# Yanhao Yang

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## Education

**Carnegie Mellon University (CMU)** **Pittsburgh, PA**
*M.S. in Mechanical Engineering* *Sep. 2020 - May. 2022*
- Cumulative GPA: 4.0 / 4.0

**University of California, Irvine (UCI)** **Irvine, CA**
*Exchange Student in Mechanical Engineering* *Sep. 2019 - Jun. 2020*
- Cumulative GPA: 4.0 / 4.0

**South China University of Technology (SCUT)** **Guangzhou, China**
*B.E. in Mechanical Engineering* *Sep. 2016 - Jul. 2020*
- Cumulative GPA: 3.95 / 4.0
- Rank: 1 / 128

## Research Experience

**Robomechanics Lab - CMU** **Pittsburgh, PA**
*Graduate Student Researcher* *Sep. 2020 - Present*
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.

**Autonomous Systems Perception, Intelligence, & Navigation Lab - UCI** **Irvine, CA**
*Undergraduate Student Researcher* *Oct. 2019 - Jun. 2020*
Advisor: Professor Zak (Zaher) M. Kassas
- UAV waypoint opportunistic navigation in GNSS-denied environments.
- Motion planning for optimal information gathering in opportunistic navigation environments.

**Robot Lab - SCUT** **Guangzhou, China**
*Undergraduate Student Researcher* *Sep. 2017 - Jun. 2019*
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

## Publications

[1] Yanhao Yang, Joseph Norby, Justin K. Yim, and Aaron M. Johnson. Overcoming unreachable contact on uneven terrain with a tail. 2021. in preparation.

[2] Joseph Norby, Yanhao Yang, Justin K. Yim, and Aaron M. Johnson. Hierarchical motion planning framework for legged robots. 2021. in preparation.

[3] 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.

[4] 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.

## 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*