPS 2019 Workshop

### Honors

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2023	CoRL 2023 Best System Finalist
2022	CoRL 2022 Best System Finalist
2022	<a href="#">Stanford Graduate Fellowship</a>
2022	MIT Hewlett Packard Fellowship (declined)
2022	UC Berkeley AI Research Ignition Award (declined)
2022	CVPR 2022 Best Paper at Multimodal Learning Workshop
2020	Latin Honors, UCLA
2019	ACM TURC 2019 Best Paper Runner-up Award
2014	Bronze Medal, British Mathematical Olympiad

### Invited Talks

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**From Mobility to Mobile Manipulation** (incl. Robot Parkour Learning and Mobile ALOHA) Jan-Feb 2024

- Academic talks: University of Michigan EECS 598-010 (Action and Perception) Guest Lecture, UCSD Contextual Robotics Institute Seminar, City University of Hong Kong GairLab, Stanford ME268 (Robotics, AI and Design of Future Education) Guest Lecture
- Industrial talks: Hugging Face, Fourier Intelligence, Stardust Robotics, AgileX Robotics

### Deep Whole-Body Control

Oct 2022

- Stanford Vision and Learning Lab

### Professional Services

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**Robotics:** reviewer of ICRA, CoRL, RA-L, IROS

**Machine Learning:** reviewer of NeurIPS, ICML, ICLR, CoLLAs

**Computer Vision:** reviewer of CVPR, ICCV, ECCV

### Technical Skills

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- Python, C++, Bash, C
- PyTorch, TensorFlow, Numpy, Git, ROS, IsaacGym, MuJoCo, PyBullet, RaiSim

### Software Projects

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**And-Or Graph Library (C++11 & Boost)** [<https://github.com/MarkFzp/and-or-graph-lib>] UCLA

- a machine learning library used as the code framework for graduate course CS266B (Stat. Computing and Inference) at UCLA
- 2<sup>nd</sup> major contributor, 6000 lines of C++, co-led the 3-month full-time software development.
- Implemented, optimized and debugged several learning, search, parsing and graph algorithms, including Monte Carlo tree search, greedy search, beam search, backtracking, Metropolis-Hastings algorithms, Earley parser, and graph compression.
- Used C++ techniques like templates, smart pointers, multi-index containers, functors and self-defined hashing.
- Boosted the model performance from 0.64 to 0.80 in terms of F1 score.