

Yen-Jen Wang

Nationality: Taiwan (R.O.C.)

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Education

- ❖ **Institute for Interdisciplinary Information Sciences (IIIS), Tsinghua University**, Beijing, China
- *Master of Science* August 2021 - June 2024 (expected)
- *Major in Computer Science* GPA: 3.952 / 4.0
- ❖ **Department of Computer Science and Information Engineering (CSIE), 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) 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. Listed alphabetically.)

- ❖ **Yen-Jen Wang**, Bike Zhang, Jianyu Chen, Koushil Sreenath. “Prompt a Robot to Walk with Large Language Models”, *Preprint, arXiv 2309.09969*
- ❖ **Yen-Jen Wang**, Xiaoyu Chen, Hai Zhong, Yanjiang Guo, and Jianyu Chen. “Reinforcement Learning with Partial Order Representation for Monotonic Physical System”, *Under Review*
- ❖ Yanjiang Guo*, **Yen-Jen Wang***, Lihan Zha*, Zheyuan Jiang, Jianyu Chen. “DoReMi: Grounding Language Model by Detecting and Recovering from Plan-Execution Misalignment”, *Preprint, arXiv 2307.00329*
- ❖ 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 used to train navigation, and legged_gym was used to train sports. Our goal is to explore the mutual influence between the two.
- ❖ **Institute for Interdisciplinary Information Sciences, Tsinghua University**, Beijing, China September 2021 – Present
- **Locomotion for Humanoid Robot**: Train an RL policy for our custom humanoid robot to address the sim-to-real transfer problem.
- **Reinforcement Learning with Partial Order Representation**: Improve the sample efficiency of reinforcement learning by capturing monotonically changing physical quantities in the environment.
- **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**
- Teaching Assistant in Advanced Topics in Robotics with Professor. Jianyu Chen. Spring 2023
- Director of the Organization Department of the Taiwan Students Association September 2022 – March 2023
- Problem Setter in the Recommended Admissions Committee for the 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
- The president of the Academic Association in the CS department. May 2019 – May 2020
- Coordinator @ [IOICamp](https://ioicamp.org): A training camp for prospective high school and college students participating in Olympiads in Informatics and other programming competitions. June 2018 – January 2020
- Teaching Assistant in Data Structures and Algorithms with Professor Jyh-Shing Roger Jang. Spring 2018
- Teaching Assistant in Computer Programming with Professor Pangfeng Liu. Fall 2017

Standard Language Tests

- ❖ **TOEFL**: 107 (Reading: 30, Listening: 30, Speaking: 20, Writing: 27)