

Yanhao Yang

☎ +1 (949) 326 6630 • ✉ yanhaoy@andrew.cmu.edu
🌐 yanhaoy.github.io • **in** [yanhaoy](#) • 🌐 [yanhaoy](#)

Education

Carnegie Mellon University (CMU)

M.S. in Mechanical Engineering

- Cumulative GPA: 4.0 / 4.0

Pittsburgh, PA

Sep. 2020 - May. 2022

University of California, Irvine (UCI)

Exchange Student in Mechanical Engineering

- Cumulative GPA: 4.0 / 4.0

Irvine, CA

Sep. 2019 - Jun. 2020

South China University of Technology (SCUT)

B.E. in Mechanical Engineering

- Cumulative GPA: 3.95 / 4.0
- Rank: 1 / 128

Guangzhou, China

Sep. 2016 - Jul. 2020

Research Experience

Robomechanics Lab - CMU

Graduate Student Researcher

Advisor: Professor Aaron M. Johnson

- Model predictive control for the tail to increase stability for legged robots on rough terrain.
- Develop legged robot controllers to perform useful behaviors in real environments.

Pittsburgh, PA

Sep. 2020 - Present

Autonomous Systems Perception, Intelligence, & Navigation Lab - UCI

Undergraduate Student Researcher

Advisor: Professor Zak (Zaher) M. Kassas

- UAV waypoint opportunistic navigation in GNSS-denied environments.
- Motion planning for optimal information gathering in opportunistic navigation environments.

Irvine, CA

Oct. 2019 - Jun. 2020

Robot Lab - SCUT

Undergraduate Student Researcher

Advisor: Professor Dong Zhang

- Real-time object recognition based on convolutional neural network and metric learning
- Decision-making of autonomous robots based on finite state machine
- Robot pose estimation based on visual localization

Guangzhou, China

Sep. 2017 - Jun. 2019

Publications

- [1] Yanhao Yang, Joseph Norby, Justin K. Yim, and Aaron M. Johnson. Improving tail compatibility through sequential distributed model predictive control. In *RSS Workshop on Software Tools for Real-Time Optimal Control*, July 2021.
- [2] Yanhao Yang, Joe Khalife, Joshua Morales, and Zaher M. Kassas. UAV waypoint opportunistic navigation in GNSS-denied environments. *IEEE Transactions on Aerospace and Electronic Systems*, 2021. accepted.

- [3] Yanhao Yang, Joseph Norby, Justin K. Yim, and Aaron M. Johnson. Overcoming unreachable contact on uneven terrain with a tail. 2021. in preparation.
- [4] Joseph Norby, Yanhao Yang, Justin K. Yim, and Aaron M. Johnson. Hierarchical motion planning framework for legged robots. 2021. in preparation.

Honors & Awards

Student with High Honors

Irvine, CA

Division of Continuing Education, University of California, Irvine

2020

Champion - National College Robot Competition RoboMaster

Shenzhen, China

DJI Technology Co., Ltd.

2018

- As a member of the South China University of Technology team.

National Scholarship

Guangzhou, China

Ministry of Education of the People's Republic of China

2017 and 2018

- For the top 0.2% of students on average in each academic school year.

Outstanding Student of Summer Social Practice

Guangzhou, China

South China University of Technology

2017

- For the students who volunteer in rural areas.

3rd Award - "Teddy Cup" Data Mining Challenge

Guangzhou, China

Guangdong Society for Industrial and Applied Mathematics

2017