Yen-Jen Wang

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Education

- ❖ **University of California, Berkeley**, CA
  - *Doctor of Philosophy*   *August 2024 - June 2028 (Expected)*
  - *Major. in Robotics and Control*
  - *Affiliated with Berkeley Artificial Intelligence Research (BAIR) and Berkeley Mechanical Engineering*
- ❖ **Tsinghua University**, Beijing, China
  - *Master of Science*   *August 2021 - June 2024*
  - *Major. in Robotics and AI*   *GPA:3.94 / 4.0*
  - *Affiliated with Institute for Interdisciplinary Information Sciences (IIIS)*
  - *Outstanding graduates of IIIS, Tsinghua University* **(top 1 master's student)**
- ❖ **National Taiwan University**, Taipei, Taiwan
  - *Bachelor of Science*   *September 2017 – January 2021*
  - *Major. in Computer Science and Information Engineering* *GPA: 3.83 / 4.3*
  - **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) WorldFinals**, 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]).*
- ❖ **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", *Preprint, arXiv 2309.09969*
- ❖ 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)*

Research Experience

- ❖ **Hybrid Robotics, University of California, Berkeley**, Berkeley, CA   ***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***