

Yen-Jen Wang

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Education

- ❖ **University of California, Berkeley, CA, USA**
- Doctor of Philosophy *August 2024 - June 2028 (Expected)*
- Major: in Robotics and Control (Affiliated with BAIR and ME)
- Advisor: Koushil Sreenath
- ❖ **Tsinghua University, Beijing, China**
- Master of Science *August 2021 - June 2024*
- Major: in Robotics and AI (Affiliated with IIS 交叉信息研究院)
- Advisor: Jianyu Chen
- Outstanding graduates of IIS, Tsinghua University (*only top 1 master's student*)
- ❖ **National Taiwan University, Taipei, Taiwan**
- Bachelor of Science *September 2017 – January 2021*
- Major: in Computer Science (Affiliated with CSIE)
- *Guaranteed admission due to the Olympiad in Informatics in 2015 (as a high school freshman).*

Selected Awards and Honors

- ❖ **5th Place**, International Collegiate Programming Contest (ICPC) World Finals, Porto, Portugal *April 2019*
- From among 135 teams of three chosen from a field of 52,709 contestants from 3,233 universities in 110 countries on six continents (Source: [ICPC Official Website](https://icpc.org)).
- ❖ **Silver Medal**, International Olympiad in Informatics (IOI), Tehran, Iran *July 2017*
- ❖ **Grand Prize Winner**, International Genetically Engineered Machine (iGEM), Boston, MA, USA *October 2016*

Publications (*: Equal contribution. Co-first Author.)

- ❖ Xinyang Gu*, **Yen-Jen Wang***, Xiang Zhu*, Chengming Shi*, Yanjiang Guo, Yichen Liu, Jianyu Chen. “Advancing Humanoid Locomotion: Mastering Challenging Terrains with Denoising World Model Learning”, In *2024 Robotics: Science and Systems (RSS 2024) (Outstanding Paper Award Finalists)*
- ❖ Xinyang Gu*, **Yen-Jen Wang***, Jianyu Chen. “Humanoid-Gym: Reinforcement Learning for Humanoid Robot with Zero-Shot Sim2Real Transfer”, In *ICRA 2024 Workshop on Agile Robotics*.
- ❖ **Yen-Jen Wang**, Bike Zhang, Jianyu Chen, Koushil Sreenath. “Prompt a Robot to Walk with Large Language Models”, In *2024 Conference on Decision and Control (CDC 2024)*
- ❖ Yanjiang Guo*, **Yen-Jen Wang***, Lihan Zha*, Zheyuan Jiang, Jianyu Chen. “DoReMi: Grounding Language Model by Detecting and Recovering from Plan-Execution Misalignment”, In *2024 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2024) (Oral)*
- ❖ Yanjiang Guo*, Zheyuan Jiang*, **Yen-Jen Wang**, Jingyue Gao, and Jianyu Chen. “Distributed Motor Skill Learning for Complex Robotic Systems”, In *2023 IEEE Robotics and Automation Letters (RA-L 2023)*

Research Experience

- ❖ **Hybrid Robotics, University of California, Berkeley, Berkeley, CA, USA** *July 2023 – Present*
- **Prompt a Robot to Walk with Large Language Models**: Using LLM directly outputs the low-level action to make a robot walk.
- **Point-goal Navigation for Quadrupedal Robots**: AI Habitat was utilized for training navigation, while legged_gym served for locomotion training. Our goal is to explore the mutual influence between the two aspects.
- ❖ **Institute for Interdisciplinary Information Sciences, Tsinghua University, Beijing, China** *September 2021 – Present*
- **Locomotion for Humanoid Robot**: Train an RL policy for XBot-S and XBot-L from Robot Era and address the sim-to-real transfer problem.
- **Grounding Language Model by Detecting and Recovering from Plan-Execution Misalignment**: Use LLMs to detect exceptions and re-plan in real-time. This dual-role approach, where LLMs assist in high-level planning and generating constraints that can indicate misalignment during execution.
- **Pour Water Task on A Mobile Manipulator**: 1. Use ROS to control the mobile manipulator to complete the pouring task. 2. Use more accurate observation as a teaching model to train students using image input.

Selected Professional Experience

- ❖ **Google LLC** *July 2021 – October 2021*
- Software Engineer Intern @ Android Core Networking Team, working with staff from Taiwan and Japan offices.
- ❖ **Pony.ai** *July 2019 – August 2019*
- Software Engineer Intern @ Planning and Control Team, working with staff from China and US offices.
- ❖ **Tsinghua University, Beijing, China**
- Problem Setter of the Undergraduate Recommended Admissions in CS department. *January 2022 – August 2022*
- ❖ **National Taiwan University, Taipei, Taiwan**
- Co-coach of the International Collegiate Programming Contest (ICPC) training course, which is instructed by Professors Chiou-Shann Fuh and Pu-Jen Cheng. *August 2019 – January 2021*
- ❖ **Taiwan Olympiad in Informatics**
- Co-coach of the Taiwan team in the International Olympiad in Informatics. *March 2018 - July 2021*